Appendix Q

2024 Test Pit Soil Sampling Results

PHOENIX
Environmental Laboratories, Inc.

Thursday, October 17, 2024

Attn: Richard Learned
Stantec
400 Crown Colony Drive/Suite 200
Quincy MA 02169

Project ID: **WALTHAM MA**
SDG ID: **GCR82121**
Sample ID#s: CR82121 - CR82128

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

NY # 11301

SDG Comments

October 17, 2024

SDG I.D.: GCR82121

Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

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Sample Id Cross Reference

October 17, 2024

SDG I.D.: GCR82121

Project ID: WALTHAM MA

Client Id	Lab Id	Matrix
TP-1 - 2-4`	CR82121	SOIL
TP-1 - 4-6`	CR82122	SOIL
TP-1 - 2-4` COMP	CR82123	SOIL
TP-1 - 4-6` COMP	CR82124	SOIL
TP-2 - 2-4`	CR82125	SOIL
TP-2 - 4-6`	CR82126	SOIL
TP-2 - 2-4` COMP	CR82127	SOIL
TP-2 - 4-6` COMP	CR82128	SOIL

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
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Analysis Report

October 17, 2024

FOR: Attn: Richard Learned
Stantec
400 Crown Colony Drive/Suite 200
Quincy MA 02169

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/07/24	12:15
Location Code:	STANTECMA	Received by:	SW	10/09/24	15:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	195150185				

Laboratory Data

SDG ID: GCR82121
Phoenix ID: CR82121

Project ID: WALTHAM MA
Client ID: TP-1 - 2-4`

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Field Extraction	Completed				10/07/24		SW5035A
MA Petroleum Hydrocarbon (VPH)	Completed				10/11/24	V	MA VPH 2/20182.1, 201
Volatiles							
1,1,1,2-Tetrachloroethane	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
1,1,1-Trichloroethane	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
1,1,2,2-Tetrachloroethane	ND	0.0029	mg/Kg	1	10/10/24	JLI	SW8260D
1,1,2-Trichloroethane	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
1,1-Dichloroethane	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
1,1-Dichloroethene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
1,1-Dichloropropene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
1,2,3-Trichlorobenzene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
1,2,3-Trichloropropane	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
1,2,4-Trichlorobenzene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
1,2,4-Trimethylbenzene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
1,2-Dibromo-3-chloropropane	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
1,2-Dibromoethane	ND	0.00048	mg/Kg	1	10/10/24	JLI	SW8260D
1,2-Dichlorobenzene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
1,2-Dichloroethane	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
1,2-Dichloropropane	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
1,3,5-Trimethylbenzene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
1,3-Dichlorobenzene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
1,3-Dichloropropane	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
1,4-Dichlorobenzene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
2,2-Dichloropropane	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
2-Chlorotoluene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
2-Hexanone	ND	0.024	mg/Kg	1	10/10/24	JLI	SW8260D

Project ID: WALTHAM MA
Client ID: TP-1 - 2-4`

Phoenix I.D.: CR82121

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Isopropyltoluene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
4-Chlorotoluene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
4-Methyl-2-pentanone	ND	0.024	mg/Kg	1	10/10/24	JLI	SW8260D
Acetone	ND	0.24	mg/Kg	1	10/10/24	JLI	SW8260D
Acrylonitrile	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Benzene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Bromobenzene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Bromochloromethane	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Bromodichloromethane	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Bromoform	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Bromomethane	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Carbon Disulfide	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Carbon tetrachloride	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Chlorobenzene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Chloroethane	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Chloroform	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Chloromethane	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
cis-1,2-Dichloroethene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
cis-1,3-Dichloropropene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Dibromochloromethane	ND	0.0029	mg/Kg	1	10/10/24	JLI	SW8260D
Dibromomethane	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Dichlorodifluoromethane	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Ethylbenzene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Hexachlorobutadiene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Isopropylbenzene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
m&p-Xylene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Methyl Ethyl Ketone	ND	0.029	mg/Kg	1	10/10/24	JLI	SW8260D
Methyl t-butyl ether (MTBE)	ND	0.0096	mg/Kg	1	10/10/24	JLI	SW8260D
Methylene chloride	ND	0.0096	mg/Kg	1	10/10/24	JLI	SW8260D
Naphthalene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
n-Butylbenzene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
n-Propylbenzene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
o-Xylene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
p-Isopropyltoluene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
sec-Butylbenzene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Styrene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
tert-Butylbenzene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Tetrachloroethene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Tetrahydrofuran (THF)	ND	0.0096	mg/Kg	1	10/10/24	JLI	SW8260D
Toluene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Total Xylenes	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
trans-1,2-Dichloroethene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
trans-1,3-Dichloropropene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
trans-1,4-dichloro-2-butene	ND	0.0096	mg/Kg	1	10/10/24	JLI	SW8260D
Trichloroethene	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Trichlorofluoromethane	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D
Trichlorotrifluoroethane	ND	0.0096	mg/Kg	1	10/10/24	JLI	SW8260D
Vinyl chloride	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D

QA/QC Surrogates

Project ID: WALTHAM MA
Client ID: TP-1 - 2-4`

Phoenix I.D.: CR82121

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% 1,2-dichlorobenzene-d4	101		%	1	10/10/24	JLI	70 - 130 %
% Bromofluorobenzene	86		%	1	10/10/24	JLI	70 - 130 %
% Dibromofluoromethane	95		%	1	10/10/24	JLI	70 - 130 %
% Toluene-d8	96		%	1	10/10/24	JLI	70 - 130 %
Oxygenates & Dioxane							
1,4-Dioxane	ND	0.096	mg/Kg	1	10/10/24	JLI	SW8260D (OXY)
Diethyl ether	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D (OXY)
Di-isopropyl ether	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D (OXY)
Ethyl tert-butyl ether	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D (OXY)
tert-amyl methyl ether	ND	0.0048	mg/Kg	1	10/10/24	JLI	SW8260D (OXY)
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	5.5	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	5.5	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	5.5	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	5.5	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	5.5	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
Benzene	ND	0.027	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
Ethyl Benzene	ND	0.055	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
MTBE	ND	0.055	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
Naphthalene	ND	0.27	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
Toluene	ND	0.055	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
m,p-Xylenes	ND	0.055	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
o-Xylene	ND	0.055	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	82		%	50	10/11/24	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	71		%	50	10/11/24	V	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

VPH:
*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 17, 2024
Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

Analysis Report

October 17, 2024

FOR: Attn: Richard Learned
Stantec
400 Crown Colony Drive/Suite 200
Quincy MA 02169

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/07/24	12:00
Location Code:	STANTECMA	Received by:	SW	10/09/24	15:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	195150185				

Laboratory Data

SDG ID: GCR82121
Phoenix ID: CR82122

Project ID: WALTHAM MA
Client ID: TP-1 - 4-6`

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Field Extraction	Completed				10/07/24		SW5035A
MA Petroleum Hydrocarbon (VPH)	Completed				10/11/24	V	MA VPH 2/20182.1, 201
Volatiles							
1,1,1,2-Tetrachloroethane	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
1,1,1-Trichloroethane	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
1,1,2,2-Tetrachloroethane	ND	0.003	mg/Kg	1	10/10/24	JLI	SW8260D
1,1,2-Trichloroethane	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
1,1-Dichloroethane	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
1,1-Dichloroethene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
1,1-Dichloropropene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
1,2,3-Trichlorobenzene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
1,2,3-Trichloropropane	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
1,2,4-Trichlorobenzene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
1,2,4-Trimethylbenzene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
1,2-Dibromo-3-chloropropane	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
1,2-Dibromoethane	ND	0.0005	mg/Kg	1	10/10/24	JLI	SW8260D
1,2-Dichlorobenzene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
1,2-Dichloroethane	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
1,2-Dichloropropane	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
1,3,5-Trimethylbenzene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
1,3-Dichlorobenzene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
1,3-Dichloropropane	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
1,4-Dichlorobenzene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
2,2-Dichloropropane	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
2-Chlorotoluene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
2-Hexanone	ND	0.025	mg/Kg	1	10/10/24	JLI	SW8260D

Project ID: WALTHAM MA
Client ID: TP-1 - 4-6`

Phoenix I.D.: CR82122

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Isopropyltoluene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
4-Chlorotoluene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
4-Methyl-2-pentanone	ND	0.025	mg/Kg	1	10/10/24	JLI	SW8260D
Acetone	ND	0.25	mg/Kg	1	10/10/24	JLI	SW8260D
Acrylonitrile	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Benzene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Bromobenzene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Bromochloromethane	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Bromodichloromethane	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Bromoform	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Bromomethane	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Carbon Disulfide	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Carbon tetrachloride	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Chlorobenzene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Chloroethane	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Chloroform	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Chloromethane	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
cis-1,2-Dichloroethene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
cis-1,3-Dichloropropene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Dibromochloromethane	ND	0.003	mg/Kg	1	10/10/24	JLI	SW8260D
Dibromomethane	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Dichlorodifluoromethane	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Ethylbenzene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Hexachlorobutadiene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Isopropylbenzene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
m&p-Xylene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Methyl Ethyl Ketone	ND	0.03	mg/Kg	1	10/10/24	JLI	SW8260D
Methyl t-butyl ether (MTBE)	ND	0.0099	mg/Kg	1	10/10/24	JLI	SW8260D
Methylene chloride	ND	0.0099	mg/Kg	1	10/10/24	JLI	SW8260D
Naphthalene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
n-Butylbenzene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
n-Propylbenzene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
o-Xylene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
p-Isopropyltoluene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
sec-Butylbenzene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Styrene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
tert-Butylbenzene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Tetrachloroethene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Tetrahydrofuran (THF)	ND	0.0099	mg/Kg	1	10/10/24	JLI	SW8260D
Toluene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Total Xylenes	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
trans-1,2-Dichloroethene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
trans-1,3-Dichloropropene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
trans-1,4-dichloro-2-butene	ND	0.0099	mg/Kg	1	10/10/24	JLI	SW8260D
Trichloroethene	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Trichlorofluoromethane	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D
Trichlorotrifluoroethane	ND	0.0099	mg/Kg	1	10/10/24	JLI	SW8260D
Vinyl chloride	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D

QA/QC Surrogates

Project ID: WALTHAM MA
Client ID: TP-1 - 4-6`

Phoenix I.D.: CR82122

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% 1,2-dichlorobenzene-d4	103		%	1	10/10/24	JLI	70 - 130 %
% Bromofluorobenzene	92		%	1	10/10/24	JLI	70 - 130 %
% Dibromofluoromethane	94		%	1	10/10/24	JLI	70 - 130 %
% Toluene-d8	100		%	1	10/10/24	JLI	70 - 130 %
Oxygenates & Dioxane							
1,4-Dioxane	ND	0.099	mg/Kg	1	10/10/24	JLI	SW8260D (OXY)
Diethyl ether	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D (OXY)
Di-isopropyl ether	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D (OXY)
Ethyl tert-butyl ether	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D (OXY)
tert-amyl methyl ether	ND	0.005	mg/Kg	1	10/10/24	JLI	SW8260D (OXY)
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	5.0	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	5.0	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	5.0	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	5.0	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	5.0	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
Benzene	ND	0.025	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
Ethyl Benzene	ND	0.050	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
MTBE	ND	0.050	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
Naphthalene	ND	0.25	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
Toluene	ND	0.050	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
m,p-Xylenes	ND	0.050	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
o-Xylene	ND	0.050	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	92		%	50	10/11/24	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	91		%	50	10/11/24	V	70 - 130 %

Project ID: WALTHAM MA
Client ID: TP-1 - 4-6`

Phoenix I.D.: CR82122

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

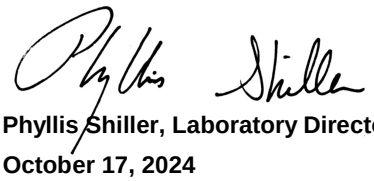
Comments:

VPH:
*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.



Phyllis Shiller, Laboratory Director
October 17, 2024
Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

Analysis Report

October 17, 2024

FOR: Attn: Richard Learned
Stantec
400 Crown Colony Drive/Suite 200
Quincy MA 02169

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/07/24	12:15
Location Code:	STANTECMA	Received by:	SW	10/09/24	15:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	195150185				

Laboratory Data

SDG ID: GCR82121
Phoenix ID: CR82123

Project ID: WALTHAM MA
Client ID: TP-1 - 2-4` COMP

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.36	0.36	mg/Kg	1	10/10/24	CPP	SW6010D
Arsenic	4.71	0.73	mg/Kg	1	10/10/24	CPP	SW6010D
Barium	35.1	0.36	mg/Kg	1	10/10/24	CPP	SW6010D
Beryllium	0.42	0.29	mg/Kg	1	10/10/24	CPP	SW6010D
Cadmium	< 0.36	0.36	mg/Kg	1	10/10/24	CPP	SW6010D
Chromium	16.8	0.36	mg/Kg	1	10/10/24	CPP	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	10/10/24	ZT	SW7471B
Nickel	13.5	0.36	mg/Kg	1	10/10/24	CPP	SW6010D
Lead	16.7	0.36	mg/Kg	1	10/10/24	CPP	SW6010D
Antimony	< 3.6	3.6	mg/Kg	1	10/10/24	CPP	SW6010D
Selenium	< 1.5	1.5	mg/Kg	1	10/10/24	CPP	SW6010D
Thallium	< 3.3	3.3	mg/Kg	1	10/10/24	CPP	SW6010D
Vanadium	45.6	0.36	mg/Kg	1	10/10/24	CPP	SW6010D
Zinc	51.9	0.7	mg/Kg	1	10/10/24	CPP	SW6010D
Percent Solid	93		%		10/09/24	CV	SW846-%Solid
Corrosivity	Negative		Pos/Neg	1	10/09/24	MW/ER	SW846-Corr
Chromium, Hex. (SW3060A digestion	< 0.36	0.36	mg/Kg	1	10/11/24	NP	SW7196A
pH at 25C - Soil	8.15	1.00	pH Units	1	10/09/24 22:36	MW/ER	SW846 9045D
Redox Potential	224		mV	1	10/09/24	MW/ER	SM2580B-09
Mercury Digestion	Completed				10/10/24	AC1/AC1	SW7471B
Extraction of ETPH	Completed				10/10/24	H/U	SW3546
EPH Extraction	Completed				10/11/24	K/K	SW3546
Soil Extraction for PCB	Completed				10/11/24	X/X	SW3546
Soil Extraction for SVOA	Completed				10/11/24	X/X	SW3546
Total Metals Digest	Completed				10/09/24	J/AG	SW3050B
Ext. Petroleum Hydrocarbons	Completed				10/09/24		MADEP EPH-19

Ver 1

Project ID: WALTHAM MA
Client ID: TP-1 - 2-4` COMP

Phoenix I.D.: CR82123

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Polychlorinated Biphenyls							
PCB-1016	ND	0.071	mg/Kg	2	10/12/24	SC	SW8082A
PCB-1221	ND	0.071	mg/Kg	2	10/12/24	SC	SW8082A
PCB-1232	ND	0.071	mg/Kg	2	10/12/24	SC	SW8082A
PCB-1242	ND	0.071	mg/Kg	2	10/12/24	SC	SW8082A
PCB-1248	ND	0.071	mg/Kg	2	10/12/24	SC	SW8082A
PCB-1254	ND	0.071	mg/Kg	2	10/12/24	SC	SW8082A
PCB-1260	ND	0.071	mg/Kg	2	10/12/24	SC	SW8082A
PCB-1262	ND	0.071	mg/Kg	2	10/12/24	SC	SW8082A
PCB-1268	ND	0.071	mg/Kg	2	10/12/24	SC	SW8082A
QA/QC Surrogates							
% DCBP	126		%	2	10/12/24	SC	30 - 150 %
% DCBP (Confirmation)	144		%	2	10/12/24	SC	30 - 150 %
% TCMX	135		%	2	10/12/24	SC	30 - 150 %
% TCMX (Confirmation)	140		%	2	10/12/24	SC	30 - 150 %
TPH by GC (Extractable (C9-C36))							
Fuel Oil #2 / Diesel Fuel	ND	530	mg/kg	10	10/11/24	JRB	SW8015D
Fuel Oil #4	ND	530	mg/kg	10	10/11/24	JRB	SW8015D
Fuel Oil #6	ND	530	mg/kg	10	10/11/24	JRB	SW8015D
Kerosene	ND	530	mg/kg	10	10/11/24	JRB	SW8015D
Motor Oil	ND	530	mg/kg	10	10/11/24	JRB	SW8015D
Total TPH	800	530	mg/kg	10	10/11/24	JRB	SW8015D
Unidentified	**	530	mg/kg	10	10/11/24	JRB	SW8015D
QA/QC Surrogates							
% COD (surr)	Diluted Out		%	10	10/11/24	JRB	50 - 150 %
% Terphenyl (surr)	Diluted Out		%	10	10/11/24	JRB	50 - 150 %
Semivolatiles							
1,1-Biphenyl	ND	0.05	mg/Kg	1	10/15/24	AW	SW8270E
1,2,4,5-Tetrachlorobenzene	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
1,2,4-Trichlorobenzene	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
1,2-Dichlorobenzene	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
1,2-Diphenylhydrazine	ND	0.36	mg/Kg	1	10/15/24	AW	SW8270E
1,3-Dichlorobenzene	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
1,4-Dichlorobenzene	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
2,2'-Oxybis(1-Chloropropane)	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
2,4,5-Trichlorophenol	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
2,4,6-Trichlorophenol	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
2,4-Dichlorophenol	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
2,4-Dimethylphenol	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
2,4-Dinitrophenol	ND	0.36	mg/Kg	1	10/15/24	AW	SW8270E
2,4-Dinitrotoluene	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
2,6-Dinitrotoluene	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
2-Chloronaphthalene	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
2-Chlorophenol	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
2-Methylnaphthalene	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
2-Methylphenol (o-cresol)	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
2-Nitroaniline	ND	0.36	mg/Kg	1	10/15/24	AW	SW8270E

Project ID: WALTHAM MA
Client ID: TP-1 - 2-4` COMP

Phoenix I.D.: CR82123

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
3&4-Methylphenol (m&p-cresol)	ND	0.36	mg/Kg	1	10/15/24	AW	SW8270E
3,3'-Dichlorobenzidine	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
3-Nitroaniline	ND	0.36	mg/Kg	1	10/15/24	AW	SW8270E
4,6-Dinitro-2-methylphenol	ND	0.36	mg/Kg	1	10/15/24	AW	SW8270E
4-Bromophenyl phenyl ether	ND	0.36	mg/Kg	1	10/15/24	AW	SW8270E
4-Chloro-3-methylphenol	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
4-Chloroaniline	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
4-Chlorophenyl phenyl ether	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
4-Nitroaniline	ND	0.57	mg/Kg	1	10/15/24	AW	SW8270E
4-Nitrophenol	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Acenaphthene	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Acenaphthylene	0.42	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Acetophenone	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Aniline	ND	0.36	mg/Kg	1	10/15/24	AW	SW8270E
Anthracene	0.25	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Benz(a)anthracene	0.87	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Benzidine	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Benzo(a)pyrene	1.3	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Benzo(b)fluoranthene	1.5	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Benzo(ghi)perylene	0.86	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Benzo(k)fluoranthene	0.47	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Benzoic acid	ND	0.71	mg/Kg	1	10/15/24	AW	SW8270E
Benzyl butyl phthalate	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Bis(2-chloroethoxy)methane	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Bis(2-chloroethyl)ether	ND	0.36	mg/Kg	1	10/15/24	AW	SW8270E
Bis(2-ethylhexyl)phthalate	ND	0.36	mg/Kg	1	10/15/24	AW	SW8270E
Carbazole	ND	0.36	mg/Kg	1	10/15/24	AW	SW8270E
Chrysene	0.84	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Dibenz(a,h)anthracene	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Dibenzofuran	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Diethyl phthalate	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Dimethylphthalate	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Di-n-butylphthalate	ND	0.36	mg/Kg	1	10/15/24	AW	SW8270E
Di-n-octylphthalate	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Fluoranthene	1.4	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Fluorene	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Hexachlorobenzene	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Hexachlorobutadiene	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Hexachlorocyclopentadiene	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Hexachloroethane	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Indeno(1,2,3-cd)pyrene	0.79	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Isophorone	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Naphthalene	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Nitrobenzene	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
N-Nitrosodimethylamine	ND	0.36	mg/Kg	1	10/15/24	AW	SW8270E
N-Nitrosodi-n-propylamine	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
N-Nitrosodiphenylamine	ND	0.36	mg/Kg	1	10/15/24	AW	SW8270E
Pentachloronitrobenzene	ND	0.36	mg/Kg	1	10/15/24	AW	SW8270E

Project ID: WALTHAM MA
Client ID: TP-1 - 2-4` COMP

Phoenix I.D.: CR82123

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachlorophenol	ND	0.36	mg/Kg	1	10/15/24	AW	SW8270E
Phenanthrene	0.4	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Phenol	ND	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Pyrene	1.4	0.25	mg/Kg	1	10/15/24	AW	SW8270E
Pyridine	ND	0.36	mg/Kg	1	10/15/24	AW	SW8270E
QA/QC Surrogates							
% 2,4,6-Tribromophenol	88		%	1	10/15/24	AW	30 - 130 %
% 2-Fluorobiphenyl	67		%	1	10/15/24	AW	30 - 130 %
% 2-Fluorophenol	75		%	1	10/15/24	AW	30 - 130 %
% Nitrobenzene-d5	75		%	1	10/15/24	AW	30 - 130 %
% Phenol-d5	78		%	1	10/15/24	AW	30 - 130 %
% Terphenyl-d14	68		%	1	10/15/24	AW	30 - 130 %
EPH Other PAH Target Analytes							
Acenaphthylene	0.42	0.25	mg/Kg	1	10/15/24	AW	MA EPH 5/2004
Anthracene	0.25	0.25	mg/Kg	1	10/15/24	AW	MA EPH 5/2004
Benz(a)anthracene	0.87	0.25	mg/Kg	1	10/15/24	AW	MA EPH 5/2004
Benzo(a)pyrene	1.3	0.25	mg/Kg	1	10/15/24	AW	MA EPH 5/2004
Benzo(b)fluoranthene	1.5	0.25	mg/Kg	1	10/15/24	AW	MA EPH 5/2004
Benzo(ghi)perylene	0.86	0.25	mg/Kg	1	10/15/24	AW	MA EPH 5/2004
Benzo(k)fluoranthene	0.47	0.25	mg/Kg	1	10/15/24	AW	MA EPH 5/2004
Chrysene	0.84	0.25	mg/Kg	1	10/15/24	AW	MA EPH 5/2004
Dibenz(a,h)anthracene	ND	0.25	mg/Kg	1	10/15/24	AW	MA EPH 5/2004
Fluoranthene	1.4	0.25	mg/Kg	1	10/15/24	AW	MA EPH 5/2004
Fluorene	ND	0.25	mg/Kg	1	10/15/24	AW	MA EPH 5/2004
Indeno(1,2,3-cd)pyrene	0.79	0.25	mg/Kg	1	10/15/24	AW	MA EPH 5/2004
Pyrene	1.4	0.25	mg/Kg	1	10/15/24	AW	MA EPH 5/2004
QA/QC Surrogates							
% 2-Fluorobiphenyl	67		%	1	10/15/24	AW	30 - 130 %
% Nitrobenzene-d5	75		%	1	10/15/24	AW	30 - 130 %
% Terphenyl-d14	68		%	1	10/15/24	AW	30 - 130 %
EPH Diesel PAH Target Analytes							
2-Methylnaphthalene	ND	0.25	mg/Kg	1	10/15/24	AW	MA EPH 5/2004
Acenaphthene	ND	0.25	mg/Kg	1	10/15/24	AW	MA EPH 5/2004
Naphthalene	ND	0.25	mg/Kg	1	10/15/24	AW	MA EPH 5/2004
Phenanthrene	0.4	0.25	mg/Kg	1	10/15/24	AW	MA EPH 5/2004
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	350	mg/Kg	5	10/11/24	AW	MA EPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	350	mg/Kg	5	10/11/24	AW	MA EPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	350	mg/Kg	5	10/11/24	AW	MA EPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	350	mg/Kg	5	10/11/24	AW	MA EPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	56		%	5	10/11/24	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	122		%	5	10/11/24	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	126		%	5	10/11/24	AW	40 - 140 %
% o-terphenyl (aromatic)	71		%	5	10/11/24	AW	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Corrosivity is based solely on the pH analysis performed above.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

Hexavalent Chromium:
This sample is in a reducing state.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C19 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

October 17, 2024

Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

Analysis Report

October 17, 2024

FOR: Attn: Richard Learned
Stantec
400 Crown Colony Drive/Suite 200
Quincy MA 02169

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/07/24	12:00
Location Code:	STANTECMA	Received by:	SW	10/09/24	15:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	195150185				

Laboratory Data

SDG ID: GCR82121
Phoenix ID: CR82124

Project ID: WALTHAM MA
Client ID: TP-1 - 4-6` COMP

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.42	0.42	mg/Kg	1	10/10/24	CPP	SW6010D
Arsenic	6.63	0.84	mg/Kg	1	10/10/24	CPP	SW6010D
Barium	51.7	0.42	mg/Kg	1	10/10/24	CPP	SW6010D
Beryllium	0.68	0.34	mg/Kg	1	10/10/24	CPP	SW6010D
Cadmium	< 0.42	0.42	mg/Kg	1	10/10/24	CPP	SW6010D
Chromium	15.3	0.42	mg/Kg	1	10/10/24	CPP	SW6010D
Mercury	0.13	0.03	mg/Kg	2	10/10/24	ZT	SW7471B
Nickel	9.45	0.42	mg/Kg	1	10/10/24	CPP	SW6010D
Lead	44.9	0.42	mg/Kg	1	10/10/24	CPP	SW6010D
Antimony	< 4.2	4.2	mg/Kg	1	10/10/24	CPP	SW6010D
Selenium	1.8	1.7	mg/Kg	1	10/10/24	CPP	SW6010D
Thallium	< 3.8	3.8	mg/Kg	1	10/10/24	CPP	SW6010D
Vanadium	27.7	0.42	mg/Kg	1	10/10/24	CPP	SW6010D
Zinc	39.1	0.8	mg/Kg	1	10/10/24	CPP	SW6010D
Percent Solid	75		%		10/09/24	CV	SW846-%Solid
Corrosivity	Negative		Pos/Neg	1	10/09/24	MW/ER	SW846-Corr
Chromium, Hex. (SW3060A digestion	< 0.49	0.49	mg/Kg	1	10/11/24	NP	SW7196A
pH at 25C - Soil	7.13	1.00	pH Units	1	10/09/24 22:36	MW/ER	SW846 9045D
Redox Potential	33.0		mV	1	10/09/24	MW/ER	SM2580B-09
Mercury Digestion	Completed				10/10/24	AC1/AC1	SW7471B
Extraction of ETPH	Completed				10/10/24	H/U	SW3546
EPH Extraction	Completed				10/11/24	K/K	SW3546
Soil Extraction for PCB	Completed				10/14/24	H/A	SW3546
Soil Extraction for SVOA	Completed				10/11/24	X/X	SW3546
Total Metals Digest	Completed				10/09/24	J/AG	SW3050B
Ext. Petroleum Hydrocarbons	Completed				10/09/24		MADEP EPH-19

Ver 1

Project ID: WALTHAM MA
Client ID: TP-1 - 4-6` COMP

Phoenix I.D.: CR82124

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Polychlorinated Biphenyls							
PCB-1016	ND	0.088	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1221	ND	0.088	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1232	ND	0.088	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1242	ND	0.088	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1248	ND	0.088	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1254	ND	0.088	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1260	ND	0.088	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1262	ND	0.088	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1268	ND	0.088	mg/Kg	2	10/15/24	SC	SW8082A
QA/QC Surrogates							
% DCBP	87		%	2	10/15/24	SC	30 - 150 %
% DCBP (Confirmation)	77		%	2	10/15/24	SC	30 - 150 %
% TCMX	80		%	2	10/15/24	SC	30 - 150 %
% TCMX (Confirmation)	77		%	2	10/15/24	SC	30 - 150 %
TPH by GC (Extractable (C9-C36))							
Fuel Oil #2 / Diesel Fuel	ND	65	mg/kg	1	10/11/24	JRB	SW8015D
Fuel Oil #4	ND	65	mg/kg	1	10/11/24	JRB	SW8015D
Fuel Oil #6	ND	65	mg/kg	1	10/11/24	JRB	SW8015D
Kerosene	ND	65	mg/kg	1	10/11/24	JRB	SW8015D
Motor Oil	ND	65	mg/kg	1	10/11/24	JRB	SW8015D
Total TPH	ND	65	mg/kg	1	10/11/24	JRB	SW8015D
Unidentified	ND	65	mg/kg	1	10/11/24	JRB	SW8015D
QA/QC Surrogates							
% COD (surr)	64		%	1	10/11/24	JRB	50 - 150 %
% Terphenyl (surr)	67		%	1	10/11/24	JRB	50 - 150 %
Semivolatiles							
1,1-Biphenyl	ND	0.05	mg/Kg	1	10/15/24	MR	SW8270E
1,2,4,5-Tetrachlorobenzene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
1,2,4-Trichlorobenzene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
1,2-Dichlorobenzene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
1,2-Diphenylhydrazine	ND	0.44	mg/Kg	1	10/15/24	MR	SW8270E
1,3-Dichlorobenzene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
1,4-Dichlorobenzene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
2,2'-Oxybis(1-Chloropropane)	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
2,4,5-Trichlorophenol	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
2,4,6-Trichlorophenol	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
2,4-Dichlorophenol	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
2,4-Dimethylphenol	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
2,4-Dinitrophenol	ND	0.44	mg/Kg	1	10/15/24	MR	SW8270E
2,4-Dinitrotoluene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
2,6-Dinitrotoluene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
2-Chloronaphthalene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
2-Chlorophenol	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
2-Methylnaphthalene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
2-Methylphenol (o-cresol)	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
2-Nitroaniline	ND	0.44	mg/Kg	1	10/15/24	MR	SW8270E

Project ID: WALTHAM MA
Client ID: TP-1 - 4-6` COMP

Phoenix I.D.: CR82124

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
3&4-Methylphenol (m&p-cresol)	ND	0.44	mg/Kg	1	10/15/24	MR	SW8270E
3,3'-Dichlorobenzidine	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
3-Nitroaniline	ND	0.44	mg/Kg	1	10/15/24	MR	SW8270E
4,6-Dinitro-2-methylphenol	ND	0.44	mg/Kg	1	10/15/24	MR	SW8270E
4-Bromophenyl phenyl ether	ND	0.44	mg/Kg	1	10/15/24	MR	SW8270E
4-Chloro-3-methylphenol	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
4-Chloroaniline	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
4-Chlorophenyl phenyl ether	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
4-Nitroaniline	ND	0.7	mg/Kg	1	10/15/24	MR	SW8270E
4-Nitrophenol	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Acenaphthene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Acenaphthylene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Acetophenone	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Aniline	ND	0.44	mg/Kg	1	10/15/24	MR	SW8270E
Anthracene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Benz(a)anthracene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Benzidine	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Benzo(a)pyrene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Benzo(b)fluoranthene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Benzo(ghi)perylene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Benzo(k)fluoranthene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Benzoic acid	ND	0.88	mg/Kg	1	10/15/24	MR	SW8270E
Benzyl butyl phthalate	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Bis(2-chloroethoxy)methane	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Bis(2-chloroethyl)ether	ND	0.44	mg/Kg	1	10/15/24	MR	SW8270E
Bis(2-ethylhexyl)phthalate	ND	0.44	mg/Kg	1	10/15/24	MR	SW8270E
Carbazole	ND	0.44	mg/Kg	1	10/15/24	MR	SW8270E
Chrysene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Dibenz(a,h)anthracene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Dibenzofuran	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Diethyl phthalate	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Dimethylphthalate	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Di-n-butylphthalate	ND	0.44	mg/Kg	1	10/15/24	MR	SW8270E
Di-n-octylphthalate	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Fluoranthene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Fluorene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Hexachlorobenzene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Hexachlorobutadiene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Hexachlorocyclopentadiene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Hexachloroethane	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Indeno(1,2,3-cd)pyrene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Isophorone	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Naphthalene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Nitrobenzene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
N-Nitrosodimethylamine	ND	0.44	mg/Kg	1	10/15/24	MR	SW8270E
N-Nitrosodi-n-propylamine	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
N-Nitrosodiphenylamine	ND	0.44	mg/Kg	1	10/15/24	MR	SW8270E
Pentachloronitrobenzene	ND	0.44	mg/Kg	1	10/15/24	MR	SW8270E

Project ID: WALTHAM MA
Client ID: TP-1 - 4-6` COMP

Phoenix I.D.: CR82124

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachlorophenol	ND	0.44	mg/Kg	1	10/15/24	MR	SW8270E
Phenanthrene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Phenol	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Pyrene	ND	0.31	mg/Kg	1	10/15/24	MR	SW8270E
Pyridine	ND	0.44	mg/Kg	1	10/15/24	MR	SW8270E
QA/QC Surrogates							
% 2,4,6-Tribromophenol	83		%	1	10/15/24	MR	30 - 130 %
% 2-Fluorobiphenyl	67		%	1	10/15/24	MR	30 - 130 %
% 2-Fluorophenol	69		%	1	10/15/24	MR	30 - 130 %
% Nitrobenzene-d5	68		%	1	10/15/24	MR	30 - 130 %
% Phenol-d5	68		%	1	10/15/24	MR	30 - 130 %
% Terphenyl-d14	68		%	1	10/15/24	MR	30 - 130 %
EPH Other PAH Target Analytes							
Acenaphthylene	ND	0.31	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Anthracene	ND	0.31	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Benz(a)anthracene	ND	0.31	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Benzo(a)pyrene	ND	0.31	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Benzo(b)fluoranthene	ND	0.31	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Benzo(ghi)perylene	ND	0.31	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Benzo(k)fluoranthene	ND	0.31	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Chrysene	ND	0.31	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Dibenz(a,h)anthracene	ND	0.31	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Fluoranthene	ND	0.31	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Fluorene	ND	0.31	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Indeno(1,2,3-cd)pyrene	ND	0.31	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Pyrene	ND	0.31	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
QA/QC Surrogates							
% 2-Fluorobiphenyl	67		%	1	10/15/24	MR	30 - 130 %
% Nitrobenzene-d5	68		%	1	10/15/24	MR	30 - 130 %
% Terphenyl-d14	68		%	1	10/15/24	MR	30 - 130 %
EPH Diesel PAH Target Analytes							
2-Methylnaphthalene	ND	0.31	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Acenaphthene	ND	0.31	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Naphthalene	ND	0.31	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Phenanthrene	ND	0.31	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	86	mg/Kg	1	10/11/24	AW	MA EPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	86	mg/Kg	1	10/11/24	AW	MA EPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	86	mg/Kg	1	10/11/24	AW	MA EPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	86	mg/Kg	1	10/11/24	AW	MA EPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	76		%	1	10/11/24	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	110		%	1	10/11/24	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	109		%	1	10/11/24	AW	40 - 140 %
% o-terphenyl (aromatic)	77		%	1	10/11/24	AW	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

Hexavalent Chromium:
This sample is in a reducing state.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 17, 2024
Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

Analysis Report

October 17, 2024

FOR: Attn: Richard Learned
Stantec
400 Crown Colony Drive/Suite 200
Quincy MA 02169

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/08/24	10:50
Location Code:	STANTECMA	Received by:	SW	10/09/24	15:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	195150185				

Laboratory Data

SDG ID: GCR82121
Phoenix ID: CR82125

Project ID: WALTHAM MA
Client ID: TP-2 - 2-4`

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Field Extraction	Completed				10/08/24		SW5035A
MA Petroleum Hydrocarbon (VPH)	Completed				10/11/24	V	MA VPH 2/20182.1, 201
Volatiles							
1,1,1,2-Tetrachloroethane	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
1,1,1-Trichloroethane	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
1,1,2,2-Tetrachloroethane	ND	0.003	mg/Kg	1	10/10/24	JLI	SW8260D
1,1,2-Trichloroethane	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
1,1-Dichloroethane	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
1,1-Dichloroethene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
1,1-Dichloropropene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
1,2,3-Trichlorobenzene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
1,2,3-Trichloropropane	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
1,2,4-Trichlorobenzene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
1,2,4-Trimethylbenzene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
1,2-Dibromo-3-chloropropane	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
1,2-Dibromoethane	ND	0.00051	mg/Kg	1	10/10/24	JLI	SW8260D
1,2-Dichlorobenzene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
1,2-Dichloroethane	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
1,2-Dichloropropane	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
1,3,5-Trimethylbenzene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
1,3-Dichlorobenzene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
1,3-Dichloropropane	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
1,4-Dichlorobenzene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
2,2-Dichloropropane	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
2-Chlorotoluene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
2-Hexanone	ND	0.025	mg/Kg	1	10/10/24	JLI	SW8260D

Project ID: WALTHAM MA
Client ID: TP-2 - 2-4`

Phoenix I.D.: CR82125

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Isopropyltoluene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
4-Chlorotoluene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
4-Methyl-2-pentanone	ND	0.025	mg/Kg	1	10/10/24	JLI	SW8260D
Acetone	ND	0.25	mg/Kg	1	10/10/24	JLI	SW8260D
Acrylonitrile	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Benzene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Bromobenzene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Bromochloromethane	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Bromodichloromethane	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Bromoform	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Bromomethane	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Carbon Disulfide	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Carbon tetrachloride	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Chlorobenzene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Chloroethane	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Chloroform	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Chloromethane	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
cis-1,2-Dichloroethene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
cis-1,3-Dichloropropene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Dibromochloromethane	ND	0.003	mg/Kg	1	10/10/24	JLI	SW8260D
Dibromomethane	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Dichlorodifluoromethane	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Ethylbenzene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Hexachlorobutadiene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Isopropylbenzene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
m&p-Xylene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Methyl Ethyl Ketone	ND	0.03	mg/Kg	1	10/10/24	JLI	SW8260D
Methyl t-butyl ether (MTBE)	ND	0.01	mg/Kg	1	10/10/24	JLI	SW8260D
Methylene chloride	ND	0.01	mg/Kg	1	10/10/24	JLI	SW8260D
Naphthalene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
n-Butylbenzene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
n-Propylbenzene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
o-Xylene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
p-Isopropyltoluene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
sec-Butylbenzene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Styrene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
tert-Butylbenzene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Tetrachloroethene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Tetrahydrofuran (THF)	ND	0.01	mg/Kg	1	10/10/24	JLI	SW8260D
Toluene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Total Xylenes	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
trans-1,2-Dichloroethene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
trans-1,3-Dichloropropene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
trans-1,4-dichloro-2-butene	ND	0.01	mg/Kg	1	10/10/24	JLI	SW8260D
Trichloroethene	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Trichlorofluoromethane	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D
Trichlorotrifluoroethane	ND	0.01	mg/Kg	1	10/10/24	JLI	SW8260D
Vinyl chloride	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D

QA/QC Surrogates

Project ID: WALTHAM MA
Client ID: TP-2 - 2-4`

Phoenix I.D.: CR82125

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% 1,2-dichlorobenzene-d4	100		%	1	10/10/24	JLI	70 - 130 %
% Bromofluorobenzene	87		%	1	10/10/24	JLI	70 - 130 %
% Dibromofluoromethane	95		%	1	10/10/24	JLI	70 - 130 %
% Toluene-d8	99		%	1	10/10/24	JLI	70 - 130 %
Oxygenates & Dioxane							
1,4-Dioxane	ND	0.1	mg/Kg	1	10/10/24	JLI	SW8260D (OXY)
Diethyl ether	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D (OXY)
Di-isopropyl ether	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D (OXY)
Ethyl tert-butyl ether	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D (OXY)
tert-amyl methyl ether	ND	0.0051	mg/Kg	1	10/10/24	JLI	SW8260D (OXY)
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	5.8	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	5.8	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	5.8	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	5.8	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	5.8	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
Benzene	ND	0.029	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
Ethyl Benzene	ND	0.058	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
MTBE	ND	0.058	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
Naphthalene	ND	0.29	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
Toluene	ND	0.058	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
m,p-Xylenes	ND	0.058	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
o-Xylene	ND	0.058	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	83		%	50	10/11/24	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	72		%	50	10/11/24	V	70 - 130 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

VPH:
*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
October 17, 2024
Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

Analysis Report

October 17, 2024

FOR: Attn: Richard Learned
Stantec
400 Crown Colony Drive/Suite 200
Quincy MA 02169

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/08/24	11:15
Location Code:	STANTECMA	Received by:	SW	10/09/24	15:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	195150185				

Laboratory Data

SDG ID: GCR82121
Phoenix ID: CR82126

Project ID: WALTHAM MA
Client ID: TP-2 - 4-6`

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Field Extraction	Completed				10/08/24		SW5035A
MA Petroleum Hydrocarbon (VPH)	Completed				10/11/24	V	MA VPH 2/20182.1, 201
Volatiles							
1,1,1,2-Tetrachloroethane	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
1,1,1-Trichloroethane	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
1,1,2,2-Tetrachloroethane	ND	0.0027	mg/Kg	1	10/10/24	JLI	SW8260D
1,1,2-Trichloroethane	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
1,1-Dichloroethane	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
1,1-Dichloroethene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
1,1-Dichloropropene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
1,2,3-Trichlorobenzene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
1,2,3-Trichloropropane	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
1,2,4-Trichlorobenzene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
1,2,4-Trimethylbenzene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
1,2-Dibromo-3-chloropropane	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
1,2-Dibromoethane	ND	0.00046	mg/Kg	1	10/10/24	JLI	SW8260D
1,2-Dichlorobenzene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
1,2-Dichloroethane	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
1,2-Dichloropropane	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
1,3,5-Trimethylbenzene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
1,3-Dichlorobenzene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
1,3-Dichloropropane	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
1,4-Dichlorobenzene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
2,2-Dichloropropane	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
2-Chlorotoluene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
2-Hexanone	ND	0.023	mg/Kg	1	10/10/24	JLI	SW8260D

Project ID: WALTHAM MA
Client ID: TP-2 - 4-6`

Phoenix I.D.: CR82126

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Isopropyltoluene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
4-Chlorotoluene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
4-Methyl-2-pentanone	ND	0.023	mg/Kg	1	10/10/24	JLI	SW8260D
Acetone	ND	0.23	mg/Kg	1	10/10/24	JLI	SW8260D
Acrylonitrile	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Benzene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Bromobenzene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Bromochloromethane	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Bromodichloromethane	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Bromoform	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Bromomethane	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Carbon Disulfide	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Carbon tetrachloride	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Chlorobenzene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Chloroethane	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Chloroform	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Chloromethane	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
cis-1,2-Dichloroethene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
cis-1,3-Dichloropropene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Dibromochloromethane	ND	0.0027	mg/Kg	1	10/10/24	JLI	SW8260D
Dibromomethane	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Dichlorodifluoromethane	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Ethylbenzene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Hexachlorobutadiene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Isopropylbenzene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
m&p-Xylene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Methyl Ethyl Ketone	ND	0.027	mg/Kg	1	10/10/24	JLI	SW8260D
Methyl t-butyl ether (MTBE)	ND	0.0091	mg/Kg	1	10/10/24	JLI	SW8260D
Methylene chloride	ND	0.0091	mg/Kg	1	10/10/24	JLI	SW8260D
Naphthalene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
n-Butylbenzene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
n-Propylbenzene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
o-Xylene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
p-Isopropyltoluene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
sec-Butylbenzene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Styrene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
tert-Butylbenzene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Tetrachloroethene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Tetrahydrofuran (THF)	ND	0.0091	mg/Kg	1	10/10/24	JLI	SW8260D
Toluene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Total Xylenes	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
trans-1,2-Dichloroethene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
trans-1,3-Dichloropropene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
trans-1,4-dichloro-2-butene	ND	0.0091	mg/Kg	1	10/10/24	JLI	SW8260D
Trichloroethene	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Trichlorofluoromethane	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D
Trichlorotrifluoroethane	ND	0.0091	mg/Kg	1	10/10/24	JLI	SW8260D
Vinyl chloride	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D

QA/QC Surrogates

Project ID: WALTHAM MA
Client ID: TP-2 - 4-6`

Phoenix I.D.: CR82126

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
% 1,2-dichlorobenzene-d4	100		%	1	10/10/24	JLI	70 - 130 %
% Bromofluorobenzene	87		%	1	10/10/24	JLI	70 - 130 %
% Dibromofluoromethane	92		%	1	10/10/24	JLI	70 - 130 %
% Toluene-d8	100		%	1	10/10/24	JLI	70 - 130 %
Oxygenates & Dioxane							
1,4-Dioxane	ND	0.091	mg/Kg	1	10/10/24	JLI	SW8260D (OXY)
Diethyl ether	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D (OXY)
Di-isopropyl ether	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D (OXY)
Ethyl tert-butyl ether	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D (OXY)
tert-amyl methyl ether	ND	0.0046	mg/Kg	1	10/10/24	JLI	SW8260D (OXY)
MA Volatile Petroleum Hydrocarbons (VPH)							
Unadjusted C5-C8 Aliphatics (*1)	ND	5.4	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
Unadjusted C9-C12 Aliphatics (*1)	ND	5.4	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
C5-C8 Aliphatic Hydrocarbons *1,2	ND	5.4	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
C9-C12 Aliphatic Hydrocarbons *1,3	ND	5.4	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
C9-C10 Aromatic Hydrocarbons *1	ND	5.4	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
Benzene	ND	0.027	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
Ethyl Benzene	ND	0.054	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
MTBE	ND	0.054	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
Naphthalene	ND	0.27	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
Toluene	ND	0.054	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
m,p-Xylenes	ND	0.054	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
o-Xylene	ND	0.054	mg/Kg	50	10/11/24	V	MA VPH2.1, 2018
QA/QC Surrogates							
% 2,5-Dibromotoluene (FID)	82		%	50	10/11/24	V	70 - 130 %
% 2,5-Dibromotoluene (PID)	71		%	50	10/11/24	V	70 - 130 %

Project ID: WALTHAM MA
Client ID: TP-2 - 4-6`

Phoenix I.D.: CR82126

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

VPH:
*1 Range data exclude concentrations of any surrogate(s) and/or Internal stds eluting in that range.
*2 C5-C8 and C9-C12 Aliphatic exclude the conc. of Target Analytes in that range.
*3 C9-C12 Aliphatic also exclude C9-C10 Aromatic Hydrocarbons.

Results are reported on an ``as received`` basis, and are not corrected for dry weight.

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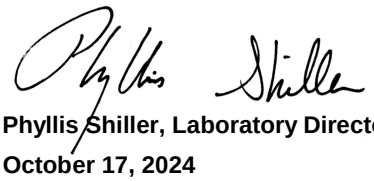

Phyllis Shiller, Laboratory Director
October 17, 2024
Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

Analysis Report

October 17, 2024

FOR: Attn: Richard Learned
Stantec
400 Crown Colony Drive/Suite 200
Quincy MA 02169

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/08/24	10:50
Location Code:	STANTECMA	Received by:	SW	10/09/24	15:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	195150185				

Laboratory Data

SDG ID: GCR82121
Phoenix ID: CR82127

Project ID: WALTHAM MA
Client ID: TP-2 - 2-4` COMP

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.39	0.39	mg/Kg	1	10/10/24	CPP	SW6010D
Arsenic	4.30	0.77	mg/Kg	1	10/10/24	CPP	SW6010D
Barium	41.7	0.39	mg/Kg	1	10/10/24	CPP	SW6010D
Beryllium	0.52	0.31	mg/Kg	1	10/10/24	CPP	SW6010D
Cadmium	< 0.39	0.39	mg/Kg	1	10/10/24	CPP	SW6010D
Chromium	16.4	0.39	mg/Kg	1	10/10/24	CPP	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	10/10/24	ZT	SW7471B
Nickel	11.3	0.39	mg/Kg	1	10/10/24	CPP	SW6010D
Lead	7.17	0.39	mg/Kg	1	10/10/24	CPP	SW6010D
Antimony	< 3.9	3.9	mg/Kg	1	10/10/24	CPP	SW6010D
Selenium	< 1.5	1.5	mg/Kg	1	10/10/24	CPP	SW6010D
Thallium	< 3.5	3.5	mg/Kg	1	10/10/24	CPP	SW6010D
Vanadium	38.3	0.39	mg/Kg	1	10/10/24	CPP	SW6010D
Zinc	33.7	0.8	mg/Kg	1	10/10/24	CPP	SW6010D
Percent Solid	82		%		10/09/24	CV	SW846-%Solid
Corrosivity	Negative		Pos/Neg	1	10/09/24	MW/ER	SW846-Corr
Chromium, Hex. (SW3060A digestion	< 0.46	0.46	mg/Kg	1	10/11/24	NP	SW7196A
pH at 25C - Soil	6.86	1.00	pH Units	1	10/09/24 22:36	MW/ER	SW846 9045D
Redox Potential	216		mV	1	10/09/24	MW/ER	SM2580B-09
Mercury Digestion	Completed				10/10/24	AC1/AC1	SW7471B
Extraction of ETPH	Completed				10/10/24	H/U	SW3546
EPH Extraction	Completed				10/11/24	K/K	SW3546
Soil Extraction for PCB	Completed				10/14/24	H/A	SW3546
Soil Extraction for SVOA	Completed				10/11/24	X/X	SW3546
Total Metals Digest	Completed				10/09/24	J/AG	SW3050B
Ext. Petroleum Hydrocarbons	Completed				10/09/24		MADEP EPH-19

Ver 1

Project ID: WALTHAM MA
Client ID: TP-2 - 2-4` COMP

Phoenix I.D.: CR82127

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Polychlorinated Biphenyls							
PCB-1016	ND	0.079	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1221	ND	0.079	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1232	ND	0.079	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1242	ND	0.079	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1248	ND	0.079	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1254	ND	0.079	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1260	ND	0.079	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1262	ND	0.079	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1268	ND	0.079	mg/Kg	2	10/15/24	SC	SW8082A
QA/QC Surrogates							
% DCBP	83		%	2	10/15/24	SC	30 - 150 %
% DCBP (Confirmation)	79		%	2	10/15/24	SC	30 - 150 %
% TCMX	79		%	2	10/15/24	SC	30 - 150 %
% TCMX (Confirmation)	75		%	2	10/15/24	SC	30 - 150 %
TPH by GC (Extractable (C9-C36))							
Fuel Oil #2 / Diesel Fuel	ND	60	mg/kg	1	10/11/24	JRB	SW8015D
Fuel Oil #4	ND	60	mg/kg	1	10/11/24	JRB	SW8015D
Fuel Oil #6	ND	60	mg/kg	1	10/11/24	JRB	SW8015D
Kerosene	ND	60	mg/kg	1	10/11/24	JRB	SW8015D
Motor Oil	ND	60	mg/kg	1	10/11/24	JRB	SW8015D
Total TPH	ND	60	mg/kg	1	10/11/24	JRB	SW8015D
Unidentified	ND	60	mg/kg	1	10/11/24	JRB	SW8015D
QA/QC Surrogates							
% COD (surr)	91		%	1	10/11/24	JRB	50 - 150 %
% Terphenyl (surr)	91		%	1	10/11/24	JRB	50 - 150 %
Semivolatiles							
1,1-Biphenyl	ND	0.05	mg/Kg	1	10/15/24	MR	SW8270E
1,2,4,5-Tetrachlorobenzene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
1,2,4-Trichlorobenzene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
1,2-Dichlorobenzene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
1,2-Diphenylhydrazine	ND	0.4	mg/Kg	1	10/15/24	MR	SW8270E
1,3-Dichlorobenzene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
1,4-Dichlorobenzene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
2,2'-Oxybis(1-Chloropropane)	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
2,4,5-Trichlorophenol	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
2,4,6-Trichlorophenol	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
2,4-Dichlorophenol	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
2,4-Dimethylphenol	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
2,4-Dinitrophenol	ND	0.4	mg/Kg	1	10/15/24	MR	SW8270E
2,4-Dinitrotoluene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
2,6-Dinitrotoluene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
2-Chloronaphthalene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
2-Chlorophenol	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
2-Methylnaphthalene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
2-Methylphenol (o-cresol)	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
2-Nitroaniline	ND	0.4	mg/Kg	1	10/15/24	MR	SW8270E

Project ID: WALTHAM MA
Client ID: TP-2 - 2-4` COMP

Phoenix I.D.: CR82127

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
3&4-Methylphenol (m&p-cresol)	ND	0.4	mg/Kg	1	10/15/24	MR	SW8270E
3,3'-Dichlorobenzidine	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
3-Nitroaniline	ND	0.4	mg/Kg	1	10/15/24	MR	SW8270E
4,6-Dinitro-2-methylphenol	ND	0.4	mg/Kg	1	10/15/24	MR	SW8270E
4-Bromophenyl phenyl ether	ND	0.4	mg/Kg	1	10/15/24	MR	SW8270E
4-Chloro-3-methylphenol	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
4-Chloroaniline	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
4-Chlorophenyl phenyl ether	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
4-Nitroaniline	ND	0.64	mg/Kg	1	10/15/24	MR	SW8270E
4-Nitrophenol	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Acenaphthene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Acenaphthylene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Acetophenone	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Aniline	ND	0.4	mg/Kg	1	10/15/24	MR	SW8270E
Anthracene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Benz(a)anthracene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Benzidine	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Benzo(a)pyrene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Benzo(b)fluoranthene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Benzo(ghi)perylene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Benzo(k)fluoranthene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Benzoic acid	ND	0.8	mg/Kg	1	10/15/24	MR	SW8270E
Benzyl butyl phthalate	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Bis(2-chloroethoxy)methane	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Bis(2-chloroethyl)ether	ND	0.4	mg/Kg	1	10/15/24	MR	SW8270E
Bis(2-ethylhexyl)phthalate	ND	0.4	mg/Kg	1	10/15/24	MR	SW8270E
Carbazole	ND	0.4	mg/Kg	1	10/15/24	MR	SW8270E
Chrysene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Dibenz(a,h)anthracene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Dibenzofuran	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Diethyl phthalate	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Dimethylphthalate	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Di-n-butylphthalate	ND	0.4	mg/Kg	1	10/15/24	MR	SW8270E
Di-n-octylphthalate	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Fluoranthene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Fluorene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Hexachlorobenzene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Hexachlorobutadiene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Hexachlorocyclopentadiene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Hexachloroethane	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Indeno(1,2,3-cd)pyrene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Isophorone	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Naphthalene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Nitrobenzene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
N-Nitrosodimethylamine	ND	0.4	mg/Kg	1	10/15/24	MR	SW8270E
N-Nitrosodi-n-propylamine	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
N-Nitrosodiphenylamine	ND	0.4	mg/Kg	1	10/15/24	MR	SW8270E
Pentachloronitrobenzene	ND	0.4	mg/Kg	1	10/15/24	MR	SW8270E

Project ID: WALTHAM MA
Client ID: TP-2 - 2-4` COMP

Phoenix I.D.: CR82127

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachlorophenol	ND	0.4	mg/Kg	1	10/15/24	MR	SW8270E
Phenanthrene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Phenol	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Pyrene	ND	0.28	mg/Kg	1	10/15/24	MR	SW8270E
Pyridine	ND	0.4	mg/Kg	1	10/15/24	MR	SW8270E
QA/QC Surrogates							
% 2,4,6-Tribromophenol	112		%	1	10/15/24	MR	30 - 130 %
% 2-Fluorobiphenyl	77		%	1	10/15/24	MR	30 - 130 %
% 2-Fluorophenol	69		%	1	10/15/24	MR	30 - 130 %
% Nitrobenzene-d5	77		%	1	10/15/24	MR	30 - 130 %
% Phenol-d5	79		%	1	10/15/24	MR	30 - 130 %
% Terphenyl-d14	71		%	1	10/15/24	MR	30 - 130 %
EPH Other PAH Target Analytes							
Acenaphthylene	ND	0.28	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Anthracene	ND	0.28	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Benz(a)anthracene	ND	0.28	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Benzo(a)pyrene	ND	0.28	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Benzo(b)fluoranthene	ND	0.28	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Benzo(ghi)perylene	ND	0.28	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Benzo(k)fluoranthene	ND	0.28	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Chrysene	ND	0.28	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Dibenz(a,h)anthracene	ND	0.28	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Fluoranthene	ND	0.28	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Fluorene	ND	0.28	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Indeno(1,2,3-cd)pyrene	ND	0.28	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Pyrene	ND	0.28	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
QA/QC Surrogates							
% 2-Fluorobiphenyl	77		%	1	10/15/24	MR	30 - 130 %
% Nitrobenzene-d5	77		%	1	10/15/24	MR	30 - 130 %
% Terphenyl-d14	71		%	1	10/15/24	MR	30 - 130 %
EPH Diesel PAH Target Analytes							
2-Methylnaphthalene	ND	0.28	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Acenaphthene	ND	0.28	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Naphthalene	ND	0.28	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Phenanthrene	ND	0.28	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	80	mg/Kg	1	10/11/24	AW	MA EPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	80	mg/Kg	1	10/11/24	AW	MA EPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	80	mg/Kg	1	10/11/24	AW	MA EPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	80	mg/Kg	1	10/11/24	AW	MA EPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	82		%	1	10/11/24	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	110		%	1	10/11/24	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	109		%	1	10/11/24	AW	40 - 140 %
% o-terphenyl (aromatic)	79		%	1	10/11/24	AW	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

Hexavalent Chromium:
This sample is in a reducing state.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

October 17, 2024

Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

Analysis Report

October 17, 2024

FOR: Attn: Richard Learned
Stantec
400 Crown Colony Drive/Suite 200
Quincy MA 02169

Sample Information		Custody Information		Date	Time
Matrix:	SOIL	Collected by:		10/08/24	11:15
Location Code:	STANTECMA	Received by:	SW	10/09/24	15:19
Rush Request:	Standard	Analyzed by:	see "By" below		
P.O.#:	195150185				

Laboratory Data

SDG ID: GCR82121
Phoenix ID: CR82128

Project ID: WALTHAM MA
Client ID: TP-2 - 4-6` COMP

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Silver	< 0.42	0.42	mg/Kg	1	10/11/24	CPP	SW6010D
Arsenic	2.56	0.83	mg/Kg	1	10/11/24	CPP	SW6010D
Barium	36.4	0.42	mg/Kg	1	10/11/24	CPP	SW6010D
Beryllium	0.43	0.33	mg/Kg	1	10/11/24	CPP	SW6010D
Cadmium	< 0.42	0.42	mg/Kg	1	10/11/24	CPP	SW6010D
Chromium	14.4	0.42	mg/Kg	1	10/11/24	CPP	SW6010D
Mercury	< 0.03	0.03	mg/Kg	2	10/10/24	AL1	SW7471B
Nickel	9.71	0.42	mg/Kg	1	10/11/24	CPP	SW6010D
Lead	6.06	0.42	mg/Kg	1	10/11/24	CPP	SW6010D
Antimony	< 4.2	4.2	mg/Kg	1	10/11/24	CPP	SW6010D
Selenium	< 1.7	1.7	mg/Kg	1	10/11/24	CPP	SW6010D
Thallium	< 3.8	3.8	mg/Kg	1	10/11/24	CPP	SW6010D
Vanadium	32.6	0.42	mg/Kg	1	10/11/24	CPP	SW6010D
Zinc	29.8	0.8	mg/Kg	1	10/11/24	CPP	SW6010D
Percent Solid	81		%		10/09/24	CV	SW846-%Solid
Corrosivity	Negative		Pos/Neg	1	10/09/24	MW/ER	SW846-Corr
Chromium, Hex. (SW3060A digestion	< 0.44	0.44	mg/Kg	1	10/11/24	NP	SW7196A
pH at 25C - Soil	6.50	1.00	pH Units	1	10/09/24 22:36	MW/ER	SW846 9045D
Redox Potential	87.0		mV	1	10/09/24	MW/ER	SM2580B-09
Mercury Digestion	Completed				10/10/24	AC1/AC1	SW7471B
Extraction of ETPH	Completed				10/10/24	H/U	SW3546
EPH Extraction	Completed				10/11/24	K/K	SW3546
Soil Extraction for PCB	Completed				10/14/24	H/A	SW3546
Soil Extraction for SVOA	Completed				10/11/24	X/X	SW3546
Total Metals Digest	Completed				10/10/24	J/AG	SW3050B
Ext. Petroleum Hydrocarbons	Completed				10/09/24		MADEP EPH-19

Ver 1

Project ID: WALTHAM MA
Client ID: TP-2 - 4-6` COMP

Phoenix I.D.: CR82128

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Polychlorinated Biphenyls							
PCB-1016	ND	0.082	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1221	ND	0.082	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1232	ND	0.082	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1242	ND	0.082	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1248	ND	0.082	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1254	ND	0.082	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1260	ND	0.082	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1262	ND	0.082	mg/Kg	2	10/15/24	SC	SW8082A
PCB-1268	ND	0.082	mg/Kg	2	10/15/24	SC	SW8082A
QA/QC Surrogates							
% DCBP	91		%	2	10/15/24	SC	30 - 150 %
% DCBP (Confirmation)	80		%	2	10/15/24	SC	30 - 150 %
% TCMX	80		%	2	10/15/24	SC	30 - 150 %
% TCMX (Confirmation)	74		%	2	10/15/24	SC	30 - 150 %
TPH by GC (Extractable (C9-C36))							
Fuel Oil #2 / Diesel Fuel	ND	600	mg/kg	10	10/11/24	JRB	SW8015D
Fuel Oil #4	ND	600	mg/kg	10	10/11/24	JRB	SW8015D
Fuel Oil #6	ND	600	mg/kg	10	10/11/24	JRB	SW8015D
Kerosene	ND	600	mg/kg	10	10/11/24	JRB	SW8015D
Motor Oil	ND	600	mg/kg	10	10/11/24	JRB	SW8015D
Total TPH	900	600	mg/kg	10	10/11/24	JRB	SW8015D
Unidentified	**	600	mg/kg	10	10/11/24	JRB	SW8015D
QA/QC Surrogates							
% COD (surr)	Diluted Out		%	10	10/11/24	JRB	50 - 150 %
% Terphenyl (surr)	Diluted Out		%	10	10/11/24	JRB	50 - 150 %
Semivolatiles							
1,1-Biphenyl	ND	0.05	mg/Kg	1	10/15/24	MR	SW8270E
1,2,4,5-Tetrachlorobenzene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
1,2,4-Trichlorobenzene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
1,2-Dichlorobenzene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
1,2-Diphenylhydrazine	ND	0.41	mg/Kg	1	10/15/24	MR	SW8270E
1,3-Dichlorobenzene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
1,4-Dichlorobenzene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
2,2'-Oxybis(1-Chloropropane)	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
2,4,5-Trichlorophenol	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
2,4,6-Trichlorophenol	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
2,4-Dichlorophenol	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
2,4-Dimethylphenol	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
2,4-Dinitrophenol	ND	0.41	mg/Kg	1	10/15/24	MR	SW8270E
2,4-Dinitrotoluene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
2,6-Dinitrotoluene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
2-Chloronaphthalene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
2-Chlorophenol	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
2-Methylnaphthalene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
2-Methylphenol (o-cresol)	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
2-Nitroaniline	ND	0.41	mg/Kg	1	10/15/24	MR	SW8270E

Project ID: WALTHAM MA
Client ID: TP-2 - 4-6` COMP

Phoenix I.D.: CR82128

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
2-Nitrophenol	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
3&4-Methylphenol (m&p-cresol)	ND	0.41	mg/Kg	1	10/15/24	MR	SW8270E
3,3'-Dichlorobenzidine	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
3-Nitroaniline	ND	0.41	mg/Kg	1	10/15/24	MR	SW8270E
4,6-Dinitro-2-methylphenol	ND	0.41	mg/Kg	1	10/15/24	MR	SW8270E
4-Bromophenyl phenyl ether	ND	0.41	mg/Kg	1	10/15/24	MR	SW8270E
4-Chloro-3-methylphenol	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
4-Chloroaniline	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
4-Chlorophenyl phenyl ether	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
4-Nitroaniline	ND	0.65	mg/Kg	1	10/15/24	MR	SW8270E
4-Nitrophenol	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Acenaphthene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Acenaphthylene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Acetophenone	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Aniline	ND	0.41	mg/Kg	1	10/15/24	MR	SW8270E
Anthracene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Benz(a)anthracene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Benzidine	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Benzo(a)pyrene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Benzo(b)fluoranthene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Benzo(ghi)perylene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Benzo(k)fluoranthene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Benzoic acid	ND	0.82	mg/Kg	1	10/15/24	MR	SW8270E
Benzyl butyl phthalate	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Bis(2-chloroethoxy)methane	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Bis(2-chloroethyl)ether	ND	0.41	mg/Kg	1	10/15/24	MR	SW8270E
Bis(2-ethylhexyl)phthalate	ND	0.41	mg/Kg	1	10/15/24	MR	SW8270E
Carbazole	ND	0.41	mg/Kg	1	10/15/24	MR	SW8270E
Chrysene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Dibenz(a,h)anthracene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Dibenzofuran	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Diethyl phthalate	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Dimethylphthalate	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Di-n-butylphthalate	ND	0.41	mg/Kg	1	10/15/24	MR	SW8270E
Di-n-octylphthalate	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Fluoranthene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Fluorene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Hexachlorobenzene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Hexachlorobutadiene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Hexachlorocyclopentadiene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Hexachloroethane	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Indeno(1,2,3-cd)pyrene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Isophorone	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Naphthalene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Nitrobenzene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
N-Nitrosodimethylamine	ND	0.41	mg/Kg	1	10/15/24	MR	SW8270E
N-Nitrosodi-n-propylamine	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
N-Nitrosodiphenylamine	ND	0.41	mg/Kg	1	10/15/24	MR	SW8270E
Pentachloronitrobenzene	ND	0.41	mg/Kg	1	10/15/24	MR	SW8270E

Project ID: WALTHAM MA
Client ID: TP-2 - 4-6` COMP

Phoenix I.D.: CR82128

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Pentachlorophenol	ND	0.41	mg/Kg	1	10/15/24	MR	SW8270E
Phenanthrene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Phenol	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Pyrene	ND	0.29	mg/Kg	1	10/15/24	MR	SW8270E
Pyridine	ND	0.41	mg/Kg	1	10/15/24	MR	SW8270E
QA/QC Surrogates							
% 2,4,6-Tribromophenol	95		%	1	10/15/24	MR	30 - 130 %
% 2-Fluorobiphenyl	73		%	1	10/15/24	MR	30 - 130 %
% 2-Fluorophenol	74		%	1	10/15/24	MR	30 - 130 %
% Nitrobenzene-d5	73		%	1	10/15/24	MR	30 - 130 %
% Phenol-d5	74		%	1	10/15/24	MR	30 - 130 %
% Terphenyl-d14	65		%	1	10/15/24	MR	30 - 130 %
EPH Other PAH Target Analytes							
Acenaphthylene	ND	0.29	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Anthracene	ND	0.29	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Benz(a)anthracene	ND	0.29	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Benzo(a)pyrene	ND	0.29	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Benzo(b)fluoranthene	ND	0.29	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Benzo(ghi)perylene	ND	0.29	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Benzo(k)fluoranthene	ND	0.29	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Chrysene	ND	0.29	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Dibenz(a,h)anthracene	ND	0.29	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Fluoranthene	ND	0.29	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Fluorene	ND	0.29	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Indeno(1,2,3-cd)pyrene	ND	0.29	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Pyrene	ND	0.29	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
QA/QC Surrogates							
% 2-Fluorobiphenyl	73		%	1	10/15/24	MR	30 - 130 %
% Nitrobenzene-d5	73		%	1	10/15/24	MR	30 - 130 %
% Terphenyl-d14	65		%	1	10/15/24	MR	30 - 130 %
EPH Diesel PAH Target Analytes							
2-Methylnaphthalene	ND	0.29	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Acenaphthene	ND	0.29	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Naphthalene	ND	0.29	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
Phenanthrene	ND	0.29	mg/Kg	1	10/15/24	MR	MA EPH 5/2004
MA EPH Aliphatic/Aromatic Ranges							
C11-C22 Aromatic Hydrocarbons 1,2	ND	80	mg/Kg	1	10/14/24	AW	MA EPH 5/2019
C11-C22 Aromatic Hydrocarbons Un	ND	80	mg/Kg	1	10/14/24	AW	MA EPH 5/2019
C19-C36 Aliphatic Hydrocarbons 1*	ND	80	mg/Kg	1	10/14/24	AW	MA EPH 5/2019
C9-C18 Aliphatic Hydrocarbons 1*	ND	80	mg/Kg	1	10/14/24	AW	MA EPH 5/2019
QA/QC Surrogates							
% 1-chlorooctadecane (aliphatic)	70		%	1	10/14/24	AW	40 - 140 %
% 2-Bromonaphthalene (Fractionation)	121		%	1	10/14/24	AW	40 - 140 %
% 2-Fluorobiphenyl (Fractionation)	123		%	1	10/14/24	AW	40 - 140 %
% o-terphenyl (aromatic)	86		%	1	10/14/24	AW	40 - 140 %

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference

Massachusetts does not offer certification for Soil/Solid matrices.

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level
QA/QC Surrogates: Surrogates are compounds (preceeded with a %) added by the lab to determine analysis efficiency. Surrogate results(%) listed in the report are not "detected" compounds.

Comments:

Corrosivity is based solely on the pH analysis performed above.

The regulatory hold time for pH is immediately. This pH was performed in the laboratory and may be considered outside of hold-time.

Per 1.4.6 of EPA method 8270D, 1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. Azobenzene is used for the calibration of 1,2-Diphenylhydrazine.

MAEPH:
1* Hydrocarbon range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range.
2* C11-C22 Aromatic Hydrocarbons exclude the concentration of Target PAH analytes eluting in that range.

Hexavalent Chromium:
This sample is in a reducing state.

TPH Comment:
**Petroleum hydrocarbon chromatogram contains a multicomponent hydrocarbon distribution in the range of C19 to C36. The sample was quantitated against a C9-C36 alkane hydrocarbon standard.

All soils, solids and sludges are reported on a dry weight basis unless otherwise noted in the sample comments.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director

October 17, 2024

Reviewed and Released by: Ethan Lee, Project Manager

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102

QA/QC Report

October 17, 2024

QA/QC Data

SDG I.D.: GCR82121

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 753206 (mg/kg), QC Sample No: CR82749 40X (CR82123, CR82124, CR82127, CR82128)														
Chromium, Hexavalent - Soil														
Chromium, Hexavalent	BRL	0.40	<0.36	<0.36	NC	95.5						80 - 120	30	
Chromium, Hexavalent (Ins)						102			92.6			80 - 120	30	
Chromium, Hexavalent (Sol)						92.9			81.7			80 - 120	30	
Comment:														
The QC sample is in a reducing state, acceptance criteria are not applicable for samples in a reducing state. The soluble spike was analyzed twice with similar recoveries.														
Additional Hexavalent Chromium criteria: MS acceptance range is 75-125%.														
QA/QC Batch 753003 (mg/kg), QC Sample No: CR82040 2X (CR82123, CR82124, CR82127)														
Mercury - Soil	BRL	0.02	0.06	0.06	NC	97.2	93.3	4.1	82.1	76.8	6.7	75 - 125	30	m
Comment:														
Additional Mercury Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range is 75-125% for aqueous and 80-120% for soils.														
QA/QC Batch 753004 (mg/kg), QC Sample No: CR82380 2X (CR82128)														
Mercury - Soil	BRL	0.03	<0.03	0.04	NC	94.8	95.5	0.7	120	121	0.8	75 - 125	30	m
Comment:														
Additional Mercury Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range is 75-125% for aqueous and 80-120% for soils.														
QA/QC Batch 752925 (mg/kg), QC Sample No: CR82123 (CR82123, CR82124, CR82127)														
ICP Metals - Soil														
Antimony	BRL	3.3	<3.6	<3.6	NC	104	102	1.9	94.0			75 - 125	30	
Arsenic	BRL	0.67	4.71	4.03	15.6	107	103	3.8	97.3			75 - 125	30	
Barium	BRL	0.33	35.1	41.2	16.0	125	126	0.8	106			75 - 125	30	l
Beryllium	BRL	0.27	0.42	0.51	NC	123	117	5.0	104			75 - 125	30	
Cadmium	BRL	0.33	<0.36	0.44	NC	118	117	0.9	103			75 - 125	30	
Chromium	BRL	0.33	16.8	17.5	4.10	119	113	5.2	102			75 - 125	30	
Lead	BRL	0.33	16.7	11.7	35.2	110	106	3.7	102			75 - 125	30	r
Nickel	BRL	0.33	13.5	13.8	2.20	124	118	5.0	101			75 - 125	30	
Selenium	BRL	1.3	<1.5	<1.4	NC	103	95.8	7.2	91.6			75 - 125	30	
Silver	BRL	0.33	<0.36	<0.36	NC	111	105	5.6	102			75 - 125	30	
Thallium	BRL	3.0	<3.3	<3.2	NC	110	113	2.7	100			75 - 125	30	
Vanadium	BRL	0.33	45.6	48.9	7.00	117	112	4.4	108			75 - 125	30	
Zinc	BRL	0.67	51.9	56.4	8.30	114	108	5.4	102			75 - 125	30	
Comment:														
Additional Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range 75-125%.														
QA/QC Batch 753123 (mg/kg), QC Sample No: CR82791 (CR82128)														
ICP Metals - Soil														
Antimony	BRL	3.3	<3.3	<3.2	NC	90.2	91.2	1.1	87.4			75 - 125	30	
Arsenic	BRL	0.67	2.17	3.60	NC	92.7	95.2	2.7	91.6			75 - 125	30	

QA/QC Data

SDG I.D.: GCR82121

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Barium	BRL	0.33	125	161	25.2	112	103	8.4	121			75 - 125	30	
Beryllium	BRL	0.27	0.50	0.64	NC	110	107	2.8	99.8			75 - 125	30	
Cadmium	BRL	0.33	<0.33	<0.32	NC	108	101	6.7	93.6			75 - 125	30	
Chromium	BRL	0.33	7.07	9.23	26.5	107	108	0.9	102			75 - 125	30	
Lead	BRL	0.33	3.2	5.44	NC	102	104	1.9	96.9			75 - 125	30	
Nickel	BRL	0.33	6.44	10.5	47.9	108	107	0.9	99.4			75 - 125	30	r
Selenium	BRL	1.3	<1.3	1.6	NC	86.2	88.7	2.9	84.3			75 - 125	30	
Silver	BRL	0.33	<0.33	0.33	NC	98.7	101	2.3	97.1			75 - 125	30	
Thallium	BRL	3.0	<1.3	<2.9	NC	109	101	7.6	94.7			75 - 125	30	
Vanadium	BRL	0.33	11.3	15.3	30.1	107	107	0.0	107			75 - 125	30	
Zinc	BRL	0.67	7.4	13.0	54.9	101	102	1.0	96.8			75 - 125	30	r

Comment:

Additional Criteria: LCS acceptance range is 80-120% for aqueous and for soils the acceptance range is set by vendor limits. MS acceptance range 75-125%.

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

Environmental Laboratories, Inc.
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QA/QC Report

October 17, 2024

QA/QC Data

SDG I.D.: GCR82121

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 752972 (PH), QC Sample No: CR81621 (CR82123, CR82124, CR82127, CR82128)													
pH			7.30	7.44	1.90	100						85 - 115	20
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													
QA/QC Batch 752973 (mV), QC Sample No: CR81621 (CR82123, CR82124, CR82127, CR82128)													
Redox Potential			206	200	NC	98.6						75 - 125	30
Comment:													
Additional: LCS acceptance range is 85-115% MS acceptance range 75-125%.													

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QA/QC Report

October 17, 2024

QA/QC Data

SDG I.D.: GCR82121

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
QA/QC Batch 753221 (mg/kg), QC Sample No: CR82366 (CR82123, CR82124, CR82127, CR82128)											
Extractable Petroleum Hydrocarbons - Soil											
C11-C22 Aromatic Hydrocarbons U	ND	3.3							40 - 140	25	
C9-C18 Aliphatic Hydrocarbons 1*	ND	3.3	57	54	5.4	64	63	1.6	40 - 140	25	
C19-C36 Aliphatic Hydrocarbons 1*	ND	3.3	72	69	4.3	77	75	2.6	40 - 140	25	
C11-C22 Aromatic Hydrocarbons 1	ND	3.3	82	79	3.7	83	90	8.1	40 - 140	25	
C9 - Nonane	ND	0.67	34	33	3.0	42	40	4.9	40 - 140	25	l
C-10 Decane	ND	0.67	47	44	6.6	52	52	0.0	40 - 140	25	
C12 - Dodecane	ND	0.67	51	48	6.1	59	57	3.4	40 - 140	25	
C14 - Tetradecane	ND	0.67	57	54	5.4	64	63	1.6	40 - 140	25	
C16 - Hexadecane	ND	0.67	67	63	6.2	73	72	1.4	40 - 140	25	
C18 - Octadecane	ND	0.67	89	83	7.0	94	91	3.2	40 - 140	25	
C19 - Nonadecane	ND	0.67	77	72	6.7	82	80	2.5	40 - 140	25	
C20 - Eicosane	ND	0.67	81	76	6.4	88	85	3.5	40 - 140	25	
C22 - Docosane	ND	0.67	84	80	4.9	90	81	10.5	40 - 140	25	
C24 - Tetracosane	ND	0.67	79	75	5.2	82	81	1.2	40 - 140	25	
C26 - Hexacosane	ND	0.67	78	73	6.6	81	80	1.2	40 - 140	25	
C28 - Octacosane	ND	0.67	75	71	5.5	80	78	2.5	40 - 140	25	
C30 - Tricotane	ND	0.67	76	73	4.0	81	79	2.5	40 - 140	25	
C36 - Hexatriacontane	ND	0.67	30	33	9.5	35	36	2.8	40 - 140	25	l,m
% 1-chlorooctadecane (aliphatic)	63	%	79	74	6.5	82	81	1.2	40 - 140	25	
% o-terphenyl (aromatic)	86	%	91	87	4.5	89	96	7.6	40 - 140	25	
% 2-Fluorobiphenyl (Fractionation)	124	%	130	128	1.6	125	130	3.9	40 - 140	25	
% 2-Bromonaphthalene (Fractionati	121	%	127	126	0.8	121	127	4.8	40 - 140	25	
% 2-Methylnaphthalene BT		%	0	0	NC				0 - 5		
% Naphthalene BT		%	0	0	NC				0 - 5		
Comment:											
Additional EPH fractionation criteria: Breakthrough criteria (BT) is 0 to 5%											
QA/QC Batch 753145 (mg/Kg), QC Sample No: CR82262 (CR82123, CR82124, CR82127, CR82128)											
TPH by GC (Extractable Products) - Soil											
Total TPH	ND	50	88	93	5.5	82	97	16.8	50 - 150	30	
% COD (surr)	94	%	103	59	54.3	54	57	5.4	50 - 150	30	r
% Terphenyl (surr)	87	%	82	83	1.2	75	82	8.9	50 - 150	30	
Comment:											
The ETPH/DRO LCS has been normalized based on the alkane calibration.											
QA/QC Batch 753373 (mg/Kg), QC Sample No: CR80942 2X (CR82123)											
Polychlorinated Biphenyls - Soil											
PCB-1016	ND	0.033	93	106	13.1	90	97	7.5	40 - 140	30	
PCB-1221	ND	0.033							40 - 140	30	
PCB-1232	ND	0.033							40 - 140	30	
PCB-1242	ND	0.033							40 - 140	30	
PCB-1248	ND	0.033							40 - 140	30	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
PCB-1254	ND	0.033							40 - 140	30	
PCB-1260	ND	0.033	94	109	14.8	90	90	0.0	40 - 140	30	
PCB-1262	ND	0.033							40 - 140	30	
PCB-1268	ND	0.033							40 - 140	30	
% DCBP (Surrogate Rec)	93	%	100	113	12.2	81	80	1.2	30 - 150	30	
% DCBP (Surrogate Rec) (Confirm	103	%	103	115	11.0	81	81	0.0	30 - 150	30	
% TCMX (Surrogate Rec)	80	%	86	96	11.0	78	84	7.4	30 - 150	30	
% TCMX (Surrogate Rec) (Confirm	82	%	86	96	11.0	78	85	8.6	30 - 150	30	
QA/QC Batch 753569 (mg/Kg), QC Sample No: CR84581 2X (CR82124, CR82127, CR82128)											
Polychlorinated Biphenyls - Soil											
PCB-1016	ND	0.033	116	109	6.2	113	111	1.8	40 - 140	30	
PCB-1221	ND	0.033							40 - 140	30	
PCB-1232	ND	0.033							40 - 140	30	
PCB-1242	ND	0.033							40 - 140	30	
PCB-1248	ND	0.033							40 - 140	30	
PCB-1254	ND	0.033							40 - 140	30	
PCB-1260	ND	0.033	121	109	10.4	114	113	0.9	40 - 140	30	
PCB-1262	ND	0.033							40 - 140	30	
PCB-1268	ND	0.033							40 - 140	30	
% DCBP (Surrogate Rec)	99	%	112	106	5.5	111	105	5.6	30 - 150	30	
% DCBP (Surrogate Rec) (Confirm	104	%	115	111	3.5	112	105	6.5	30 - 150	30	
% TCMX (Surrogate Rec)	97	%	105	97	7.9	108	102	5.7	30 - 150	30	
% TCMX (Surrogate Rec) (Confirm	96	%	107	100	6.8	107	101	5.8	30 - 150	30	
QA/QC Batch 753395 (mg/Kg), QC Sample No: CR84059 (CR82123, CR82124, CR82127, CR82128)											
Semivolatiles - Soil											
1,1-Biphenyl	ND	0.23	64	63	1.6	58			40 - 140	30	
1,2,4,5-Tetrachlorobenzene	ND	0.23	63	58	8.3	56			40 - 140	30	
1,2,4-Trichlorobenzene	ND	0.23	58	50	14.8	51			40 - 140	30	
1,2-Dichlorobenzene	ND	0.18	54	42	25.0	57			40 - 140	30	
1,2-Diphenylhydrazine	ND	0.23	71	70	1.4	86			40 - 140	30	
1,3-Dichlorobenzene	ND	0.23	52	40	26.1	48			40 - 140	30	
1,4-Dichlorobenzene	ND	0.23	52	41	23.7	51			40 - 140	30	
2,2'-Oxybis(1-Chloropropane)	ND	0.23	50	40	22.2	68			40 - 140	30	
2,4,5-Trichlorophenol	ND	0.23	77	74	4.0	90			30 - 130	30	
2,4,6-Trichlorophenol	ND	0.13	78	76	2.6	81			30 - 130	30	
2,4-Dichlorophenol	ND	0.13	78	72	8.0	84			30 - 130	30	
2,4-Dimethylphenol	ND	0.23	84	79	6.1	101			30 - 130	30	
2,4-Dinitrophenol	ND	0.23	87	67	26.0	136			30 - 130	30	m
2,4-Dinitrotoluene	ND	0.13	87	83	4.7	128			40 - 140	30	
2,6-Dinitrotoluene	ND	0.13	82	80	2.5	108			40 - 140	30	
2-Chloronaphthalene	ND	0.23	69	67	2.9	62			40 - 140	30	
2-Chlorophenol	ND	0.23	70	61	13.7	94			30 - 130	30	
2-Methylnaphthalene	ND	0.23	67	61	9.4	63			40 - 140	30	
2-Methylphenol (o-cresol)	ND	0.23	79	69	13.5	126			30 - 130	30	
2-Nitroaniline	ND	0.33	110	99	10.5	>200			40 - 140	30	m
2-Nitrophenol	ND	0.23	68	62	9.2	75			30 - 130	30	
3&4-Methylphenol (m&p-cresol)	ND	0.23	70	63	10.5	119			30 - 130	30	
3,3'-Dichlorobenzidine	ND	0.13	97	95	2.1	72			40 - 140	30	
3-Nitroaniline	ND	0.33	94	85	10.1	152			40 - 140	30	m
4,6-Dinitro-2-methylphenol	ND	0.23	80	73	9.2	126			30 - 130	30	
4-Bromophenyl phenyl ether	ND	0.23	73	76	4.0	56			40 - 140	30	
4-Chloro-3-methylphenol	ND	0.23	83	77	7.5	129			30 - 130	30	

QA/QC Data

SDG I.D.: GCR82121

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
4-Chloroaniline	ND	0.23	79	70	12.1	89			40 - 140	30	
4-Chlorophenyl phenyl ether	ND	0.23	75	76	1.3	78			40 - 140	30	
4-Nitroaniline	ND	0.23	80	76	5.1	134			40 - 140	30	
4-Nitrophenol	ND	0.23	86	72	17.7	163			30 - 130	30	m
Acenaphthene	ND	0.23	73	72	1.4	73			40 - 140	30	
Acenaphthylene	ND	0.13	66	66	0.0	65			40 - 140	30	
Acetophenone	ND	0.23	61	53	14.0	84			40 - 140	30	
Aniline	ND	0.33	65	59	9.7	56			40 - 140	30	
Anthracene	ND	0.23	76	77	1.3	71			40 - 140	30	
Benz(a)anthracene	ND	0.23	79	80	1.3	70			40 - 140	30	
Benzidine	ND	0.33	103	99	4.0	<10			40 - 140	30	m
Benzo(a)pyrene	ND	0.13	86	85	1.2	71			40 - 140	30	
Benzo(b)fluoranthene	ND	0.16	82	79	3.7	76			40 - 140	30	
Benzo(ghi)perylene	ND	0.23	75	70	6.9	60			40 - 140	30	
Benzo(k)fluoranthene	ND	0.23	77	75	2.6	70			40 - 140	30	
Benzoic Acid	ND	0.67	87	56	43.4	116			30 - 130	30	r
Benzyl butyl phthalate	ND	0.23	71	77	8.1	70			40 - 140	30	
Bis(2-chloroethoxy)methane	ND	0.23	66	62	6.3	73			40 - 140	30	
Bis(2-chloroethyl)ether	ND	0.13	59	49	18.5	82			40 - 140	30	
Bis(2-ethylhexyl)phthalate	ND	0.23	64	72	11.8	57			40 - 140	30	
Carbazole	ND	0.23	79	77	2.6	91			40 - 140	30	
Chrysene	ND	0.23	71	75	5.5	62			40 - 140	30	
Dibenz(a,h)anthracene	ND	0.13	71	75	5.5	65			40 - 140	30	
Dibenzofuran	ND	0.23	72	70	2.8	75			40 - 140	30	
Diethyl phthalate	ND	0.23	81	79	2.5	116			40 - 140	30	
Dimethylphthalate	ND	0.23	79	75	5.2	118			40 - 140	30	
Di-n-butylphthalate	ND	0.67	81	80	1.2	80			40 - 140	30	
Di-n-octylphthalate	ND	0.23	74	81	9.0	63			40 - 140	30	
Fluoranthene	ND	0.23	80	78	2.5	87			40 - 140	30	
Fluorene	ND	0.23	78	79	1.3	88			40 - 140	30	
Hexachlorobenzene	ND	0.13	72	74	2.7	54			40 - 140	30	
Hexachlorobutadiene	ND	0.23	57	47	19.2	45			40 - 140	30	
Hexachlorocyclopentadiene	ND	0.23	29	38	26.9	<10			40 - 140	30	l,m
Hexachloroethane	ND	0.13	51	39	26.7	47			40 - 140	30	l
Indeno(1,2,3-cd)pyrene	ND	0.23	72	77	6.7	62			40 - 140	30	
Isophorone	ND	0.13	63	59	6.6	70			40 - 140	30	
Naphthalene	ND	0.23	62	54	13.8	59			40 - 140	30	
Nitrobenzene	ND	0.13	65	54	18.5	86			40 - 140	30	
N-Nitrosodimethylamine	ND	0.23	48	42	13.3	91			40 - 140	30	
N-Nitrosodi-n-propylamine	ND	0.13	68	59	14.2	92			40 - 140	30	
N-Nitrosodiphenylamine	ND	0.13	76	73	4.0	98			40 - 140	30	
Pentachloronitrobenzene	ND	0.23	72	73	1.4	64			40 - 140	30	
Pentachlorophenol	ND	0.23	90	86	4.5	88			30 - 130	30	
Phenanthrene	ND	0.13	76	77	1.3	73			40 - 140	30	
Phenol	ND	0.23	77	67	13.9	140			30 - 130	30	m
Pyrene	ND	0.23	76	75	1.3	83			40 - 140	30	
Pyridine	ND	0.23	35	32	9.0	53			40 - 140	30	l
% 2,4,6-Tribromophenol	65	%	73	74	1.4	75			30 - 130	30	
% 2-Fluorobiphenyl	38	%	63	63	0.0	56			30 - 130	30	
% 2-Fluorophenol	44	%	65	58	11.4	95			30 - 130	30	
% Nitrobenzene-d5	34	%	61	51	17.9	80			30 - 130	30	
% Phenol-d5	52	%	71	64	10.4	129			30 - 130	30	
% Terphenyl-d14	68	%	59	66	11.2	64			30 - 130	30	

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Comment:											
This batch consists of a Blank, LCS, LCSD and MS.											
Additional 8270 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is at least 10%. (Acid surrogates acceptance range for aqueous samples: 10-110%, for soils 30-130%)											
QA/QC Batch 753057 (mg/Kg), QC Sample No: CR82711 (CR82121, CR82122, CR82125, CR82126)											
Volatiles - Soil (Low Level)											
1,1,1,2-Tetrachloroethane	ND	0.005	102	104	1.9	86	86	0.0	70 - 130	20	
1,1,1-Trichloroethane	ND	0.005	99	102	3.0	88	88	0.0	70 - 130	20	
1,1,2,2-Tetrachloroethane	ND	0.003	107	109	1.9	103	102	1.0	70 - 130	20	
1,1,2-Trichloroethane	ND	0.005	103	105	1.9	91	90	1.1	70 - 130	20	
1,1-Dichloroethane	ND	0.005	106	108	1.9	92	95	3.2	70 - 130	20	
1,1-Dichloroethene	ND	0.005	110	114	3.6	99	99	0.0	70 - 130	20	
1,1-Dichloropropene	ND	0.005	105	108	2.8	90	90	0.0	70 - 130	20	
1,2,3-Trichlorobenzene	ND	0.005	114	115	0.9	58	55	5.3	70 - 130	20	m
1,2,3-Trichloropropane	ND	0.005	104	102	1.9	95	94	1.1	70 - 130	20	
1,2,4-Trichlorobenzene	ND	0.005	116	114	1.7	60	57	5.1	70 - 130	20	m
1,2,4-Trimethylbenzene	ND	0.001	112	113	0.9	88	85	3.5	70 - 130	20	
1,2-Dibromo-3-chloropropane	ND	0.005	98	103	5.0	83	82	1.2	70 - 130	20	
1,2-Dibromoethane	ND	0.005	108	109	0.9	95	94	1.1	70 - 130	20	
1,2-Dichlorobenzene	ND	0.005	109	111	1.8	85	82	3.6	70 - 130	20	
1,2-Dichloroethane	ND	0.005	98	100	2.0	89	89	0.0	70 - 130	20	
1,2-Dichloropropane	ND	0.005	97	100	3.0	89	88	1.1	70 - 130	20	
1,3,5-Trimethylbenzene	ND	0.001	112	115	2.6	91	88	3.4	70 - 130	20	
1,3-Dichlorobenzene	ND	0.005	110	112	1.8	86	82	4.8	70 - 130	20	
1,3-Dichloropropane	ND	0.005	105	106	0.9	93	93	0.0	70 - 130	20	
1,4-Dichlorobenzene	ND	0.005	110	111	0.9	85	81	4.8	70 - 130	20	
1,4-dioxane	ND	0.1	117	107	8.9	105	110	4.7	40 - 160	20	
2,2-Dichloropropane	ND	0.005	79	81	2.5	69	68	1.5	70 - 130	20	m
2-Chlorotoluene	ND	0.005	112	113	0.9	96	92	4.3	70 - 130	20	
2-Hexanone	ND	0.025	81	81	0.0	56	54	3.6	40 - 160	20	
2-Isopropyltoluene	ND	0.005	113	116	2.6	89	85	4.6	70 - 130	20	
4-Chlorotoluene	ND	0.005	110	113	2.7	94	90	4.3	70 - 130	20	
4-Methyl-2-pentanone	ND	0.025	88	90	2.2	72	70	2.8	40 - 160	20	
Acetone	ND	0.01	85	83	2.4	70	68	2.9	40 - 160	20	
Acrylonitrile	ND	0.005	102	103	1.0	73	80	9.2	70 - 130	20	
Benzene	ND	0.001	103	106	2.9	93	92	1.1	70 - 130	20	
Bromobenzene	ND	0.005	110	113	2.7	97	95	2.1	70 - 130	20	
Bromochloromethane	ND	0.005	103	106	2.9	96	95	1.0	70 - 130	20	
Bromodichloromethane	ND	0.005	99	102	3.0	86	87	1.2	70 - 130	20	
Bromoform	ND	0.005	102	105	2.9	80	82	2.5	70 - 130	20	
Bromomethane	ND	0.005	123	129	4.8	109	110	0.9	40 - 160	20	
Carbon Disulfide	ND	0.005	108	113	4.5	92	92	0.0	70 - 130	20	
Carbon tetrachloride	ND	0.005	92	96	4.3	79	79	0.0	70 - 130	20	
Chlorobenzene	ND	0.005	108	110	1.8	91	90	1.1	70 - 130	20	
Chloroethane	ND	0.005	133	136	2.2	122	124	1.6	70 - 130	20	l
Chloroform	ND	0.005	103	105	1.9	92	91	1.1	70 - 130	20	
Chloromethane	ND	0.005	103	107	3.8	99	97	2.0	40 - 160	20	
cis-1,2-Dichloroethene	ND	0.005	98	104	5.9	86	85	1.2	70 - 130	20	
cis-1,3-Dichloropropene	ND	0.005	94	97	3.1	80	80	0.0	70 - 130	20	
Dibromochloromethane	ND	0.003	105	107	1.9	88	89	1.1	70 - 130	20	
Dibromomethane	ND	0.005	101	103	2.0	92	90	2.2	70 - 130	20	
Dichlorodifluoromethane	ND	0.005	105	106	0.9	91	89	2.2	40 - 160	20	

QA/QC Data

SDG I.D.: GCR82121

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits	
Diethyl ether	ND	0.005	101	102	1.0	91	88	3.4	70 - 130	20	
Di-isopropyl ether	ND	0.005	100	102	2.0	91	89	2.2	70 - 130	20	
Ethyl tert-butyl ether	ND	0.005	96	96	0.0	73	79	7.9	70 - 130	20	
Ethylbenzene	ND	0.001	105	108	2.8	89	87	2.3	70 - 130	20	
Hexachlorobutadiene	ND	0.005	113	112	0.9	50	47	6.2	70 - 130	20	m
Isopropylbenzene	ND	0.001	109	112	2.7	97	93	4.2	70 - 130	20	
m&p-Xylene	ND	0.002	107	109	1.9	89	87	2.3	70 - 130	20	
Methyl ethyl ketone	ND	0.005	80	80	0.0	64	63	1.6	40 - 160	20	
Methyl t-butyl ether (MTBE)	ND	0.001	97	98	1.0	88	85	3.5	70 - 130	20	
Methylene chloride	ND	0.005	102	105	2.9	95	92	3.2	70 - 130	20	
Naphthalene	ND	0.005	109	110	0.9	70	65	7.4	70 - 130	20	m
n-Butylbenzene	ND	0.001	116	116	0.0	76	72	5.4	70 - 130	20	
n-Propylbenzene	ND	0.001	111	112	0.9	93	90	3.3	70 - 130	20	
o-Xylene	ND	0.002	104	107	2.8	88	85	3.5	70 - 130	20	
p-Isopropyltoluene	ND	0.001	115	116	0.9	85	80	6.1	70 - 130	20	
sec-Butylbenzene	ND	0.001	113	115	1.8	86	81	6.0	70 - 130	20	
Styrene	ND	0.005	107	110	2.8	86	84	2.4	70 - 130	20	
tert-amyl methyl ether	ND	0.005	82	83	1.2	77	75	2.6	70 - 130	20	
tert-Butylbenzene	ND	0.001	110	112	1.8	90	86	4.5	70 - 130	20	
Tetrachloroethene	ND	0.005	109	110	0.9	90	86	4.5	70 - 130	20	
Tetrahydrofuran (THF)	ND	0.005	92	93	1.1	84	83	1.2	70 - 130	20	
Toluene	ND	0.001	102	105	2.9	90	88	2.2	70 - 130	20	
trans-1,2-Dichloroethene	ND	0.005	114	117	2.6	100	100	0.0	70 - 130	20	
trans-1,3-Dichloropropene	ND	0.005	90	92	2.2	76	75	1.3	70 - 130	20	
trans-1,4-dichloro-2-butene	ND	0.005	86	89	3.4	74	73	1.4	70 - 130	20	
Trichloroethene	ND	0.005	107	111	3.7	90	91	1.1	70 - 130	20	
Trichlorofluoromethane	ND	0.005	117	121	3.4	103	104	1.0	70 - 130	20	
Trichlorotrifluoroethane	ND	0.005	121	124	2.4	100	100	0.0	70 - 130	20	
Vinyl chloride	ND	0.005	101	106	4.8	96	93	3.2	70 - 130	20	
% 1,2-dichlorobenzene-d4	100	%	101	100	1.0	100	100	0.0	70 - 130	20	
% Bromofluorobenzene	93	%	94	94	0.0	92	91	1.1	70 - 130	20	
% Dibromofluoromethane	94	%	102	100	2.0	99	101	2.0	70 - 130	20	
% Toluene-d8	100	%	96	97	1.0	98	98	0.0	70 - 130	20	

Comment:

Additional 8260 criteria: 10% of LCS/LCSD compounds can be outside of acceptance criteria as long as recovery is 40-160%.
The RPD criteria for the LCS/LCSD is 20%,
The MS/MSD RPD criteria is listed above.

QA/QC Batch 753294 (mg/Kg), QC Sample No: CR80943 50X (CR82121 (50X) , CR82125 (50X) , CR82126 (50X))

Volatile Petroleum Hydrocarbons - Soil

Benzene	ND	13	87	87	0.0	85	85	0.0	70 - 130	25	
C5-C8 Aliphatic Hydrocarbons *1,2	ND	250	100	99	1.0	100	99	1.0	70 - 130	25	
C9-C10 Aromatic Hydrocarbons *1	ND	83	91	91	0.0	90	90	0.0	70 - 130	25	
C9-C12 Aliphatic Hydrocarbons *1,	ND	250	91	89	2.2	101	100	1.0	70 - 130	25	
Ethyl Benzene	ND	13	87	87	0.0	85	85	0.0	70 - 130	25	
m,p-Xylenes	ND	13	89	89	0.0	88	88	0.0	70 - 130	25	
MTBE	ND	2.5	95	90	5.4	103	104	1.0	70 - 130	25	
Naphthalene	ND	13	93	94	1.1	89	89	0.0	70 - 130	25	
o-Xylene	ND	13	87	88	1.1	85	85	0.0	70 - 130	25	
Toluene	ND	13	88	88	0.0	87	87	0.0	70 - 130	25	
Unadjusted C5-C8 Aliphatics (*1)	ND	250	100	99	1.0	100	99	1.0	70 - 130	25	
Unadjusted C9-C12 Aliphatics (*1)	ND	250	91	89	2.2	101	100	1.0	70 - 130	25	
% 2,5-Dibromotoluene (FID)	99	%	100	102	2.0	100	98	2.0	70 - 130	25	

QA/QC Data

SDG I.D.: GCR82121

Parameter	Blank	Blk RL	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
% 2,5-Dibromotoluene (PID)	86	%	88	90	2.2	87	86	1.2	70 - 130	25
QA/QC Batch 753547 (mg/Kg), QC Sample No: CR83370 50X (CR82122 (50X))										
Volatile Petroleum Hydrocarbons - Soil										
Benzene	ND	13	95	95	0.0	95	95	0.0	70 - 130	25
C5-C8 Aliphatic Hydrocarbons *1,2	ND	250	94	94	0.0	97	96	1.0	70 - 130	25
C9-C10 Aromatic Hydrocarbons *1	ND	83	101	102	1.0	102	102	0.0	70 - 130	25
C9-C12 Aliphatic Hydrocarbons *1,	ND	250	94	99	5.2	109	112	2.7	70 - 130	25
Ethyl Benzene	ND	13	97	97	0.0	97	96	1.0	70 - 130	25
m,p-Xylenes	ND	13	99	99	0.0	98	98	0.0	70 - 130	25
MTBE	ND	2.5	94	90	4.3	116	112	3.5	70 - 130	25
Naphthalene	ND	13	106	110	3.7	105	99	5.9	70 - 130	25
o-Xylene	ND	13	95	95	0.0	95	94	1.1	70 - 130	25
Toluene	ND	13	98	98	0.0	98	98	0.0	70 - 130	25
Unadjusted C5-C8 Aliphatics (*1)	ND	250	94	94	0.0	97	96	1.0	70 - 130	25
Unadjusted C9-C12 Aliphatics (*1)	ND	250	94	99	5.2	109	112	2.7	70 - 130	25
% 2,5-Dibromotoluene (FID)	89	%	105	104	1.0	106	102	3.8	70 - 130	25
% 2,5-Dibromotoluene (PID)	89	%	105	104	1.0	104	100	3.9	70 - 130	25

l = This parameter is outside laboratory LCS/LCSD specified recovery limits.
m = This parameter is outside laboratory MS/MSD specified recovery limits.
r = This parameter is outside laboratory RPD specified recovery limits.

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference
(ISO) - Isotope Dilution

Phyllis Shiller, Laboratory Director
October 17, 2024

Thursday, October 17, 2024

Criteria: MA: CAM, S1

State: MA

Sample Criteria Exceedances Report

GCR82121 - STANTECMA

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.