CONTRACT DOCUMENTS

Pare Project No. 22116.00

Carpenter Pond Dam Removal
Dudley, Massachusetts

Prepared for:

Town of Dudley
71 W. Main Street
Dudley, MA 01571

Prepared by:

Pare Corporation
10 Lincoln Road, Suite 210
Foxboro, MA 02135

APRIL 2026

PARE CORPORATION
ENGINEERS SCIENTISTS PLANNERS

TECHNICAL SPECIFICATIONS INDEX
CARPENTER POND DAM REMOVAL
DUDLEY, MASSACHUSETTS

Section #	Description
Division 0 – Contract	
00020	Invitation to Bid
00100	Instructions to Bidders
00310	Form for General Bid
00410	Bid Bond
00500	Agreement
00510	Notice of Award
00550	Notice to Proceed
00610	Performance Bond
00615	Payment Bond
00700	General Conditions
00800	Supplemental Conditions
00850	Wage Rates
00950	Drawing Index
Division 1 – General	
01000	Summary of Work
01019	Contract Considerations
01025	Measurement and Payment
01070	Abbreviations, Symbols, and Definitions
01200	Project Meetings
01310	Construction Schedules
01340	Submittals
01400	Quality Control/Quality Assurance
01500	Temporary Construction Facilities
01510	Temporary Utilities
01560	Temporary Controls
01600	Material and Equipment
01700	Contract Closeout
01720	Project Record Documents
Division 2 - Site Work	
02005	Mobilization/Demobilization
02050	Demolition and Removal
02110	Clearing, Grubbing, and Stripping
02200	Earthwork
02270	Erosion and Sediment Control
02300	Riprap
02400	Dewatering, Control, and Diversion of Water
02900	Landscaping
02905	Coir Logs
02920	Seeding for Non-Lawn Areas
02930	Trees, Shrubs, and Groundcovers

Appendix A: Permits

Appendix B: Reference Documents

Town of Dudley

Carpenter Pond Dam Removal

DIVISION 0 - CONTRACT

CARPENTER POND DAM REMOVAL
DUDLEY, MASSACHUSETTS

Sealed bids for the Carpenter Pond Dam Removal will be received until May 8, 2026, at the Dudley Town Hall, Town Administrator's Office, 71 W Main St, Dudley, MA 01571, until 11:00 a.m. local time.

The work on Carpenter Pond Dam Improvements includes:

1. Prior to contractor's mobilization:
    a. Town will remove the gate post at the site entrance and stockpile onsite (to be reset at project completion by contractor). Town will install the stabilized construction access pad as shown on the drawings.
    b. Initial debris removal / pond drawdown: town will remove accumulated debris from the spillway crest prior to contractor mobilization. Town will remove the top 2 feet± of stones from a portion of the spillway to initiate drawdown. Town will not be responsible for maintaining the spillway clear upon completion of debris removal.
    c. Clearing: town will clear and remove small trees (3" dbh) and brush from the limits of work.
2. Mobilize to the site. Establish access ways and staging areas.
3. Install erosion and sediment control devices as required.
4. Install control of water devices including diversions; commence impoundment drawdown
    a. Install diversion pipe
    b. Install temporary upstream and tailwater cofferdams
5. Complete removal of the dam
    a. Remove trees and brush as needed within the proposed breach as shown in plan
    b. Demolish the stone masonry spillway section; implement drawdown
        i. Sequentially demolish spillway to implement drawdown in accordance with allowable drawdown rate; stockpile stone for reuse
        ii. Excavate upstream soils as required to implement drawdown during spillway demolition
    c. Excavate to proposed grades and lines to create the proposed channel
        i. Remove boulders; stockpile for reuse
        ii. Remove concrete (if any) and unsuitable material; dispose of offsite
        iii. Material trucking & disposal: town will provide trucking and disposal for stone masonry, earth fill, and organic materials resulting from embankment excavation and breach creation. Contractor shall segregate materials prior to loading into town truck. Contractor shall assume that the town will provide one 12.5 ton dump truck with a round trip travel time to the disposal facility of 30 minutes operating during normal business hours only.
    d. Install bank protection river right; place stockpiled boulders where indicated; establish vegetation within channel as indicated on plan
    e. Remove cofferdams; divert flow to constructed channel and remove diversion pipe
    f. Complete excavation of the embankment to the limits shown
6. Site finishing and demobilization
    a. Install other surface finished as specified (i.e. plantings, shrub, coir logs, loam, seed, etc.)
    b. Unless otherwise noted, install loam and establish grass in all areas disturbed by construction activities.
    c. Restore site access ways including grading improvements, erosion control, and stabilization.
    d. Demobilize

MARK ENVELOPE: BID FOR CARPENTER POND DAM REMOVAL.

Bid Security: Certified, treasurer's, cashiers or company check or bid bond in the sum of five (5) percent of the Total Bid is required.

A Pre-Bid Conference will be held on site on Tuesday April 14, 2026 at 9:00 a.m. to review the project.

The successful bidder must furnish 100 percent Performance Bond and a Labor and Materials Bond. The estimated value of this contract is $385,000.

No bidder may withdraw their Bid for a period of thirty (30) days excluding Saturdays, Sundays, and legal holidays after the date of the opening of the Bids. The Town reserves the right to waive any informality and to reject any or all proposals. A proposal which includes for any item a bid that is abnormally low or high may be rejected as unbalanced. The right is also reserved to accept any proposal deemed to be best for the Town of Dudley. In any event, general bids to be deemed acceptable shall conform to all applicable Massachusetts General Laws.

The Owner reserves the right to waive any informality in or to reject any or all Bids if deemed to be in its best interest. Owner may conduct investigations as Owner deems necessary to establish the responsibility, qualifications, and financial ability of the Bidders, proposed Subcontractors, Suppliers, individuals, or entities to perform the Work in accordance with the Contract Documents. The Owner reserves the right to complete post-bid opening interviews to support their evaluation of the bids.

- Town of Dudley

SECTION 00100
INSTRUCTIONS TO BIDDERS

PART 1.00 – GENERAL

1.01. SECURING DOCUMENTS

A. Electronic copies of the Contract Documents will be available for download on request by emailing lneitlich@parecorp.com beginning on April 8, 2026.

B. Office copies of the proposed Contract Documents are available for viewing only at:

Pare Corporation
10 Lincoln Road, Suite 210
Foxboro, Massachusetts 02035

Town of Dudley, Town Administrator's Office
71 West Main Street
Dudley, MA 01571

1.02 BID FORMS

A. In order to receive consideration, the bidder shall make all bids in strict accordance with the following:

a. The bidder shall make all bids upon the forms provided therefore, properly executed and all items filled out. The bidder shall not change the wording of the Bid Form and shall not add words to the wording of the Bid Form. Unauthorized conditions, limitations, or provisions shall be cause for rejection of the proposal. Alterations by erasure or interlineation may be explained or noted in the bid over the signature of the bidder.

b. A bidder may correct, modify, or withdraw a bid by written notice received at the office of the Town of Dudley up to 1 hour prior to the time and date set for the bid opening. After the bid opening, a bidder may not change the price or any other provision of the bid in a manner prejudicial to the interests of the Owner or fair competition.

c. No bids received after the time fixed for receiving them shall be considered. Late bids will be returned to the sender unopened.

d. Each bid shall be addressed to the Town of Dudley and shall be delivered to the address given in SECTION 00020 INVITATION TO BID on or before the date and hour set for opening bids. Each bid shall be enclosed in a sealed envelope bearing the title of the specifications, the name of the bidder, and the date and hour of the bid opening. It is the sole responsibility of the bidder to see that the bid is received on time.

1.03 NOTIFICATION OF CORPORATE VOTE

A. Where the bidder is a corporation, the bidder must include with the bid form a letter indicating the corporate vote authorizing the person who signs the bid to do so.

B. The successful bidder shall provide a similar letter to the Owner at the time the contract documents are being prepared.

1.04 EVALUATION CRITERIA

A. In order for a bidder to be considered a responsible and responsive bidder, it must provide with its bid the following information:

a) Cost breakdown which will be used to determine the monetary obligation of the Owner to the Contractor(s) awarded the Contract(s).

b) Completion of the anti-collusion and anti-fraudulent certification.

c) Notification of corporate vote when the bid submitted is $20,000 or more. This is to ensure that the person signing the bid is recognized by the Bidder's company to do so.

d) Certificate of compliance with tax laws.

e) A bid bond in the amount of 5% of the total bid price.

B. Bids shall be evaluated and the bid which represents the best value for the Owner shall be selected.

1.05 AWARDING THE BID ITEMS

A. The Bid Form is comprised of separate bid items to be awarded in accordance to these contract specifications.

1.06 BASIS OF THE BID

A. Lump Sum

Bidders shall submit a Bid on a lump sum basis as set forth in the Bid form.

B. Unit Price

Bidders shall submit a Bid on a unit price basis for each item of Work listed in the unit price section of the Bid Form.

The "Bid Price" (sometimes referred to as the extended price) for each unit price Bid item will be the product of the "Estimated Quantity" (which Owner or its representative has set forth in the Bid Form) for the item and the corresponding "Bid Unit Price" offered by the Bidder. The total of all unit price Bid items will be the sum of these "Bid Prices"; such total will be used by Owner for Bid comparison purposes.

Discrepancies between the multiplication of units of Work and unit prices will be resolved in favor of the unit prices. Discrepancies between the indicated sum of any column of figures and the correct sum thereof will be resolved in favor of the correct sum. Discrepancies between words and figures will be resolved in favor of the words.

Unit prices for identical item numbers that are in more than one bid schedule shall be equal. Discrepancies will be resolved in favor of the lowest unit price.

1.07 LENGTH OF CONTRACT

A. Delivery of all contract items is to commence within ten (10) days of receiving a written Notice to Proceed and be substantially completed within two hundred ten (210) days from the date of receipt of a Notice to Proceed. Substantial completion shall be considered the date by which the site restoration work has been completed and only planting/seeding remains to be completed.

1.08 REQUESTS FOR INFORMATION

A. Requests for information regarding this Bid shall be submitted by email to: Lneitlich@parecorp.com.

Emails shall bear the title, "22116.00 – Carpenter Pond Dam Removal – Bid Request for Information".

B. The deadline for Requests for Information shall be five (5) days before the bid due date, with all addenda issued at least three (3) days before the bid due date, including weekends and Holidays.

1.09 INFORMATION NOT GUARANTEED

A. All information given on the drawings or in the other Contract Documents relating to subsurface and other conditions, natural phenomena, existing utilities and other structures is from the best resources at present available to the Owner. All such information is furnished only for the information and convenience of bidders and is not guaranteed.

B. It is agreed and understood that the Owner does not warrant or guarantee that the subsurface or other conditions, natural phenomena, existing pipes, or other structures encountered during construction will be the same as those indicated on the drawings or in the other Contract Documents.

C. It is agreed further and understood that no bidder or contractor shall use or be entitled to use any of the information made available to him or obtained in any examination made by him in any manner as a basis of or ground for any claims or demand against the Owner or the Engineer, arising from or by reason of any variance which may exist between the information made available and the actual subsurface or other conditions, natural phenomena, existing utilities or other structures actually encountered during the construction work, except as may otherwise be expressly provided for in the Contract Documents.

1.10 BIDDERS TO INVESTIGATE

A. Bidders must satisfy themselves by personal examination of the site of the Work and by such other means as they may wish, as to the actual conditions there existing, the character and requirements of the Work, the difficulties attendant upon its execution, and the accuracy of all estimated quantities stated in the Bid.

1.11 REDUCTION IN THE SCOPE OF WORK

A. The Owner reserves the right to decrease the scope of the work to be done under this Contract and to omit any work in order to bring the cost within available funds. To this end, the Owner reserves the right to reduce the quantity of any items or omit all of any items as set forth in the BID, either prior to executing the Contract or at any time during the progress of the work. The Owner further reserves the right, at any time during the progress of work, to restore all or part of any items previously omitted or reduced. Exercise by the Owner of the above rights shall not constitute any ground or basis of claim for damages or for anticipated profits on the work omitted.

1.12 MASSACHUSETTS SALES AND USE TAX

A. Materials and equipment purchased for permanent installation on this project will be exempt from the Massachusetts Sales and Use Tax. The exemption certificate number will be furnished to the Contractor. Each bidder shall take this exemption into account in calculating his bid for the work.

1.13 INSURANCE CERTIFICATES

A. The Contractor will not be permitted to start any construction work until approved certificates covering all insurances called for under Section 00700 and 00800 have been submitted.

1.14 RETURN OF BID BONDS TO UNSUCCESSFUL BIDDERS

A. Bid bonds for all unsuccessful bidders will be returned.

PART 2.00 – PRODUCTS

Not Used

PART 3.00 – EXECUTION

Not Used

END OF SECTION

22116.00 **SECTION 00310**
04/26 **BID FORM**

TO: Town of Dudley
71 West Main Street,
Dudley, MA 01571

PROJECT: Carpenter Pond Dam Removal
Dudley, Massachusetts
Pare Project No. 22116.00

DATE: _____

SUBMITTED BY:_____
(full name)

_____
(full address)

_____

1. OFFER:

Having examined the Place of the Work and all matters referred to in the Instructions to Bidders and the Contract Documents prepared by Pare Corporation, Engineer for the above-mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work, **Carpenter Pond Dam Removal,** for the Price of:

A. Total Base Bid Price: $.....…….dollars

TOTAL BASE BIDPRICE IN WORDS…….……dollars, in lawful money of the United States of America and,

B. Bid Add/Alternates

Add/Alt 1: $.....……. dollars

In Words $.....……. dollars

Add/Alt 2: $.....……. dollars

In Words $.....……. dollars

Add/Alt 3: $.....……. dollars

In Words $.....……. dollars

Add/Alt 4: $.....……. dollars

In Words $.....……. dollars

TOTAL BID PRICE WITH ALTERNATES …….……dollars, in lawful money of the United States of America

In Words $.....……. dollars

We have included herewith, the unit price bid forms, and the required security deposit or Bid Bond as required by the Instruction to Bidders.

NOTE: THE TOTAL BID ITEM PRICE FOR EACH BID ITEM MUST BE WRITTEN IN WORDS AND FIGURES. IN CASE OF DISCREPANCY, THE AMOUNT SHOWN IN WORDS WILL GOVERN.

BID ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL BID ITEM PRICE
1.	Contract Bonds	LS	1	_____	_____
	TOTAL BID ITEM PRICE IN WORDS: _____				
2.	General Requirements	LS	1	_____	_____
	TOTAL BID ITEM PRICE IN WORDS: _____				
3.	Mobilization & Demobilization	LS	1	_____	_____
	TOTAL BID ITEM PRICE IN WORDS: _____				
4.	Erosion & Sediment Controls	LS	1	_____	_____
	TOTAL BID ITEM PRICE IN WORDS: _____				
5.	Control of Water	LS	1	_____	_____
	TOTAL BID ITEM PRICE IN WORDS: _____				
6.	Dam Removal	LS	1	_____	_____
	TOTAL BID ITEM PRICE IN WORDS: _____				
7.	Channel and Dam Restoration	LS	1	_____	_____
	TOTAL BID ITEM PRICE IN WORDS: _____				

CARRIED FORWARD _____

BROUGHT FORWARD _____

NOTE: THE TOTAL BID ITEM PRICE FOR EACH BID ITEM MUST BE WRITTEN IN WORDS AND FIGURES. IN CASE OF DISCREPANCY, THE AMOUNT SHOWN IN WORDS WILL GOVERN.

BID ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL BID ITEM PRICE
8a.	Import Armor Stone	TON	85	_____	_____
	TOTAL BID ITEM PRICE IN WORDS: _____				
8b.	Import Bedding Stone	TON	120	_____	_____
	TOTAL BID ITEM PRICE IN WORDS: _____				
8c.	Import Anchor Stone	TON	150	_____	_____
	TOTAL BID ITEM PRICE IN WORDS: _____				
8d.	Import Loam	CY	250	_____	_____
	TOTAL BID ITEM PRICE IN WORDS: _____				

TOTAL BASE BID PRICE _____

TOTAL BASE BID PRICE IN WORDS _____

Add/Alt 1	Stabilized Entrance Pad	LS	1	_____	_____
	TOTAL BID ITEM PRICE IN WORDS: _____				
Add/Alt 2	Small Tree Clearing	LS	1	_____	_____
	TOTAL BID ITEM PRICE IN WORDS: _____				
Add/Alt 3	Debris/Initial Drawdown	LS	1	_____	_____
	TOTAL BID ITEM PRICE IN WORDS: _____				

NOTE: THE TOTAL BID ITEM PRICE FOR EACH BID ITEM MUST BE WRITTEN IN WORDS AND FIGURES. IN CASE OF DISCREPANCY, THE AMOUNT SHOWN IN WORDS WILL GOVERN.

BID ITEM	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL BID ITEM PRICE
Add/Alt 4	Material Trucking & Disposal	TON	1,800	_____	_____

TOTAL BID ITEM PRICE IN WORDS: _____

3.00 ACCEPTANCE

This offer shall be open to acceptance and is irrevocable for thirty (30) days, excluding Saturdays, Sundays, and legal holidays, from the Bid closing date.

If this Bid is accepted by the Owner within the time period stated above, we will:

Execute the Agreement within three (3) days (excluding Saturdays, Sundays, and legal holidays) of receipt of Notice of Award.

Furnish the required Performance Bond and Labor and Material Payment Bond within three (3) days (excluding Saturdays, Sundays, and legal holidays) of receipt of Notice of Award.

Commence work within ten (10) days (excluding Saturdays, Sundays, and legal holidays) of receiving a written Notice to Proceed.

If this Bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required Bond(s), the security deposit shall be forfeited as damages to the Owner by reason of our failure, limited in amount to the lesser of the face value of the security deposit or the difference between this Bid and the Bid upon which the Contract is signed.

In the event our Bid is not accepted within the time stated above, the required security deposit shall be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

4.00 CONTRACT TIME

If this Bid is accepted, the BIDDER hereby agrees to commence WORK under this Contract on or before a date to be specified in the NOTICE TO PROCEED. The Contractor agrees that the WORK shall be substantially complete within 180 calendar days and to fully complete the PROJECT in 365 calendar days.

5.00 ADDENDA

The following Addenda have been received. The modifications to the Contract Documents noted therein have been considered and all costs thereto are included in the Bid Price.

Addendum # _____ Dated _____

Addendum # _____ Dated _____

Addendum # _____ Dated _____

Addendum # _____ Dated _____

6.00 BID FORM SIGNATURE(S)

The Corporate Seal of

_____

(Bidder - please print the full name of your Proprietorship, Partnership, or Corporation)

was hereunto affixed in the presence of:

_____

(Authorized signing officer Title)

(Seal)

_____

(Authorized signing officer Title)

If the Bid is a joint venture or partnership, add additional forms of execution for each member of the joint venture in the appropriate form or forms as above.

NON-COLLUSION AFFIDAVIT OF PRIME BIDDER

State of_____)
) .ss
County of_____)

_____,
being first duly sworn, deposes and says that;

(1) He is_____(owner, partner, officer, representative or agent)_____of

_____, the BIDDER that has submitted the attached bid;

(2) He is fully informed respecting the preparation and contents of the attached Bid and all pertinent circumstances respecting such Bid;

(3) Such Bid is genuine and is not a collusive or sham Bid;

(4) Neither the said BIDDER nor any of its officers, partners, owners, agents, representatives, employees, or parties in interest, including the affiant, has in any way colluded, conspired or agreed, directly or indirectly, with any other BIDDER, firm or person to submit a collusive or sham bid in connection with the Contract for which the attached Bid has been submitted or to refrain from bidding in connection with such a contract, or has in any manner, directly or indirectly, sought by agreement or collusion or communication or conference with any other BIDDER, firm or person to fix the price or prices in the attached Bid or of any other Bidder, or to fix any overhead, profit or cost element of the Bid price or the Bid price of any other BIDDER, or to secure through any collusion, conspiracy, connivance or unlawful agreement any advantage against the Local Government or any person interested in the proposed Contract; and

(5) The price or prices quoted in the attached Bid are fair and proper and are not tainted by any collusion, conspiracy, connivance or unlawful agreement on the part of the BIDDER or any of its agents, representatives, owners, employees or parties in interest including this affiant.

(Signed)_____
_____
(Title)

Subscribed and sworn to before me
This_____Day of_____, 20_____
_____
_____

My Commission Expires_____

ANTI FRAUDULENT DOCUMENTATION OF PRIME BIDDER

(1) Attach documentation from the Secretary of the Commonwealth of Massachusetts stating that there are no pending proceedings under the Massachusetts General Laws Chapter 156D section 14.21 for the Bidder's dissolution, no articles of dissolution have been filed by the BIDDER, the BIDDER has filed all annual reports, the BIDDER has paid all fees with respect to such reports, and the BIDDER has legal existence and is in good standing with the Secretary of the Commonwealth of Massachusetts.

TAX COMPLIANCE AFFIDAVIT OF PRIME BIDDER

I, _____ of _____, certify under
(principal) *(corporation)*
pains and penalties of perjury that said corporation has complied with all the laws of the Commonwealth of Massachusetts relating to taxes and is in compliance with its tax obligations payable under M.G.L. c. 62C.

_____ _____
Date Signature

_____
Title

_____
Federal Tax Identification Number

END OF SECTION

Any singular reference to Bidder, Surety, Owner, or other party shall be considered plural where applicable.

Bidder Name: **[Full formal name of Bidder]** Address *(principal place of business)*: **[Address of Bidder's principal place of business]**	**Surety** Name: **[Full formal name of Surety]** Address *(principal place of business)*: **[Address of Surety's principal place of business]**
Owner Name: **[Full formal name of Owner]** Address *(principal place of business)*: **[Address of Owner's principal place of business]**	**Bid** Project *(name and location)*: **[Owner project/contract name, and location of the project]** Bid Due Date: **[Enter date bid is due]**
Bond Penal Sum: **[Amount]** Date of Bond: **[Date]**	
Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth in this Bid Bond, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.	
Bidder *(Full formal name of Bidder)*	Surety *(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature) (Attach Power of Attorney)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title:	Title:
Notes: (1) Note: Addresses are to be used for giving any required notice. (2) Provide execution by any additional parties, such as joint venturers, if necessary.	

22116.00
04/26

SECTION 00410
BID BOND

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond will be Owner's sole and exclusive remedy upon default of Bidder.

2. Default of Bidder occurs upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.

3. This obligation will be null and void if:

3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
3.2 All Bids are rejected by Owner, or
3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).

4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.

5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions does not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.

6. No suit or action will be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety, and in no case later than one year after the Bid due date.

7. Any suit or action under this Bond will be commenced only in a court of competent jurisdiction located in the state in which the Project is located.

8. Notices required hereunder must be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Postal Service registered or certified mail, return receipt requested, postage pre-paid, and will be deemed to be effective upon receipt by the party concerned.

9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.

10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond will be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute governs and the remainder of this Bond that is not in conflict therewith continues in full force and effect.

11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

STANDARD FORM OF AGREEMENT
BETWEEN OWNER AND CONTRACTOR
ON THE BASIS OF A STIPULATED PRICE

THIS AGREEMENT is dated as of the _____day of _____ in the year _____ by and between the Town of Dudley (hereinafter called OWNER) and _____(hereinafter called CONTRACTOR).

OWNER and CONTRACTOR, in consideration of the mutual covenants hereinafter set forth, agree as follows:

Article 1. WORK.

CONTRACTOR shall complete all Work as specified or indicated in the Contract Documents. The Work is generally described as follows:

CARPENTER POND DAM REMOVAL

The Project for which the Work under the Contract Documents may be the whole or only a part is generally described as follows:

SEE SPECIFICATION SECTION 01000 – SUMMARY OF WORK

Article 2. ENGINEER.

The Project has been designed by Pare Corporation, who is hereinafter called ENGINEER and who are authorized to act as OWNER's representative, assume all duties and responsibilities and have the rights and authority assigned to ENGINEER in the Contract Documents in connection with completion of the Work in accordance with the Contract Documents.

Article 3. CONTRACT TIME.

3.1. The Work will be completed and ready for final payment in accordance with paragraph 14.07 of the General Conditions within ____ days from the date when the Contract Time commences to run as provided in paragraph 2.03 of the General Conditions and proposed by the contractor with their bid.

3.2. *Liquidated Damages.* OWNER and CONTRACTOR recognize that time is of the essence of this Agreement and that OWNER will suffer financial loss if the Work is not completed within the times specified in paragraph 3.1 above, plus any extensions thereof allowed in accordance with Article 12 of the General Conditions. They also recognize the delays, expense and difficulties involved in proving in a legal or arbitration proceeding the actual loss suffered by OWNER if the Work is not completed on time. Accordingly, instead of requiring any such proof, OWNER and CONTRACTOR agree that as liquidated damages for delay (but not as a penalty) CONTRACTOR shall pay OWNER five hundred dollars ($500.00) for each day that expires after the time specified in paragraph 3.1 for substantial completion (Base work).

Article 4. CONTRACT PRICE.

6.1. OWNER shall pay CONTRACTOR for completion of the Work in accordance with the Contract Documents in current funds as follows:

4.1.1 In accordance with the Unit Price Schedule of the Contractor's Bid (SECTION 00310)

Article 5. PAYMENT PROCEDURES.

CONTRACTOR shall submit Applications for Payment in accordance with Article 14 of the General Conditions. Applications for Payment will be processed by ENGINEER as provided in the General Conditions.

5.1.1. Prior to Substantial Completion, progress payments will be made in an amount indicated below, but, in each case, less the aggregate of payments previously made and less such amounts as ENGINEER shall determine, or OWNER may withhold, in accordance with Article 15 of the General Conditions.

95% of Work completed (with 5% retainage).

5.1.2. Upon Substantial Completion, Owner shall pay an amount sufficient to increase total payments to Contractor to 100 percent of the Work completed, less such amounts set off by Owner pursuant to Paragraph 15.01.E of the General Conditions, and less 200 percent of Engineer's estimate of the value of Work to be completed or corrected as shown on the punch list of items to be completed or corrected prior to final payment.

5.2. *Final Payment.* Upon final completion and acceptance of the Work in accordance with paragraph 15.06 of the General Conditions, OWNER shall pay the remainder of the Contract Price as recommended by ENGINEER as provided in said paragraph 15.06.

Article 6. CONTRACTOR'S REPRESENTATIONS.

In order to induce OWNER to enter into this Agreement, CONTRACTOR makes the following representations:

6.1. CONTRACTOR has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality and all local conditions and Laws and Regulations that in any manner may affect cost, progress, performance or furnishing of the Work.

6.2. CONTRACTOR has studied carefully all reports of explorations, tests of subsurface conditions and drawings of physical conditions which are identified in the Supplementary Conditions as provided in paragraph 4.02 of the General Conditions of the extent of the technical data contained in such reports and drawings upon which CONTRACTOR is entitled to rely.

6.3. CONTRACTOR has obtained and carefully studied (or assumes responsibility for obtaining and carefully studying) all such examinations, investigations, explorations, tests, reports and studies (in addition to or to supplement those referred to in paragraph 7.2 above) which pertain to the subsurface or physical conditions at or contiguous to the site or otherwise may affect the cost, progress, performance or furnishing of the Work as CONTRACTOR considers necessary for the performance or furnishing of the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.02 of the General Conditions; and no additional examinations, investigations, explorations, tests, reports, studies or similar information or data are or will be required by Contractor for such purposes.

6.4. CONTRACTOR has reviewed and checked all information and data shown or indicated on the Contract Documents with respect to existing Underground Facilities at or contiguous to the site and assumes responsibility for the accurate location of said Underground Facilities. No additional

examinations, investigations, explorations, tests, reports, studies or similar information or data in respect of said Underground Facilities are or will be required by CONTRACTOR in order to perform and furnish the Work at the Contract Price, within the Contract Time and in accordance with the other terms and conditions of the Contract Documents, including specifically the provisions of paragraph 4.03 of the General Conditions.

6.5. CONTRACTOR has correlated the results of all such observations, examinations, investigations, explorations, tests, reports and studies with the terms and conditions of the Contract Documents.

6.6. CONTRACTOR has given ENGINEER written notice of all conflicts, errors or discrepancies that he has discovered in the Contract Documents and the written resolution thereof by ENGINEER is acceptable to CONTRACTOR.

Article 7. CONTRACT DOCUMENTS.

The Contract Documents which comprise the entire agreement between OWNER and CONTRACTOR concerning the Work consist of the following:

7.1. This Agreement

7.2. Invitation to Bid

7.3 CONTRACTOR's Bid (pages 1 to 8, inclusive) –Section 00310.

7.4. Insurance Certificates:

7.5. Performance and Payment Bonds.

7.6. General Conditions (EJCDJ C-700 © 2013)

7.7 Section 00800 – Supplementary Conditions (pages 1 to 32, inclusive).

7.8. Specifications consisting of Sections 00020 through 02930.

7.9. Drawings, consisting of a cover sheet and sheets numbered 1.0 through 5.0, inclusive, with each sheet bearing the following general title: CARPENTER POND DAM REMOVAL

7.10. Addenda numbers __to __inclusive.

7.11. The following which may be delivered or issued after the Effective Date of the Agreement and are not attached hereto: All Written Amendments and other documents amending, modifying or supplementing the Contract Documents pursuant to paragraphs 3.03 and 3.04 of the General Conditions.

There are no Contract Documents other than those listed above in this Article 7. The Contract Documents may only be amended, modified or supplemented as provided in paragraphs 3.03 and 3.04 of the General Conditions.

Article 8 MISCELLANEOUS.

8.1. Terms used in this Agreement which are defined in Article 1 of the General Conditions will have the meanings indicated in the General Conditions.

8.2. No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound; and specifically but without limitation monies that may become due and monies that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.

OWNER shall have the right to assign the Contract Documents, or specified provisions of, or rights and/or obligations under, the Contract Documents, to any person or private or governmental entity to whom OWNER transfers the Carpenter Pond Dam and OWNER will be released from any duty and responsibility so assigned.

8.3. CONTRACTOR binds itself, its partners, successors, assigns and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect of all covenants, agreements and obligations contained in the Contract Documents.

IN WITNESS WHEREOF, OWNER and CONTRACTOR have signed this Agreement in triplicate. One counterpart each has been delivered to OWNER, CONTRACTOR and ENGINEER. All portions of the Contract Documents have been signed or identified by OWNER and CONTRACTOR or by ENGINEER on their behalf.

This Agreement will be effective on _____, (which is the Effective Date of the Agreement).

OWNER:

TOWN OF DUDLEY

By:_____

By:_____

By:_____

[CORPORATE SEAL]

Attest _____

Address for giving notices:

_____

_____

_____

(If OWNER is a corporation, attach evidence of authority to sign. If OWNER is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of OWNER-CONTRACTOR Agreement)

Designated Representative

Name:_____

Title:_____

Address:_____

_____

Phone:_____

Facsimile:_____

CONTRACTOR:

_____

By:_____

[CORPORATE SEAL]

Attest _____

Address for giving notices:

_____

_____

_____

License No._____
(where applicable)

Agent for service of process:_____

_____

(If CONTRACTOR is a corporation or a partnership, attach evidence of authority to sign.)

Designated Representative:

Name:_____

Title:_____

Address:_____

_____

Phone:_____

Facsimile:_____

SECTION 00510

NOTICE OF AWARD

Date of Issuance:
Owner: Owner's Project No.:
Engineer: Engineer's Project No.:
Project:
Contract Name:
Bidder:
Bidder's Address:

You are notified that Owner has accepted your Bid dated **[date]** for the above Contract, and that you are the Successful Bidder and are awarded a Contract for:

[Describe Work, alternates, or sections of Work awarded]

The Contract Price of the awarded Contract is $**[Contract Price]**. Contract Price is subject to adjustment based on the provisions of the Contract, including but not limited to those governing changes, Unit Price Work, and Work performed on a cost-plus-fee basis, as applicable.

[Number of copies sent] unexecuted counterparts of the Agreement accompany this Notice of Award, and one copy of the Contract Documents accompanies this Notice of Award, or has been transmitted or made available to Bidder electronically.

☐ Drawings will be delivered separately from the other Contract Documents.

You must comply with the following conditions precedent within 15 days of the date of receipt of this Notice of Award:

1. Deliver to Owner **[number of copies sent]** counterparts of the Agreement, signed by Bidder (as Contractor).
2. Deliver with the signed Agreement(s) the Contract security (such as required performance and payment bonds) and insurance documentation, as specified in the Instructions to Bidders and in the General Conditions, Articles 2 and 6.
3. Other conditions precedent (if any): **[Describe other conditions that require Successful Bidder's compliance]**

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within 10 days after you comply with the above conditions, Owner will return to you one fully signed counterpart of the Agreement, together with any additional copies of the Contract Documents as indicated in Paragraph 2.02 of the General Conditions.

Owner: **[Full formal name of Owner]**
By *(signature)*: _____
Name *(printed)*: _____
Title: _____
Copy: Engineer

END OF SECTION

SECTION 00550
NOTICE TO PROCEED

Owner:	_____	Owner's Project No.:	_____
Engineer:	_____	Engineer's Project No.:	_____
Contractor:	_____	Contractor's Project No.:	_____
Project:	_____		
Contract Name:	_____		
Effective Date of Contract:	_____		

Owner hereby notifies Contractor that the Contract Times under the above Contract will commence to run on **[date Contract Times are to start]** pursuant to Paragraph 4.01 of the General Conditions. On that date, Contractor shall start performing its obligations under the Contract Documents. No Work will be done at the Site prior to such date.

In accordance with the Agreement: **[Select one of the following two alternatives, insert dates or number of days, and delete the other alternative.]**

The date by which Substantial Completion must be achieved is **[date for Substantial Completion, from Agreement]**, and the date by which readiness for final payment must be achieved is **[date for readiness, from Agreement]**.

[or]

The number of days to achieve Substantial Completion is **[number of days, from Agreement]** from the date stated above for the commencement of the Contract Times, resulting in a date for Substantial Completion of **[date, calculated from commencement date above]**; and the number of days to achieve readiness for final payment is **[number of days, from Agreement]** from the commencement date of the Contract Times, resulting in a date for readiness for final payment of **[date, calculated from commencement date above]**.

Before starting any Work at the Site, Contractor must comply with the following:

[Note any access limitations, security procedures, or other restrictions]

Owner:	**[Full formal name of Owner]**
By *(signature)*:	_____
Name *(printed)*:	_____
Title:	_____
Date Issued:	_____

Copy: Engineer

END OF SECTION

SECTION 00610
PERFORMANCE BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

Contractor Name: **[Full formal name of Contractor]** Address *(principal place of business)*: **[Address of Contractor's principal place of business]**	**Surety** Name: **[Full formal name of Surety]** Address *(principal place of business)*: **[Address of Surety's principal place of business]**
Owner Name: **[Full formal name of Owner]** Mailing address *(principal place of business)*: **[Address of Owner's principal place of business]**	**Contract** Description *(name and location)*: **[Owner's project/contract name, and location of the project]** Contract Price: **[Amount from Contract]** Effective Date of Contract: **[Date from Contract]**
Bond Bond Amount: **[Amount]** Date of Bond: **[Date]** *(Date of Bond cannot be earlier than Effective Date of Contract)* Modifications to this Bond form: ☐ None ☐ See Paragraph 16	
Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Performance Bond, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.	
Contractor as Principal _____ *(Full formal name of Contractor)* By: _____ *(Signature)* Name: _____ *(Printed or typed)* Title: _____ Attest: _____ *(Signature)* Name: _____ *(Printed or typed)* Title: _____	Surety _____ *(Full formal name of Surety) (corporate seal)* By: _____ *(Signature)(Attach Power of Attorney)* Name: _____ *(Printed or typed)* Title: _____ Attest: _____ *(Signature)* Name: _____ *(Printed or typed)* Title: _____
Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.	

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.

2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond will arise after:

   3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice may indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 will be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement does not waive the Owner's right, if any, subsequently to declare a Contractor Default;

   3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and

   3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.

4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 does not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.

5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:

   5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;

   5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;

   5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or

   5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:

      5.4.1 After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or

      5.4.2 Deny liability in whole or in part and notify the Owner, citing the reasons for denial.

6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment, or the Surety has denied liability, in whole or in part, without further notice, the Owner shall be entitled to enforce any remedy available to the Owner.

7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner will not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety will not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:

    7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;

    7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and

    7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.

8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.

9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price will not be reduced or set off on account of any such unrelated obligations. No right of action will accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.

10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

11. Any proceeding, legal or equitable, under this Bond must be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and must be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit will be applicable.

12. Notice to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears.

13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted therefrom and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

14. Definitions

    14.1. Balance of the Contract Price—The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.

    14.2. Construction Contract—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.

    14.3. Contractor Default—Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.

    14.4. Owner Default—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

    14.5. Contract Documents—All the documents that comprise the agreement between the Owner and Contractor.

15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

16. Modifications to this Bond are as follows: **[Describe modification or enter "None"]**

FOR INFORMATION ONLY – (*Name, Address and Telephone*) Surety Agency or Broker: Owner's Representative (*Engineer or other party*):

22116.00 **SECTION 00615**
04/26 **PAYMENT BOND**

1.00 GENERAL

A. The bonding company shall be licensed to do business in the Commonwealth of Massachusetts.

B. Payment Bond shall be in the amount of 100% of the contract price, as security for faithful performance of the Contract and executed by a surety company licensed to do business in the Commonwealth of Massachusetts.

C. Payment Bond to be bound to the Town of Dudley.

SECTION 00615
PAYMENT BOND

Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

Contractor	**Surety**
Name: **[Full formal name of Contractor]** Address *(principal place of business)*: **[Address of Contractor's principal place of business]**	Name: **[Full formal name of Surety]** Address *(principal place of business)*: **[Address of Surety's principal place of business]**
Owner	**Contract**
Name: **[Full formal name of Owner]** Mailing address *(principal place of business)*: **[Address of Owner's principal place of business]**	Description *(name and location)*: **[Owner's project/contract name, and location of the project]** Contract Price: **[Amount, from Contract]** Effective Date of Contract: **[Date, from Contract]**

Bond

Bond Amount: **[Amount]**

Date of Bond: **[Date]**

(Date of Bond cannot be earlier than Effective Date of Contract)

Modifications to this Bond form:

☐ None ☐ See Paragraph 18

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth in this Payment Bond, do each cause this Payment Bond to be duly executed by an authorized officer, agent, or representative.

Contractor as Principal	Surety
_____ *(Full formal name of Contractor)*	_____ *(Full formal name of Surety) (corporate seal)*
By: _____ *(Signature)*	By: _____ *(Signature)(Attach Power of Attorney)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____
Attest: _____ *(Signature)*	Attest: _____ *(Signature)*
Name: _____ *(Printed or typed)*	Name: _____ *(Printed or typed)*
Title: _____	Title: _____

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party is considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner to pay for labor, materials, and equipment furnished for use in the performance of the Construction Contract, which is incorporated herein by reference, subject to the following terms.

2. If the Contractor promptly makes payment of all sums due to Claimants, and defends, indemnifies, and holds harmless the Owner from claims, demands, liens, or suits by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, then the Surety and the Contractor shall have no obligation under this Bond.

3. If there is no Owner Default under the Construction Contract, the Surety's obligation to the Owner under this Bond will arise after the Owner has promptly notified the Contractor and the Surety (at the address described in Paragraph 13) of claims, demands, liens, or suits against the Owner or the Owner's property by any person or entity seeking payment for labor, materials, or equipment furnished for use in the performance of the Construction Contract, and tendered defense of such claims, demands, liens, or suits to the Contractor and the Surety.

4. When the Owner has satisfied the conditions in Paragraph 3, the Surety shall promptly and at the Surety's expense defend, indemnify, and hold harmless the Owner against a duly tendered claim, demand, lien, or suit.

5. The Surety's obligations to a Claimant under this Bond will arise after the following:

   5.1. Claimants who do not have a direct contract with the Contractor

      5.1.1. have furnished a written notice of non-payment to the Contractor, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were, or equipment was, furnished or supplied or for whom the labor was done or performed, within ninety (90) days after having last performed labor or last furnished materials or equipment included in the Claim; and

      5.1.2. have sent a Claim to the Surety (at the address described in Paragraph 13).

   5.2. Claimants who are employed by or have a direct contract with the Contractor have sent a Claim to the Surety (at the address described in Paragraph 13).

6. If a notice of non-payment required by Paragraph 5.1.1 is given by the Owner to the Contractor, that is sufficient to satisfy a Claimant's obligation to furnish a written notice of non-payment under Paragraph 5.1.1.

7. When a Claimant has satisfied the conditions of Paragraph 5.1 or 5.2, whichever is applicable, the Surety shall promptly and at the Surety's expense take the following actions:

   7.1. Send an answer to the Claimant, with a copy to the Owner, within sixty (60) days after receipt of the Claim, stating the amounts that are undisputed and the basis for challenging any amounts that are disputed; and

   7.2. Pay or arrange for payment of any undisputed amounts.

   7.3. The Surety's failure to discharge its obligations under Paragraph 7.1 or 7.2 will not be deemed to constitute a waiver of defenses the Surety or Contractor may have or acquire as to a Claim, except as to undisputed amounts for which the Surety and Claimant have reached agreement. If, however, the Surety fails to discharge its obligations under Paragraph 7.1 or 7.2, the Surety shall indemnify the Claimant for the reasonable attorney's fees the Claimant incurs thereafter to recover any sums found to be due and owing to the Claimant.

8. The Surety's total obligation will not exceed the amount of this Bond, plus the amount of reasonable attorney's fees provided under Paragraph 7.3, and the amount of this Bond will be credited for any payments made in good faith by the Surety.

9. Amounts owed by the Owner to the Contractor under the Construction Contract will be used for the performance of the Construction Contract and to satisfy claims, if any, under any construction performance bond. By the Contractor furnishing and the Owner accepting this Bond, they agree that all funds earned by the Contractor in the performance of the Construction Contract are dedicated to satisfying obligations of the Contractor and Surety under this Bond, subject to the Owner's priority to use the funds for the completion of the work.

10. The Surety shall not be liable to the Owner, Claimants, or others for obligations of the Contractor that are unrelated to the Construction Contract. The Owner shall not be liable for the payment of any costs or expenses of any Claimant under this Bond, and shall have under this Bond no obligation to make payments to or give notice on behalf of Claimants, or otherwise have any obligations to Claimants under this Bond.

11. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.

12. No suit or action will be commenced by a Claimant under this Bond other than in a court of competent jurisdiction in the state in which the project that is the subject of the Construction Contract is located or after the expiration of one year from the date (1) on which the Claimant sent a Claim to the Surety pursuant to Paragraph 5.1.2 or 5.2, or (2) on which the last labor or service was performed by anyone or the last materials or equipment were furnished by anyone under the Construction Contract, whichever of (1) or (2) first occurs. If the provisions of this paragraph are void or prohibited by law, the minimum period of limitation available to sureties as a defense in the jurisdiction of the suit will be applicable.

13. Notice and Claims to the Surety, the Owner, or the Contractor must be mailed or delivered to the address shown on the page on which their signature appears. Actual receipt of notice or Claims, however accomplished, will be sufficient compliance as of the date received.

14. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement will be deemed deleted here from and provisions conforming to such statutory or other legal requirement will be deemed incorporated herein. When so furnished, the intent is that this Bond will be construed as a statutory bond and not as a common law bond.

15. Upon requests by any person or entity appearing to be a potential beneficiary of this Bond, the Contractor and Owner shall promptly furnish a copy of this Bond or shall permit a copy to be made.

16. Definitions

    16.1. Claim—A written statement by the Claimant including at a minimum:

        16.1.1. The name of the Claimant;

        16.1.2. The name of the person for whom the labor was done, or materials or equipment furnished;

        16.1.3. A copy of the agreement or purchase order pursuant to which labor, materials, or equipment was furnished for use in the performance of the Construction Contract;

        16.1.4. A brief description of the labor, materials, or equipment furnished;

        16.1.5. The date on which the Claimant last performed labor or last furnished materials or equipment for use in the performance of the Construction Contract;

        16.1.6. The total amount earned by the Claimant for labor, materials, or equipment furnished as of the date of the Claim;

        16.1.7. The total amount of previous payments received by the Claimant; and

        16.1.8. The total amount due and unpaid to the Claimant for labor, materials, or equipment furnished as of the date of the Claim.

    16.2. Claimant—An individual or entity having a direct contract with the Contractor or with a subcontractor of the Contractor to furnish labor, materials, or equipment for use in the performance of the Construction Contract. The term Claimant also includes any individual or entity that has rightfully asserted a claim under an applicable mechanic's lien or similar statute against the real property upon which the Project is located. The intent of this Bond is to include without limitation in the terms of "labor, materials, or equipment" that part of the water, gas, power, light, heat, oil, gasoline, telephone service, or rental equipment used in the Construction Contract,

architectural and engineering services required for performance of the work of the Contractor and the Contractor's subcontractors, and all other items for which a mechanic's lien may be asserted in the jurisdiction where the labor, materials, or equipment were furnished.

16.3. Construction Contract—The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and all changes made to the agreement and the Contract Documents.

16.4. Owner Default—Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.

16.5. Contract Documents—All the documents that comprise the agreement between the Owner and Contractor.

17. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond will be deemed to be Subcontractor and the term Owner will be deemed to be Contractor.

18. Modifications to this Bond are as follows: **None**

FOR INFORMATION ONLY – (*Name, Address, and Telephone*) Surety Agency or Broker: Owner's Representative (*Engineer or other*):

This document has important legal consequences; consultation with an attorney is encouraged with respect to its use or modification. This document should be adapted to the particular circumstances of the contemplated Project and the controlling Laws and Regulations.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

EJCDC®
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

ACEC
American Council of Engineering Companies

ASCE
American Society of Civil Engineers

NSPE
National Society of Professional Engineers

Endorsed By

CSI
Building Knowledge
Improving Project Delivery

NUCA
We Dig America

EJCDC® C-700, Standard General Conditions of the Construction Contract.
Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Copyright© 2018

National Society of Professional Engineers
1420 King Street, Alexandria, VA 22314-2794
(703) 684-2882
www.nspe.org

American Council of Engineering Companies
1015 15th Street N.W., Washington, DC 20005
(202) 347-7474
www.acec.org

American Society of Civil Engineers
1801 Alexander Bell Drive, Reston, VA 20191-4400
(800) 548-2723
www.asce.org

The copyright for this EJCDC document is owned jointly by the three sponsoring organizations listed above. The National Society of Professional Engineers is the Copyright Administrator for the EJCDC documents; please direct all inquiries regarding EJCDC copyrights to NSPE.

NOTE: EJCDC publications may be purchased at www.ejcdc.org, or from any of the sponsoring organizations above.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

TABLE OF CONTENTS

Page

Article 1—Definitions and Terminology 1
1.01 Defined Terms 1
1.02 Terminology 6
Article 2—Preliminary Matters 7
2.01 Delivery of Performance and Payment Bonds; Evidence of Insurance 7
2.02 Copies of Documents 7
2.03 Before Starting Construction 7
2.04 Preconstruction Conference; Designation of Authorized Representatives 8
2.05 Acceptance of Schedules 8
2.06 Electronic Transmittals 8
Article 3—Contract Documents: Intent, Requirements, Reuse 9
3.01 Intent 9
3.02 Reference Standards 9
3.03 Reporting and Resolving Discrepancies 10
3.04 Requirements of the Contract Documents 10
3.05 Reuse of Documents 11
Article 4—Commencement and Progress of the Work 11
4.01 Commencement of Contract Times; Notice to Proceed 11
4.02 Starting the Work 11
4.03 Reference Points 11
4.04 Progress Schedule 12
4.05 Delays in Contractor's Progress 12
Article 5—Site; Subsurface and Physical Conditions; Hazardous Environmental Conditions 13
5.01 Availability of Lands 13
5.02 Use of Site and Other Areas 14
5.03 Subsurface and Physical Conditions 15
5.04 Differing Subsurface or Physical Conditions 16

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

5.05 Underground Facilities 17
5.06 Hazardous Environmental Conditions at Site 19
Article 6—Bonds and Insurance 21
6.01 Performance, Payment, and Other Bonds 21
6.02 Insurance—General Provisions 22
6.03 Contractor's Insurance 24
6.04 Builder's Risk and Other Property Insurance 25
6.05 Property Losses; Subrogation 25
6.06 Receipt and Application of Property Insurance Proceeds 27
Article 7—Contractor's Responsibilities 27
7.01 Contractor's Means and Methods of Construction 27
7.02 Supervision and Superintendence 27
7.03 Labor; Working Hours 27
7.04 Services, Materials, and Equipment 28
7.05 "Or Equals" 28
7.06 Substitutes 29
7.07 Concerning Subcontractors and Suppliers 31
7.08 Patent Fees and Royalties 32
7.09 Permits 33
7.10 Taxes 33
7.11 Laws and Regulations 33
7.12 Record Documents 33
7.13 Safety and Protection 34
7.14 Hazard Communication Programs 35
7.15 Emergencies 35
7.16 Submittals 35
7.17 Contractor's General Warranty and Guarantee 38
7.18 Indemnification 39
7.19 Delegation of Professional Design Services 39
Article 8—Other Work at the Site 40
8.01 Other Work 40
8.02 Coordination 41
8.03 Legal Relationships 41

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Article 9—Owner's Responsibilities 42
9.01 Communications to Contractor 42
9.02 Replacement of Engineer 42
9.03 Furnish Data 42
9.04 Pay When Due 42
9.05 Lands and Easements; Reports, Tests, and Drawings 43
9.06 Insurance 43
9.07 Change Orders 43
9.08 Inspections, Tests, and Approvals 43
9.09 Limitations on Owner's Responsibilities 43
9.10 Undisclosed Hazardous Environmental Condition 43
9.11 Evidence of Financial Arrangements 43
9.12 Safety Programs 43
Article 10—Engineer's Status During Construction 44
10.01 Owner's Representative 44
10.02 Visits to Site 44
10.03 Resident Project Representative 44
10.04 Engineer's Authority 44
10.05 Determinations for Unit Price Work 45
10.06 Decisions on Requirements of Contract Documents and Acceptability of Work 45
10.07 Limitations on Engineer's Authority and Responsibilities 45
10.08 Compliance with Safety Program 45
Article 11—Changes to the Contract 46
11.01 Amending and Supplementing the Contract 46
11.02 Change Orders 46
11.03 Work Change Directives 46
11.04 Field Orders 47
11.05 Owner-Authorized Changes in the Work 47
11.06 Unauthorized Changes in the Work 47
11.07 Change of Contract Price 47
11.08 Change of Contract Times 49
11.09 Change Proposals 49
11.10 Notification to Surety 50

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Article 12—Claims 50
12.01 Claims 50
Article 13—Cost of the Work; Allowances; Unit Price Work 51
13.01 Cost of the Work 51
13.02 Allowances 55
13.03 Unit Price Work 55
Article 14—Tests and Inspections; Correction, Removal, or Acceptance of Defective Work 56
14.01 Access to Work 56
14.02 Tests, Inspections, and Approvals 56
14.03 Defective Work 57
14.04 Acceptance of Defective Work 58
14.05 Uncovering Work 58
14.06 Owner May Stop the Work 58
14.07 Owner May Correct Defective Work 59
Article 15—Payments to Contractor; Set-Offs; Completion; Correction Period 59
15.01 Progress Payments 59
15.02 Contractor's Warranty of Title 62
15.03 Substantial Completion 62
15.04 Partial Use or Occupancy 63
15.05 Final Inspection 64
15.06 Final Payment 64
15.07 Waiver of Claims 65
15.08 Correction Period 66
Article 16—Suspension of Work and Termination 67
16.01 Owner May Suspend Work 67
16.02 Owner May Terminate for Cause 67
16.03 Owner May Terminate for Convenience 68
16.04 Contractor May Stop Work or Terminate 68
Article 17—Final Resolution of Disputes 69
17.01 Methods and Procedures 69
Article 18—Miscellaneous 69
18.01 Giving Notice 69
18.02 Computation of Times 69

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

18.03 Cumulative Remedies 70
18.04 Limitation of Damages 70
18.05 No Waiver 70
18.06 Survival of Obligations 70
18.07 Controlling Law 70
18.08 Assignment of Contract 70
18.09 Successors and Assigns 70
18.10 Headings 70

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT

ARTICLE 1—DEFINITIONS AND TERMINOLOGY

1.01 *Defined Terms*

A. Wherever used in the Bidding Requirements or Contract Documents, a term printed with initial capital letters, including the term's singular and plural forms, will have the meaning indicated in the definitions below. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. *Addenda*—Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. *Agreement*—The written instrument, executed by Owner and Contractor, that sets forth the Contract Price and Contract Times, identifies the parties and the Engineer, and designates the specific items that are Contract Documents.

3. *Application for Payment*—The document prepared by Contractor, in a form acceptable to Engineer, to request progress or final payments, and which is to be accompanied by such supporting documentation as is required by the Contract Documents.

4. *Bid*—The offer of a Bidder submitted on the prescribed form setting forth the prices for the Work to be performed.

5. *Bidder*—An individual or entity that submits a Bid to Owner.

6. *Bidding Documents*—The Bidding Requirements, the proposed Contract Documents, and all Addenda.

7. *Bidding Requirements*—The Advertisement or invitation to bid, Instructions to Bidders, Bid Bond or other Bid security, if any, the Bid Form, and the Bid with any attachments.

8. *Change Order*—A document which is signed by Contractor and Owner and authorizes an addition, deletion, or revision in the Work or an adjustment in the Contract Price or the Contract Times, or other revision to the Contract, issued on or after the Effective Date of the Contract.

9. *Change Proposal*—A written request by Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment in Contract Price or Contract Times; contesting an initial decision by Engineer concerning the requirements of the Contract Documents or the acceptability of Work under the Contract Documents; challenging a set-off against payments due; or seeking other relief with respect to the terms of the Contract.

10. *Claim*

a. A demand or assertion by Owner directly to Contractor, duly submitted in compliance with the procedural requirements set forth herein, seeking an adjustment of Contract Price or Contract Times; contesting an initial decision by Engineer concerning the

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

requirements of the Contract Documents or the acceptability of Work under the Contract Documents; contesting Engineer's decision regarding a Change Proposal; seeking resolution of a contractual issue that Engineer has declined to address; or seeking other relief with respect to the terms of the Contract.

b. A demand or assertion by Contractor directly to Owner, duly submitted in compliance with the procedural requirements set forth herein, contesting Engineer's decision regarding a Change Proposal, or seeking resolution of a contractual issue that Engineer has declined to address.

c. A demand or assertion by Owner or Contractor, duly submitted in compliance with the procedural requirements set forth herein, made pursuant to Paragraph 12.01.A.4, concerning disputes arising after Engineer has issued a recommendation of final payment.

d. A demand for money or services by a third party is not a Claim.

11. *Constituent of Concern*—Asbestos, petroleum, radioactive materials, polychlorinated biphenyls (PCBs), lead-based paint (as defined by the HUD/EPA standard), hazardous waste, and any substance, product, waste, or other material of any nature whatsoever that is or becomes listed, regulated, or addressed pursuant to Laws and Regulations regulating, relating to, or imposing liability or standards of conduct concerning, any hazardous, toxic, or dangerous waste, substance, or material.

12. *Contract*—The entire and integrated written contract between Owner and Contractor concerning the Work.

13. *Contract Documents*—Those items so designated in the Agreement, and which together comprise the Contract.

14. *Contract Price*—The money that Owner has agreed to pay Contractor for completion of the Work in accordance with the Contract Documents.

15. *Contract Times*—The number of days or the dates by which Contractor shall: (a) achieve Milestones, if any; (b) achieve Substantial Completion; and (c) complete the Work.

16. *Contractor*—The individual or entity with which Owner has contracted for performance of the Work.

17. *Cost of the Work*—See Paragraph 13.01 for definition.

18. *Drawings*—The part of the Contract that graphically shows the scope, extent, and character of the Work to be performed by Contractor.

19. *Effective Date of the Contract*—The date, indicated in the Agreement, on which the Contract becomes effective.

20. *Electronic Document*—Any Project-related correspondence, attachments to correspondence, data, documents, drawings, information, or graphics, including but not limited to Shop Drawings and other Submittals, that are in an electronic or digital format.

21. *Electronic Means*—Electronic mail (email), upload/download from a secure Project website, or other communications methods that allow: (a) the transmission or communication of Electronic Documents; (b) the documentation of transmissions, including sending and receipt; (c) printing of the transmitted Electronic Document by the

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

recipient; (d) the storage and archiving of the Electronic Document by sender and recipient; and (e) the use by recipient of the Electronic Document for purposes permitted by this Contract. Electronic Means does not include the use of text messaging, or of Facebook, Twitter, Instagram, or similar social media services for transmission of Electronic Documents.

22. *Engineer*—The individual or entity named as such in the Agreement.

23. *Field Order*—A written order issued by Engineer which requires minor changes in the Work but does not change the Contract Price or the Contract Times.

24. *Hazardous Environmental Condition*—The presence at the Site of Constituents of Concern in such quantities or circumstances that may present a danger to persons or property exposed thereto.

    a. The presence at the Site of materials that are necessary for the execution of the Work, or that are to be incorporated into the Work, and that are controlled and contained pursuant to industry practices, Laws and Regulations, and the requirements of the Contract, is not a Hazardous Environmental Condition.

    b. The presence of Constituents of Concern that are to be removed or remediated as part of the Work is not a Hazardous Environmental Condition.

    c. The presence of Constituents of Concern as part of the routine, anticipated, and obvious working conditions at the Site, is not a Hazardous Environmental Condition.

25. *Laws and Regulations; Laws or Regulations*—Any and all applicable laws, statutes, rules, regulations, ordinances, codes, and binding decrees, resolutions, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

26. *Liens*—Charges, security interests, or encumbrances upon Contract-related funds, real property, or personal property.

27. *Milestone*—A principal event in the performance of the Work that the Contract requires Contractor to achieve by an intermediate completion date, or by a time prior to Substantial Completion of all the Work.

28. *Notice of Award*—The written notice by Owner to a Bidder of Owner's acceptance of the Bid.

29. *Notice to Proceed*—A written notice by Owner to Contractor fixing the date on which the Contract Times will commence to run and on which Contractor shall start to perform the Work.

30. *Owner*—The individual or entity with which Contractor has contracted regarding the Work, and which has agreed to pay Contractor for the performance of the Work, pursuant to the terms of the Contract.

31. *Progress Schedule*—A schedule, prepared and maintained by Contractor, describing the sequence and duration of the activities comprising Contractor's plan to accomplish the Work within the Contract Times.

32. *Project*—The total undertaking to be accomplished for Owner by engineers, contractors, and others, including planning, study, design, construction, testing, commissioning, and start-up, and of which the Work to be performed under the Contract Documents is a part.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

33. *Resident Project Representative*—The authorized representative of Engineer assigned to assist Engineer at the Site. As used herein, the term Resident Project Representative (RPR) includes any assistants or field staff of Resident Project Representative.

34. *Samples*—Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and that establish the standards by which such portion of the Work will be judged.

35. *Schedule of Submittals*—A schedule, prepared and maintained by Contractor, of required submittals and the time requirements for Engineer's review of the submittals.

36. *Schedule of Values*—A schedule, prepared and maintained by Contractor, allocating portions of the Contract Price to various portions of the Work and used as the basis for reviewing Contractor's Applications for Payment.

37. *Shop Drawings*—All drawings, diagrams, illustrations, schedules, and other data or information that are specifically prepared or assembled by or for Contractor and submitted by Contractor to illustrate some portion of the Work. Shop Drawings, whether approved or not, are not Drawings and are not Contract Documents.

38. *Site*—Lands or areas indicated in the Contract Documents as being furnished by Owner upon which the Work is to be performed, including rights-of-way and easements, and such other lands or areas furnished by Owner which are designated for the use of Contractor.

39. *Specifications*—The part of the Contract that consists of written requirements for materials, equipment, systems, standards, and workmanship as applied to the Work, and certain administrative requirements and procedural matters applicable to the Work.

40. *Subcontractor*—An individual or entity having a direct contract with Contractor or with any other Subcontractor for the performance of a part of the Work.

41. *Submittal*—A written or graphic document, prepared by or for Contractor, which the Contract Documents require Contractor to submit to Engineer, or that is indicated as a Submittal in the Schedule of Submittals accepted by Engineer. Submittals may include Shop Drawings and Samples; schedules; product data; Owner-delegated designs; sustainable design information; information on special procedures; testing plans; results of tests and evaluations, source quality-control testing and inspections, and field or Site quality-control testing and inspections; warranties and certifications; Suppliers' instructions and reports; records of delivery of spare parts and tools; operations and maintenance data; Project photographic documentation; record documents; and other such documents required by the Contract Documents. Submittals, whether or not approved or accepted by Engineer, are not Contract Documents. Change Proposals, Change Orders, Claims, notices, Applications for Payment, and requests for interpretation or clarification are not Submittals.

42. *Substantial Completion*—The time at which the Work (or a specified part thereof) has progressed to the point where, in the opinion of Engineer, the Work (or a specified part thereof) is sufficiently complete, in accordance with the Contract Documents, so that the Work (or a specified part thereof) can be utilized for the purposes for which it is intended. The terms "substantially complete" and "substantially completed" as applied to all or part of the Work refer to Substantial Completion of such Work.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

43. *Successful Bidder*—The Bidder to which the Owner makes an award of contract.

44. *Supplementary Conditions*—The part of the Contract that amends or supplements these General Conditions.

45. *Supplier*—A manufacturer, fabricator, supplier, distributor, or vendor having a direct contract with Contractor or with any Subcontractor to furnish materials or equipment to be incorporated in the Work by Contractor or a Subcontractor.

46. *Technical Data*

    a. Those items expressly identified as Technical Data in the Supplementary Conditions, with respect to either (1) existing subsurface conditions at or adjacent to the Site, or existing physical conditions at or adjacent to the Site including existing surface or subsurface structures (except Underground Facilities) or (2) Hazardous Environmental Conditions at the Site.

    b. If no such express identifications of Technical Data have been made with respect to conditions at the Site, then Technical Data is defined, with respect to conditions at the Site under Paragraphs 5.03, 5.04, and 5.06, as the data contained in boring logs, recorded measurements of subsurface water levels, assessments of the condition of subsurface facilities, laboratory test results, and other factual, objective information regarding conditions at the Site that are set forth in any geotechnical, environmental, or other Site or facilities conditions report prepared for the Project and made available to Contractor.

    c. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data, and instead Underground Facilities are shown or indicated on the Drawings.

47. *Underground Facilities*—All active or not-in-service underground lines, pipelines, conduits, ducts, encasements, cables, wires, manholes, vaults, tanks, tunnels, or other such facilities or systems at the Site, including but not limited to those facilities or systems that produce, transmit, distribute, or convey telephone or other communications, cable television, fiber optic transmissions, power, electricity, light, heat, gases, oil, crude oil products, liquid petroleum products, water, steam, waste, wastewater, storm water, other liquids or chemicals, or traffic or other control systems. An abandoned facility or system is not an Underground Facility.

48. *Unit Price Work*—Work to be paid for on the basis of unit prices.

49. *Work*—The entire construction or the various separately identifiable parts thereof required to be provided under the Contract Documents. Work includes and is the result of performing or providing all labor, services, and documentation necessary to produce such construction; furnishing, installing, and incorporating all materials and equipment into such construction; and may include related services such as testing, start-up, and commissioning, all as required by the Contract Documents.

50. *Work Change Directive*—A written directive to Contractor issued on or after the Effective Date of the Contract, signed by Owner and recommended by Engineer, ordering an addition, deletion, or revision in the Work.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

1.02 *Terminology*

A. The words and terms discussed in Paragraphs 1.02.B, C, D, and E are not defined terms that require initial capital letters, but, when used in the Bidding Requirements or Contract Documents, have the indicated meaning.

B. *Intent of Certain Terms or Adjectives*: The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Work. It is intended that such exercise of professional judgment, action, or determination will be solely to evaluate, in general, the Work for compliance with the information in the Contract Documents and with the design concept of the Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective is not intended to and shall not be effective to assign to Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility contrary to the provisions of Article 10 or any other provision of the Contract Documents.

C. *Day*: The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

D. *Defective*: The word "defective," when modifying the word "Work," refers to Work that is unsatisfactory, faulty, or deficient in that it:

1. does not conform to the Contract Documents;

2. does not meet the requirements of any applicable inspection, reference standard, test, or approval referred to in the Contract Documents; or

3. has been damaged prior to Engineer's recommendation of final payment (unless responsibility for the protection thereof has been assumed by Owner at Substantial Completion in accordance with Paragraph 15.03 or Paragraph 15.04).

E. *Furnish, Install, Perform, Provide*

1. The word "furnish," when used in connection with services, materials, or equipment, means to supply and deliver said services, materials, or equipment to the Site (or some other specified location) ready for use or installation and in usable or operable condition.

2. The word "install," when used in connection with services, materials, or equipment, means to put into use or place in final position said services, materials, or equipment complete and ready for intended use.

3. The words "perform" or "provide," when used in connection with services, materials, or equipment, means to furnish and install said services, materials, or equipment complete and ready for intended use.

4. If the Contract Documents establish an obligation of Contractor with respect to specific services, materials, or equipment, but do not expressly use any of the four words "furnish," "install," "perform," or "provide," then Contractor shall furnish and install said services, materials, or equipment complete and ready for intended use.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

F. *Contract Price or Contract Times*: References to a change in "Contract Price or Contract Times" or "Contract Times or Contract Price" or similar, indicate that such change applies to (1) Contract Price, (2) Contract Times, or (3) both Contract Price and Contract Times, as warranted, even if the term "or both" is not expressed.

G. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

ARTICLE 2—PRELIMINARY MATTERS

2.01 *Delivery of Performance and Payment Bonds; Evidence of Insurance*

A. *Performance and Payment Bonds*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner the performance bond and payment bond (if the Contract requires Contractor to furnish such bonds).

B. *Evidence of Contractor's Insurance*: When Contractor delivers the signed counterparts of the Agreement to Owner, Contractor shall also deliver to Owner, with copies to each additional insured (as identified in the Contract), the certificates, endorsements, and other evidence of insurance required to be provided by Contractor in accordance with Article 6, except to the extent the Supplementary Conditions expressly establish other dates for delivery of specific insurance policies.

C. *Evidence of Owner's Insurance*: After receipt of the signed counterparts of the Agreement and all required bonds and insurance documentation, Owner shall promptly deliver to Contractor, with copies to each additional insured (as identified in the Contract), the certificates and other evidence of insurance required to be provided by Owner under Article 6.

2.02 *Copies of Documents*

A. Owner shall furnish to Contractor four printed copies of the Contract (including one fully signed counterpart of the Agreement), and one copy in electronic portable document format (PDF). Additional printed copies will be furnished upon request at the cost of reproduction.

B. Owner shall maintain and safeguard at least one original printed record version of the Contract, including Drawings and Specifications signed and sealed by Engineer and other design professionals. Owner shall make such original printed record version of the Contract available to Contractor for review. Owner may delegate the responsibilities under this provision to Engineer.

2.03 *Before Starting Construction*

A. *Preliminary Schedules*: Within 10 days after the Effective Date of the Contract (or as otherwise required by the Contract Documents), Contractor shall submit to Engineer for timely review:

1. a preliminary Progress Schedule indicating the times (numbers of days or dates) for starting and completing the various stages of the Work, including any Milestones specified in the Contract;

2. a preliminary Schedule of Submittals; and

3. a preliminary Schedule of Values for all of the Work which includes quantities and prices of items which when added together equal the Contract Price and subdivides the Work

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

into component parts in sufficient detail to serve as the basis for progress payments during performance of the Work. Such prices will include an appropriate amount of overhead and profit applicable to each item of Work.

2.04 *Preconstruction Conference; Designation of Authorized Representatives*

A. Before any Work at the Site is started, a conference attended by Owner, Contractor, Engineer, and others as appropriate will be held to establish a working understanding among the parties as to the Work, and to discuss the schedules referred to in Paragraph 2.03.A, procedures for handling Shop Drawings, Samples, and other Submittals, processing Applications for Payment, electronic or digital transmittals, and maintaining required records.

B. At this conference Owner and Contractor each shall designate, in writing, a specific individual to act as its authorized representative with respect to the services and responsibilities under the Contract. Such individuals shall have the authority to transmit and receive information, render decisions relative to the Contract, and otherwise act on behalf of each respective party.

2.05 *Acceptance of Schedules*

A. At least 10 days before submission of the first Application for Payment a conference, attended by Contractor, Engineer, and others as appropriate, will be held to review the schedules submitted in accordance with Paragraph 2.03.A. No progress payment will be made to Contractor until acceptable schedules are submitted to Engineer.

1. The Progress Schedule will be acceptable to Engineer if it provides an orderly progression of the Work to completion within the Contract Times. Such acceptance will not impose on Engineer responsibility for the Progress Schedule, for sequencing, scheduling, or progress of the Work, nor interfere with or relieve Contractor from Contractor's full responsibility therefor.

2. Contractor's Schedule of Submittals will be acceptable to Engineer if it provides a workable arrangement for reviewing and processing the required submittals.

3. Contractor's Schedule of Values will be acceptable to Engineer as to form and substance if it provides a reasonable allocation of the Contract Price to the component parts of the Work.

4. If a schedule is not acceptable, Contractor will have an additional 10 days to revise and resubmit the schedule.

2.06 *Electronic Transmittals*

A. Except as otherwise stated elsewhere in the Contract, the Owner, Engineer, and Contractor may send, and shall accept, Electronic Documents transmitted by Electronic Means.

B. If the Contract does not establish protocols for Electronic Means, then Owner, Engineer, and Contractor shall jointly develop such protocols.

C. Subject to any governing protocols for Electronic Means, when transmitting Electronic Documents by Electronic Means, the transmitting party makes no representations as to long-term compatibility, usability, or readability of the Electronic Documents resulting from the recipient's use of software application packages, operating systems, or computer hardware differing from those used in the drafting or transmittal of the Electronic Documents.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ARTICLE 3—CONTRACT DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 *Intent*

A. The Contract Documents are complementary; what is required by one Contract Document is as binding as if required by all.

B. It is the intent of the Contract Documents to describe a functionally complete Project (or part thereof) to be constructed in accordance with the Contract Documents.

C. Unless otherwise stated in the Contract Documents, if there is a discrepancy between the electronic versions of the Contract Documents (including any printed copies derived from such electronic versions) and the printed record version, the printed record version will govern.

D. The Contract supersedes prior negotiations, representations, and agreements, whether written or oral.

E. Engineer will issue clarifications and interpretations of the Contract Documents as provided herein.

F. Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation will be deemed stricken, and all remaining provisions will continue to be valid and binding upon Owner and Contractor, which agree that the Contract Documents will be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.

G. Nothing in the Contract Documents creates:

1. any contractual relationship between Owner or Engineer and any Subcontractor, Supplier, or other individual or entity performing or furnishing any of the Work, for the benefit of such Subcontractor, Supplier, or other individual or entity; or

2. any obligation on the part of Owner or Engineer to pay or to see to the payment of any money due any such Subcontractor, Supplier, or other individual or entity, except as may otherwise be required by Laws and Regulations.

3.02 *Reference Standards*

A. *Standards Specifications, Codes, Laws and Regulations*

1. Reference in the Contract Documents to standard specifications, manuals, reference standards, or codes of any technical society, organization, or association, or to Laws or Regulations, whether such reference be specific or by implication, means the standard specification, manual, reference standard, code, or Laws or Regulations in effect at the time of opening of Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

2. No provision of any such standard specification, manual, reference standard, or code, and no instruction of a Supplier, will be effective to change the duties or responsibilities of Owner, Contractor, or Engineer from those set forth in the part of the Contract Documents prepared by or for Engineer. No such provision or instruction shall be effective to assign to Owner or Engineer any duty or authority to supervise or direct the performance of the Work, or any duty or authority to undertake responsibility

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

inconsistent with the provisions of the part of the Contract Documents prepared by or for Engineer.

3.03 *Reporting and Resolving Discrepancies*

A. *Reporting Discrepancies*

1. *Contractor's Verification of Figures and Field Measurements*: Before undertaking each part of the Work, Contractor shall carefully study the Contract Documents, and check and verify pertinent figures and dimensions therein, particularly with respect to applicable field measurements. Contractor shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy that Contractor discovers, or has actual knowledge of, and shall not proceed with any Work affected thereby until the conflict, error, ambiguity, or discrepancy is resolved by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

2. *Contractor's Review of Contract Documents*: If, before or during the performance of the Work, Contractor discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents, or between the Contract Documents and (a) any applicable Law or Regulation, (b) actual field conditions, (c) any standard specification, manual, reference standard, or code, or (d) any instruction of any Supplier, then Contractor shall promptly report it to Engineer in writing. Contractor shall not proceed with the Work affected thereby (except in an emergency as required by Paragraph 7.15) until the conflict, error, ambiguity, or discrepancy is resolved, by a clarification or interpretation by Engineer, or by an amendment or supplement to the Contract issued pursuant to Paragraph 11.01.

3. Contractor shall not be liable to Owner or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Contractor had actual knowledge thereof.

B. *Resolving Discrepancies*

1. Except as may be otherwise specifically stated in the Contract Documents, the provisions of the part of the Contract Documents prepared by or for Engineer take precedence in resolving any conflict, error, ambiguity, or discrepancy between such provisions of the Contract Documents and:

a. the provisions of any standard specification, manual, reference standard, or code, or the instruction of any Supplier (whether or not specifically incorporated by reference as a Contract Document); or

b. the provisions of any Laws or Regulations applicable to the performance of the Work (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.04 *Requirements of the Contract Documents*

A. During the performance of the Work and until final payment, Contractor and Owner shall submit to the Engineer in writing all matters in question concerning the requirements of the Contract Documents (sometimes referred to as requests for information or interpretation—RFIs), or relating to the acceptability of the Work under the Contract Documents, as soon as possible after such matters arise. Engineer will be the initial interpreter of the requirements of the Contract Documents, and judge of the acceptability of the Work.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. Engineer will, with reasonable promptness, render a written clarification, interpretation, or decision on the issue submitted, or initiate an amendment or supplement to the Contract Documents. Engineer's written clarification, interpretation, or decision will be final and binding on Contractor, unless it appeals by submitting a Change Proposal, and on Owner, unless it appeals by filing a Claim.

C. If a submitted matter in question concerns terms and conditions of the Contract Documents that do not involve (1) the performance or acceptability of the Work under the Contract Documents, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, then Engineer will promptly notify Owner and Contractor in writing that Engineer is unable to provide a decision or interpretation. If Owner and Contractor are unable to agree on resolution of such a matter in question, either party may pursue resolution as provided in Article 12.

3.05 *Reuse of Documents*

A. Contractor and its Subcontractors and Suppliers shall not:

1. have or acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions, or reuse any such Drawings, Specifications, other documents, or copies thereof on extensions of the Project or any other project without written consent of Owner and Engineer and specific written verification or adaptation by Engineer; or

2. have or acquire any title or ownership rights in any other Contract Documents, reuse any such Contract Documents for any purpose without Owner's express written consent, or violate any copyrights pertaining to such Contract Documents.

B. The prohibitions of this Paragraph 3.05 will survive final payment, or termination of the Contract. Nothing herein precludes Contractor from retaining copies of the Contract Documents for record purposes.

ARTICLE 4—COMMENCEMENT AND PROGRESS OF THE WORK

4.01 *Commencement of Contract Times; Notice to Proceed*

A. The Contract Times will commence to run on the 30th day after the Effective Date of the Contract or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Contract. In no event will the Contract Times commence to run later than the 60th day after the day of Bid opening or the 30th day after the Effective Date of the Contract, whichever date is earlier.

4.02 *Starting the Work*

A. Contractor shall start to perform the Work on the date when the Contract Times commence to run. No Work may be done at the Site prior to such date.

4.03 *Reference Points*

A. Owner shall provide engineering surveys to establish reference points for construction which in Engineer's judgment are necessary to enable Contractor to proceed with the Work. Contractor shall be responsible for laying out the Work, shall protect and preserve the

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

established reference points and property monuments, and shall make no changes or relocations without the prior written approval of Owner. Contractor shall report to Engineer whenever any reference point or property monument is lost or destroyed or requires relocation because of necessary changes in grades or locations, and shall be responsible for the accurate replacement or relocation of such reference points or property monuments by professionally qualified personnel.

4.04 *Progress Schedule*

A. Contractor shall adhere to the Progress Schedule established in accordance with Paragraph 2.05 as it may be adjusted from time to time as provided below.

1. Contractor shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.05) proposed adjustments in the Progress Schedule that will not result in changing the Contract Times.

2. Proposed adjustments in the Progress Schedule that will change the Contract Times must be submitted in accordance with the requirements of Article 11.

B. Contractor shall carry on the Work and adhere to the Progress Schedule during all disputes or disagreements with Owner. No Work will be delayed or postponed pending resolution of any disputes or disagreements, or during any appeal process, except as permitted by Paragraph 16.04, or as Owner and Contractor may otherwise agree in writing.

4.05 *Delays in Contractor's Progress*

A. If Owner, Engineer, or anyone for whom Owner is responsible, delays, disrupts, or interferes with the performance or progress of the Work, then Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times.

B. Contractor shall not be entitled to an adjustment in Contract Price or Contract Times for delay, disruption, or interference caused by or within the control of Contractor. Delay, disruption, and interference attributable to and within the control of a Subcontractor or Supplier shall be deemed to be within the control of Contractor.

C. If Contractor's performance or progress is delayed, disrupted, or interfered with by unanticipated causes not the fault of and beyond the control of Owner, Contractor, and those for which they are responsible, then Contractor shall be entitled to an equitable adjustment in Contract Times. Such an adjustment will be Contractor's sole and exclusive remedy for the delays, disruption, and interference described in this paragraph. Causes of delay, disruption, or interference that may give rise to an adjustment in Contract Times under this paragraph include but are not limited to the following:

1. Severe and unavoidable natural catastrophes such as fires, floods, epidemics, and earthquakes;

2. Abnormal weather conditions;

3. Acts or failures to act of third-party utility owners or other third-party entities (other than those third-party utility owners or other third-party entities performing other work at or adjacent to the Site as arranged by or under contract with Owner, as contemplated in Article 8); and

4. Acts of war or terrorism.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

D. Contractor's entitlement to an adjustment of Contract Times or Contract Price is limited as follows:

1. Contractor's entitlement to an adjustment of the Contract Times is conditioned on the delay, disruption, or interference adversely affecting an activity on the critical path to completion of the Work, as of the time of the delay, disruption, or interference.

2. Contractor shall not be entitled to an adjustment in Contract Price for any delay, disruption, or interference if such delay is concurrent with a delay, disruption, or interference caused by or within the control of Contractor. Such a concurrent delay by Contractor shall not preclude an adjustment of Contract Times to which Contractor is otherwise entitled.

3. Adjustments of Contract Times or Contract Price are subject to the provisions of Article 11.

E. Each Contractor request or Change Proposal seeking an increase in Contract Times or Contract Price must be supplemented by supporting data that sets forth in detail the following:

1. The circumstances that form the basis for the requested adjustment;

2. The date upon which each cause of delay, disruption, or interference began to affect the progress of the Work;

3. The date upon which each cause of delay, disruption, or interference ceased to affect the progress of the Work;

4. The number of days' increase in Contract Times claimed as a consequence of each such cause of delay, disruption, or interference; and

5. The impact on Contract Price, in accordance with the provisions of Paragraph 11.07.

Contractor shall also furnish such additional supporting documentation as Owner or Engineer may require including, where appropriate, a revised progress schedule indicating all the activities affected by the delay, disruption, or interference, and an explanation of the effect of the delay, disruption, or interference on the critical path to completion of the Work.

F. Delays, disruption, and interference to the performance or progress of the Work resulting from the existence of a differing subsurface or physical condition, an Underground Facility that was not shown or indicated by the Contract Documents, or not shown or indicated with reasonable accuracy, and those resulting from Hazardous Environmental Conditions, are governed by Article 5, together with the provisions of Paragraphs 4.05.D and 4.05.E.

G. Paragraph 8.03 addresses delays, disruption, and interference to the performance or progress of the Work resulting from the performance of certain other work at or adjacent to the Site.

ARTICLE 5—SITE; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 *Availability of Lands*

A. Owner shall furnish the Site. Owner shall notify Contractor in writing of any encumbrances or restrictions not of general application but specifically related to use of the Site with which Contractor must comply in performing the Work.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. Upon reasonable written request, Owner shall furnish Contractor with a current statement of record legal title and legal description of the lands upon which permanent improvements are to be made and Owner's interest therein as necessary for giving notice of or filing a mechanic's or construction lien against such lands in accordance with applicable Laws and Regulations.

C. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

5.02 *Use of Site and Other Areas*

A. *Limitation on Use of Site and Other Areas*

1. Contractor shall confine construction equipment, temporary construction facilities, the storage of materials and equipment, and the operations of workers to the Site, adjacent areas that Contractor has arranged to use through construction easements or otherwise, and other adjacent areas permitted by Laws and Regulations, and shall not unreasonably encumber the Site and such other adjacent areas with construction equipment or other materials or equipment. Contractor shall assume full responsibility for (a) damage to the Site; (b) damage to any such other adjacent areas used for Contractor's operations; (c) damage to any other adjacent land or areas, or to improvements, structures, utilities, or similar facilities located at such adjacent lands or areas; and (d) for injuries and losses sustained by the owners or occupants of any such land or areas; provided that such damage or injuries result from the performance of the Work or from other actions or conduct of the Contractor or those for which Contractor is responsible.

2. If a damage or injury claim is made by the owner or occupant of any such land or area because of the performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible, Contractor shall (a) take immediate corrective or remedial action as required by Paragraph 7.13, or otherwise; (b) promptly attempt to settle the claim as to all parties through negotiations with such owner or occupant, or otherwise resolve the claim by arbitration or other dispute resolution proceeding, or in a court of competent jurisdiction; and (c) to the fullest extent permitted by Laws and Regulations, indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against any such claim, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any claim or action, legal or equitable, brought by any such owner or occupant against Owner, Engineer, or any other party indemnified hereunder to the extent caused directly or indirectly, in whole or in part by, or based upon, Contractor's performance of the Work, or because of other actions or conduct of the Contractor or those for which Contractor is responsible.

B. *Removal of Debris During Performance of the Work*: During the progress of the Work the Contractor shall keep the Site and other adjacent areas free from accumulations of waste materials, rubbish, and other debris. Removal and disposal of such waste materials, rubbish, and other debris will conform to applicable Laws and Regulations.

C. *Cleaning*: Prior to Substantial Completion of the Work Contractor shall clean the Site and the Work and make it ready for utilization by Owner. At the completion of the Work Contractor shall remove from the Site and adjacent areas all tools, appliances, construction equipment

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

and machinery, and surplus materials and shall restore to original condition all property not designated for alteration by the Contract Documents.

D. *Loading of Structures*: Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall Contractor subject any part of the Work or adjacent structures or land to stresses or pressures that will endanger them.

5.03 *Subsurface and Physical Conditions*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. Those reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data;

2. Those drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data; and

3. Technical Data contained in such reports and drawings.

B. *Underground Facilities*: Underground Facilities are shown or indicated on the Drawings, pursuant to Paragraph 5.05, and not in the drawings referred to in Paragraph 5.03.A. Information and data regarding the presence or location of Underground Facilities are not intended to be categorized, identified, or defined as Technical Data.

C. *Reliance by Contractor on Technical Data*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely upon the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b.

D. *Limitations of Other Data and Documents*: Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences, and procedures of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings;

3. the contents of other Site-related documents made available to Contractor, such as record drawings from other projects at or adjacent to the Site, or Owner's archival documents concerning the Site; or

4. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions, or information.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

5.04 *Differing Subsurface or Physical Conditions*

A. *Notice by Contractor*: If Contractor believes that any subsurface or physical condition that is uncovered or revealed at the Site:

1. is of such a nature as to establish that any Technical Data on which Contractor is entitled to rely as provided in Paragraph 5.03 is materially inaccurate;

2. is of such a nature as to require a change in the Drawings or Specifications;

3. differs materially from that shown or indicated in the Contract Documents; or

4. is of an unusual nature, and differs materially from conditions ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents;

then Contractor shall, promptly after becoming aware thereof and before further disturbing the subsurface or physical conditions or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing about such condition. Contractor shall not further disturb such condition or perform any Work in connection therewith (except with respect to an emergency) until receipt of a written statement permitting Contractor to do so.

B. *Engineer's Review*: After receipt of written notice as required by the preceding paragraph, Engineer will promptly review the subsurface or physical condition in question; determine whether it is necessary for Owner to obtain additional exploration or tests with respect to the condition; conclude whether the condition falls within any one or more of the differing site condition categories in Paragraph 5.04.A; obtain any pertinent cost or schedule information from Contractor; prepare recommendations to Owner regarding the Contractor's resumption of Work in connection with the subsurface or physical condition in question and the need for any change in the Drawings or Specifications; and advise Owner in writing of Engineer's findings, conclusions, and recommendations.

C. *Owner's Statement to Contractor Regarding Site Condition*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the subsurface or physical condition in question, addressing the resumption of Work in connection with such condition, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations, in whole or in part.

D. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the subsurface or physical condition in question may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the condition in question has been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

E. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in Contract Price or Contract Times, to the extent that the existence of a differing subsurface or physical condition, or any related delay, disruption, or interference, causes an increase or decrease in

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. Such condition must fall within any one or more of the categories described in Paragraph 5.04.A;

b. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03; and,

c. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

2. Contractor shall not be entitled to any adjustment in the Contract Price or Contract Times with respect to a subsurface or physical condition if:

a. Contractor knew of the existence of such condition at the time Contractor made a commitment to Owner with respect to Contract Price and Contract Times by the submission of a Bid or becoming bound under a negotiated contract, or otherwise;

b. The existence of such condition reasonably could have been discovered or revealed as a result of any examination, investigation, exploration, test, or study of the Site and contiguous areas expressly required by the Bidding Requirements or Contract Documents to be conducted by or for Contractor prior to Contractor's making such commitment; or

c. Contractor failed to give the written notice required by Paragraph 5.04.A.

3. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

4. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the subsurface or physical condition in question.

F. *Underground Facilities; Hazardous Environmental Conditions*: Paragraph 5.05 governs rights and responsibilities regarding the presence or location of Underground Facilities. Paragraph 5.06 governs rights and responsibilities regarding Hazardous Environmental Conditions. The provisions of Paragraphs 5.03 and 5.04 are not applicable to the presence or location of Underground Facilities, or to Hazardous Environmental Conditions.

5.05 *Underground Facilities*

A. *Contractor's Responsibilities*: Unless it is otherwise expressly provided in the Supplementary Conditions, the cost of all of the following are included in the Contract Price, and Contractor shall have full responsibility for:

1. reviewing and checking all information and data regarding existing Underground Facilities at the Site;

2. complying with applicable state and local utility damage prevention Laws and Regulations;

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

3. verifying the actual location of those Underground Facilities shown or indicated in the Contract Documents as being within the area affected by the Work, by exposing such Underground Facilities during the course of construction;

4. coordination of the Work with the owners (including Owner) of such Underground Facilities, during construction; and

5. the safety and protection of all existing Underground Facilities at the Site, and repairing any damage thereto resulting from the Work.

B. *Notice by Contractor*: If Contractor believes that an Underground Facility that is uncovered or revealed at the Site was not shown or indicated on the Drawings, or was not shown or indicated on the Drawings with reasonable accuracy, then Contractor shall, promptly after becoming aware thereof and before further disturbing conditions affected thereby or performing any Work in connection therewith (except in an emergency as required by Paragraph 7.15), notify Owner and Engineer in writing regarding such Underground Facility.

C. *Engineer's Review*: Engineer will:

1. promptly review the Underground Facility and conclude whether such Underground Facility was not shown or indicated on the Drawings, or was not shown or indicated with reasonable accuracy;

2. identify and communicate with the owner of the Underground Facility; prepare recommendations to Owner (and if necessary issue any preliminary instructions to Contractor) regarding the Contractor's resumption of Work in connection with the Underground Facility in question;

3. obtain any pertinent cost or schedule information from Contractor; determine the extent, if any, to which a change is required in the Drawings or Specifications to reflect and document the consequences of the existence or location of the Underground Facility; and

4. advise Owner in writing of Engineer's findings, conclusions, and recommendations.

During such time, Contractor shall be responsible for the safety and protection of such Underground Facility.

D. *Owner's Statement to Contractor Regarding Underground Facility*: After receipt of Engineer's written findings, conclusions, and recommendations, Owner shall issue a written statement to Contractor (with a copy to Engineer) regarding the Underground Facility in question addressing the resumption of Work in connection with such Underground Facility, indicating whether any change in the Drawings or Specifications will be made, and adopting or rejecting Engineer's written findings, conclusions, and recommendations in whole or in part.

E. *Early Resumption of Work*: If at any time Engineer determines that Work in connection with the Underground Facility may resume prior to completion of Engineer's review or Owner's issuance of its statement to Contractor, because the Underground Facility in question and conditions affected by its presence have been adequately documented, and analyzed on a preliminary basis, then the Engineer may at its discretion instruct Contractor to resume such Work.

F. *Possible Price and Times Adjustments*

1. Contractor shall be entitled to an equitable adjustment in the Contract Price or Contract Times, to the extent that any existing Underground Facility at the Site that was not shown

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

or indicated on the Drawings, or was not shown or indicated with reasonable accuracy, or any related delay, disruption, or interference, causes an increase or decrease in Contractor's cost of, or time required for, performance of the Work; subject, however, to the following:

a. With respect to Work that is paid for on a unit price basis, any adjustment in Contract Price will be subject to the provisions of Paragraph 13.03;

b. Contractor's entitlement to an adjustment of the Contract Times is subject to the provisions of Paragraphs 4.05.D and 4.05.E; and

c. Contractor gave the notice required in Paragraph 5.05.B.

2. If Owner and Contractor agree regarding Contractor's entitlement to and the amount or extent of any adjustment in the Contract Price or Contract Times, then any such adjustment will be set forth in a Change Order.

3. Contractor may submit a Change Proposal regarding its entitlement to or the amount or extent of any adjustment in the Contract Price or Contract Times, no later than 30 days after Owner's issuance of the Owner's written statement to Contractor regarding the Underground Facility in question.

4. The information and data shown or indicated on the Drawings with respect to existing Underground Facilities at the Site is based on information and data (a) furnished by the owners of such Underground Facilities, or by others, (b) obtained from available records, or (c) gathered in an investigation conducted in accordance with the current edition of ASCE 38, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data, by the American Society of Civil Engineers. If such information or data is incorrect or incomplete, Contractor's remedies are limited to those set forth in this Paragraph 5.05.F.

5.06 *Hazardous Environmental Conditions at Site*

A. *Reports and Drawings*: The Supplementary Conditions identify:

1. those reports known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site;

2. drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site; and

3. Technical Data contained in such reports and drawings.

B. *Reliance by Contractor on Technical Data Authorized*: Contractor may rely upon the accuracy of the Technical Data expressly identified in the Supplementary Conditions with respect to such reports and drawings, but such reports and drawings are not Contract Documents. If no such express identification has been made, then Contractor may rely on the accuracy of the Technical Data as defined in Paragraph 1.01.A.46.b. Except for such reliance on Technical Data, Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:

1. the completeness of such reports and drawings for Contractor's purposes, including, but not limited to, any aspects of the means, methods, techniques, sequences and procedures

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

of construction to be employed by Contractor, and safety precautions and programs incident thereto;

2. other data, interpretations, opinions, and information contained in such reports or shown or indicated in such drawings; or

3. any Contractor interpretation of or conclusion drawn from any Technical Data or any such other data, interpretations, opinions or information.

C. Contractor shall not be responsible for removing or remediating any Hazardous Environmental Condition encountered, uncovered, or revealed at the Site unless such removal or remediation is expressly identified in the Contract Documents to be within the scope of the Work.

D. Contractor shall be responsible for controlling, containing, and duly removing all Constituents of Concern brought to the Site by Contractor, Subcontractors, Suppliers, or anyone else for whom Contractor is responsible, and for any associated costs; and for the costs of removing and remediating any Hazardous Environmental Condition created by the presence of any such Constituents of Concern.

E. If Contractor encounters, uncovers, or reveals a Hazardous Environmental Condition whose removal or remediation is not expressly identified in the Contract Documents as being within the scope of the Work, or if Contractor or anyone for whom Contractor is responsible creates a Hazardous Environmental Condition, then Contractor shall immediately: (1) secure or otherwise isolate such condition; (2) stop all Work in connection with such condition and in any area affected thereby (except in an emergency as required by Paragraph 7.15); and (3) notify Owner and Engineer (and promptly thereafter confirm such notice in writing). Owner shall promptly consult with Engineer concerning the necessity for Owner to retain a qualified expert to evaluate such condition or take corrective action, if any. Promptly after consulting with Engineer, Owner shall take such actions as are necessary to permit Owner to timely obtain required permits and provide Contractor the written notice required by Paragraph 5.06.F. If Contractor or anyone for whom Contractor is responsible created the Hazardous Environmental Condition in question, then Owner may remove and remediate the Hazardous Environmental Condition, and impose a set-off against payments to account for the associated costs.

F. Contractor shall not resume Work in connection with such Hazardous Environmental Condition or in any affected area until after Owner has obtained any required permits related thereto, and delivered written notice to Contractor either (1) specifying that such condition and any affected area is or has been rendered safe for the resumption of Work, or (2) specifying any special conditions under which such Work may be resumed safely.

G. If Owner and Contractor cannot agree as to entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times, as a result of such Work stoppage, such special conditions under which Work is agreed to be resumed by Contractor, or any costs or expenses incurred in response to the Hazardous Environmental Condition, then within 30 days of Owner's written notice regarding the resumption of Work, Contractor may submit a Change Proposal, or Owner may impose a set-off. Entitlement to any such adjustment is subject to the provisions of Paragraphs 4.05.D, 4.05.E, 11.07, and 11.08.

H. If, after receipt of such written notice, Contractor does not agree to resume such Work based on a reasonable belief it is unsafe, or does not agree to resume such Work under such special

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

conditions, then Owner may order the portion of the Work that is in the area affected by such condition to be deleted from the Work, following the contractual change procedures in Article 11. Owner may have such deleted portion of the Work performed by Owner's own forces or others in accordance with Article 8.

I. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court, arbitration, or other dispute resolution costs) arising out of or relating to a Hazardous Environmental Condition, provided that such Hazardous Environmental Condition (1) was not shown or indicated in the Drawings, Specifications, or other Contract Documents, identified as Technical Data entitled to limited reliance pursuant to Paragraph 5.06.B, or identified in the Contract Documents to be included within the scope of the Work, and (2) was not created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.I obligates Owner to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

J. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the failure to control, contain, or remove a Constituent of Concern brought to the Site by Contractor or by anyone for whom Contractor is responsible, or to a Hazardous Environmental Condition created by Contractor or by anyone for whom Contractor is responsible. Nothing in this Paragraph 5.06.J obligates Contractor to indemnify any individual or entity from and against the consequences of that individual's or entity's own negligence.

K. The provisions of Paragraphs 5.03, 5.04, and 5.05 do not apply to the presence of Constituents of Concern or to a Hazardous Environmental Condition uncovered or revealed at the Site.

ARTICLE 6—BONDS AND INSURANCE

6.01 *Performance, Payment, and Other Bonds*

A. Contractor shall furnish a performance bond and a payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of Contractor's obligations under the Contract. These bonds must remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by Laws or Regulations, the terms of a prescribed bond form, the Supplementary Conditions, or other provisions of the Contract.

B. Contractor shall also furnish such other bonds (if any) as are required by the Supplementary Conditions or other provisions of the Contract.

C. All bonds must be in the form included in the Bidding Documents or otherwise specified by Owner prior to execution of the Contract, except as provided otherwise by Laws or

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Regulations, and must be issued and signed by a surety named in "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Department Circular 570 (as amended and supplemented) by the Bureau of the Fiscal Service, U.S. Department of the Treasury. A bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority must show that it is effective on the date the agent or attorney-in-fact signed the accompanying bond.

D. Contractor shall obtain the required bonds from surety companies that are duly licensed or authorized, in the state or jurisdiction in which the Project is located, to issue bonds in the required amounts.

E. If the surety on a bond furnished by Contractor is declared bankrupt or becomes insolvent, or the surety ceases to meet the requirements above, then Contractor shall promptly notify Owner and Engineer in writing and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which must comply with the bond and surety requirements above.

F. If Contractor has failed to obtain a required bond, Owner may exclude the Contractor from the Site and exercise Owner's termination rights under Article 16.

G. Upon request to Owner from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Owner shall provide a copy of the payment bond to such person or entity.

H. Upon request to Contractor from any Subcontractor, Supplier, or other person or entity claiming to have furnished labor, services, materials, or equipment used in the performance of the Work, Contractor shall provide a copy of the payment bond to such person or entity.

6.02 *Insurance—General Provisions*

A. Owner and Contractor shall obtain and maintain insurance as required in this article and in the Supplementary Conditions.

B. All insurance required by the Contract to be purchased and maintained by Owner or Contractor shall be obtained from insurance companies that are duly licensed or authorized in the state or jurisdiction in which the Project is located to issue insurance policies for the required limits and coverages. Unless a different standard is indicated in the Supplementary Conditions, all companies that provide insurance policies required under this Contract shall have an A.M. Best rating of A-VII or better.

C. Alternative forms of insurance coverage, including but not limited to self-insurance and "Occupational Accident and Excess Employer's Indemnity Policies," are not sufficient to meet the insurance requirements of this Contract, unless expressly allowed in the Supplementary Conditions.

D. Contractor shall deliver to Owner, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Contractor has obtained and is maintaining the policies and coverages required by the Contract. Upon request by Owner or any other insured, Contractor shall also furnish other evidence of such required insurance, including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, full disclosure of all relevant exclusions, and evidence of insurance required to be purchased and maintained by

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Subcontractors or Suppliers. In any documentation furnished under this provision, Contractor, Subcontractors, and Suppliers may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those applicable to this Contract.

E. Owner shall deliver to Contractor, with copies to each additional insured identified in the Contract, certificates of insurance and endorsements establishing that Owner has obtained and is maintaining the policies and coverages required of Owner by the Contract (if any). Upon request by Contractor or any other insured, Owner shall also provide other evidence of such required insurance (if any), including but not limited to copies of policies, documentation of applicable self-insured retentions (if allowed) and deductibles, and full disclosure of all relevant exclusions. In any documentation furnished under this provision, Owner may block out (redact) (1) any confidential premium or pricing information and (2) any wording specific to a project or jurisdiction other than those relevant to this Contract.

F. Failure of Owner or Contractor to demand such certificates or other evidence of the other party's full compliance with these insurance requirements, or failure of Owner or Contractor to identify a deficiency in compliance from the evidence provided, will not be construed as a waiver of the other party's obligation to obtain and maintain such insurance.

G. In addition to the liability insurance required to be provided by Contractor, the Owner, at Owner's option, may purchase and maintain Owner's own liability insurance. Owner's liability policies, if any, operate separately and independently from policies required to be provided by Contractor, and Contractor cannot rely upon Owner's liability policies for any of Contractor's obligations to the Owner, Engineer, or third parties.

H. Contractor shall require:

1. Subcontractors to purchase and maintain worker's compensation, commercial general liability, and other insurance that is appropriate for their participation in the Project, and to name as additional insureds Owner and Engineer (and any other individuals or entities identified in the Supplementary Conditions as additional insureds on Contractor's liability policies) on each Subcontractor's commercial general liability insurance policy; and

2. Suppliers to purchase and maintain insurance that is appropriate for their participation in the Project.

I. If either party does not purchase or maintain the insurance required of such party by the Contract, such party shall notify the other party in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage.

J. If Contractor has failed to obtain and maintain required insurance, Contractor's entitlement to enter or remain at the Site will end immediately, and Owner may impose an appropriate set-off against payment for any associated costs (including but not limited to the cost of purchasing necessary insurance coverage), and exercise Owner's termination rights under Article 16.

K. Without prejudice to any other right or remedy, if a party has failed to obtain required insurance, the other party may elect (but is in no way obligated) to obtain equivalent insurance to protect such other party's interests at the expense of the party who was required to provide such coverage, and the Contract Price will be adjusted accordingly.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

L. Owner does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Contractor or Contractor's interests. Contractor is responsible for determining whether such coverage and limits are adequate to protect its interests, and for obtaining and maintaining any additional insurance that Contractor deems necessary.

M. The insurance and insurance limits required herein will not be deemed as a limitation on Contractor's liability, or that of its Subcontractors or Suppliers, under the indemnities granted to Owner and other individuals and entities in the Contract or otherwise.

N. All the policies of insurance required to be purchased and maintained under this Contract will contain a provision or endorsement that the coverage afforded will not be canceled, or renewal refused, until at least 10 days prior written notice has been given to the purchasing policyholder. Within three days of receipt of any such written notice, the purchasing policyholder shall provide a copy of the notice to each other insured and Engineer.

6.03 *Contractor's Insurance*

A. *Required Insurance*: Contractor shall purchase and maintain Worker's Compensation, Commercial General Liability, and other insurance pursuant to the specific requirements of the Supplementary Conditions.

B. *General Provisions*: The policies of insurance required by this Paragraph 6.03 as supplemented must:

1. include at least the specific coverages required;

2. be written for not less than the limits provided, or those required by Laws or Regulations, whichever is greater;

3. remain in effect at least until the Work is complete (as set forth in Paragraph 15.06.D), and longer if expressly required elsewhere in this Contract, and at all times thereafter when Contractor may be correcting, removing, or replacing defective Work as a warranty or correction obligation, or otherwise, or returning to the Site to conduct other tasks arising from the Contract;

4. apply with respect to the performance of the Work, whether such performance is by Contractor, any Subcontractor or Supplier, or by anyone directly or indirectly employed by any of them to perform any of the Work, or by anyone for whose acts any of them may be liable; and

5. include all necessary endorsements to support the stated requirements.

C. *Additional Insureds*: The Contractor's commercial general liability, automobile liability, employer's liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies, if required by this Contract, must:

1. include and list as additional insureds Owner and Engineer, and any individuals or entities identified as additional insureds in the Supplementary Conditions;

2. include coverage for the respective officers, directors, members, partners, employees, and consultants of all such additional insureds;

3. afford primary coverage to these additional insureds for all claims covered thereby (including as applicable those arising from both ongoing and completed operations);

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

4. not seek contribution from insurance maintained by the additional insured; and

5. as to commercial general liability insurance, apply to additional insureds with respect to liability caused in whole or in part by Contractor's acts or omissions, or the acts and omissions of those working on Contractor's behalf, in the performance of Contractor's operations.

6.04 *Builder's Risk and Other Property Insurance*

A. *Builder's Risk*: Unless otherwise provided in the Supplementary Conditions, Contractor shall purchase and maintain builder's risk insurance upon the Work on a completed value basis, in the amount of the Work's full insurable replacement cost (subject to such deductible amounts as may be provided in the Supplementary Conditions or required by Laws and Regulations). The specific requirements applicable to the builder's risk insurance are set forth in the Supplementary Conditions.

B. *Property Insurance for Facilities of Owner Where Work Will Occur*: Owner is responsible for obtaining and maintaining property insurance covering each existing structure, building, or facility in which any part of the Work will occur, or to which any part of the Work will attach or be adjoined. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, providing coverage consistent with that required for the builder's risk insurance, and will be maintained until the Work is complete, as set forth in Paragraph 15.06.D.

C. *Property Insurance for Substantially Complete Facilities*: Promptly after Substantial Completion, and before actual occupancy or use of the substantially completed Work, Owner will obtain property insurance for such substantially completed Work, and maintain such property insurance at least until the Work is complete, as set forth in Paragraph 15.06.D. Such property insurance will be written on a special perils (all-risk) form, on a replacement cost basis, and provide coverage consistent with that required for the builder's risk insurance. The builder's risk insurance may terminate upon written confirmation of Owner's procurement of such property insurance.

D. *Partial Occupancy or Use by Owner*: If Owner will occupy or use a portion or portions of the Work prior to Substantial Completion of all the Work, as provided in Paragraph 15.04, then Owner (directly, if it is the purchaser of the builder's risk policy, or through Contractor) will provide advance notice of such occupancy or use to the builder's risk insurer, and obtain an endorsement consenting to the continuation of coverage prior to commencing such partial occupancy or use.

E. *Insurance of Other Property; Additional Insurance*: If the express insurance provisions of the Contract do not require or address the insurance of a property item or interest, then the entity or individual owning such property item will be responsible for insuring it. If Contractor elects to obtain other special insurance to be included in or supplement the builder's risk or property insurance policies provided under this Paragraph 6.04, it may do so at Contractor's expense.

6.05 *Property Losses; Subrogation*

A. The builder's risk insurance policy purchased and maintained in accordance with Paragraph 6.04 (or an installation floater policy if authorized by the Supplementary Conditions), will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Engineer or its consultants, or their officers, directors, members, partners, employees, agents, consultants, or subcontractors.

1. Owner and Contractor waive all rights against each other and the respective officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from any of the perils, risks, or causes of loss covered by such policies and any other property insurance applicable to the Work; and, in addition, waive all such rights against Engineer, its consultants, all individuals or entities identified in the Supplementary Conditions as builder's risk or installation floater insureds, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, under such policies for losses and damages so caused.
2. None of the above waivers extends to the rights that any party making such waiver may have to the proceeds of insurance held by Owner or Contractor as trustee or fiduciary, or otherwise payable under any policy so issued.

B. Any property insurance policy maintained by Owner covering any loss, damage, or consequential loss to Owner's existing structures, buildings, or facilities in which any part of the Work will occur, or to which any part of the Work will attach or adjoin; to adjacent structures, buildings, or facilities of Owner; or to part or all of the completed or substantially completed Work, during partial occupancy or use pursuant to Paragraph 15.04, after Substantial Completion pursuant to Paragraph 15.03, or after final payment pursuant to Paragraph 15.06, will contain provisions to the effect that in the event of payment of any loss or damage the insurer will have no rights of recovery against any insureds thereunder, or against Contractor, Subcontractors, or Engineer, or the officers, directors, members, partners, employees, agents, consultants, or subcontractors of each and any of them, and that the insured is allowed to waive the insurer's rights of subrogation in a written contract executed prior to the loss, damage, or consequential loss.

1. Owner waives all rights against Contractor, Subcontractors, and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, for all losses and damages caused by, arising out of, or resulting from fire or any of the perils, risks, or causes of loss covered by such policies.

C. The waivers in this Paragraph 6.05 include the waiver of rights due to business interruption, loss of use, or other consequential loss extending beyond direct physical loss or damage to Owner's property or the Work caused by, arising out of, or resulting from fire or other insured peril, risk, or cause of loss.

D. Contractor shall be responsible for assuring that each Subcontract contains provisions whereby the Subcontractor waives all rights against Owner, Contractor, all individuals or entities identified in the Supplementary Conditions as insureds, the Engineer and its consultants, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, for all losses and damages caused by, arising out of, relating to, or resulting from fire or other peril, risk, or cause of loss covered by builder's risk insurance, installation floater, and any other property insurance applicable to the Work.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

6.06 *Receipt and Application of Property Insurance Proceeds*

A. Any insured loss under the builder's risk and other policies of property insurance required by Paragraph 6.04 will be adjusted and settled with the named insured that purchased the policy. Such named insured shall act as fiduciary for the other insureds, and give notice to such other insureds that adjustment and settlement of a claim is in progress. Any other insured may state its position regarding a claim for insured loss in writing within 15 days after notice of such claim.

B. Proceeds for such insured losses may be made payable by the insurer either jointly to multiple insureds, or to the named insured that purchased the policy in its own right and as fiduciary for other insureds, subject to the requirements of any applicable mortgage clause. A named insured receiving insurance proceeds under the builder's risk and other policies of insurance required by Paragraph 6.04 shall maintain such proceeds in a segregated account, and distribute such proceeds in accordance with such agreement as the parties in interest may reach, or as otherwise required under the dispute resolution provisions of this Contract or applicable Laws and Regulations.

C. If no other special agreement is reached, Contractor shall repair or replace the damaged Work, using allocated insurance proceeds.

ARTICLE 7—CONTRACTOR'S RESPONSIBILITIES

7.01 *Contractor's Means and Methods of Construction*

A. Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures of construction.

B. If the Contract Documents note, or Contractor determines, that professional engineering or other design services are needed to carry out Contractor's responsibilities for construction means, methods, techniques, sequences, and procedures, or for Site safety, then Contractor shall cause such services to be provided by a properly licensed design professional, at Contractor's expense. Such services are not Owner-delegated professional design services under this Contract, and neither Owner nor Engineer has any responsibility with respect to (1) Contractor's determination of the need for such services, (2) the qualifications or licensing of the design professionals retained or employed by Contractor, (3) the performance of such services, or (4) any errors, omissions, or defects in such services.

7.02 *Supervision and Superintendence*

A. Contractor shall supervise, inspect, and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.

B. At all times during the progress of the Work, Contractor shall assign a competent resident superintendent who will not be replaced without written notice to Owner and Engineer except under extraordinary circumstances.

7.03 *Labor; Working Hours*

A. Contractor shall provide competent, suitably qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents. Contractor shall maintain good discipline and order at the Site.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. Contractor shall be fully responsible to Owner and Engineer for all acts and omissions of Contractor's employees; of Suppliers and Subcontractors, and their employees; and of any other individuals or entities performing or furnishing any of the Work, just as Contractor is responsible for Contractor's own acts and omissions.

C. Except as otherwise required for the safety or protection of persons or the Work or property at the Site or adjacent thereto, and except as otherwise stated in the Contract Documents, all Work at the Site will be performed during regular working hours, Monday through Friday. Contractor will not perform Work on a Saturday, Sunday, or any legal holiday. Contractor may perform Work outside regular working hours or on Saturdays, Sundays, or legal holidays only with Owner's written consent, which will not be unreasonably withheld.

7.04 *Services, Materials, and Equipment*

A. Unless otherwise specified in the Contract Documents, Contractor shall provide and assume full responsibility for all services, materials, equipment, labor, transportation, construction equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities, and all other facilities and incidentals necessary for the performance, testing, start up, and completion of the Work, whether or not such items are specifically called for in the Contract Documents.

B. All materials and equipment incorporated into the Work must be new and of good quality, except as otherwise provided in the Contract Documents. All special warranties and guarantees required by the Specifications will expressly run to the benefit of Owner. If required by Engineer, Contractor shall furnish satisfactory evidence (including reports of required tests) as to the source, kind, and quality of materials and equipment.

C. All materials and equipment must be stored, applied, installed, connected, erected, protected, used, cleaned, and conditioned in accordance with instructions of the applicable Supplier, except as otherwise may be provided in the Contract Documents.

7.05 *"Or Equals"*

A. *Contractor's Request; Governing Criteria*: Whenever an item of equipment or material is specified or described in the Contract Documents by using the names of one or more proprietary items or specific Suppliers, the Contract Price has been based upon Contractor furnishing such item as specified. The specification or description of such an item is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or equal" item is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material, or items from other proposed Suppliers, under the circumstances described below.

1. If Engineer in its sole discretion determines that an item of equipment or material proposed by Contractor is functionally equal to that named and sufficiently similar so that no change in related Work will be required, Engineer will deem it an "or equal" item. For the purposes of this paragraph, a proposed item of equipment or material will be considered functionally equal to an item so named if:

a. in the exercise of reasonable judgment Engineer determines that the proposed item:

1) is at least equal in materials of construction, quality, durability, appearance, strength, and design characteristics;

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

2) will reliably perform at least equally well the function and achieve the results imposed by the design concept of the completed Project as a functioning whole;

3) has a proven record of performance and availability of responsive service; and

4) is not objectionable to Owner.

b. Contractor certifies that, if the proposed item is approved and incorporated into the Work:

1) there will be no increase in cost to the Owner or increase in Contract Times; and

2) the item will conform substantially to the detailed requirements of the item named in the Contract Documents.

B. *Contractor's Expense*: Contractor shall provide all data in support of any proposed "or equal" item at Contractor's expense.

C. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each "or-equal" request. Engineer may require Contractor to furnish additional data about the proposed "or-equal" item. Engineer will be the sole judge of acceptability. No "or-equal" item will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an "or-equal," which will be evidenced by an approved Shop Drawing or other written communication. Engineer will advise Contractor in writing of any negative determination.

D. *Effect of Engineer's Determination*: Neither approval nor denial of an "or-equal" request will result in any change in Contract Price. The Engineer's denial of an "or-equal" request will be final and binding, and may not be reversed through an appeal under any provision of the Contract.

E. *Treatment as a Substitution Request*: If Engineer determines that an item of equipment or material proposed by Contractor does not qualify as an "or-equal" item, Contractor may request that Engineer consider the item a proposed substitute pursuant to Paragraph 7.06.

7.06 *Substitutes*

A. *Contractor's Request; Governing Criteria*: Unless the specification or description of an item of equipment or material required to be furnished under the Contract Documents contains or is followed by words reading that no substitution is permitted, Contractor may request that Engineer authorize the use of other items of equipment or material under the circumstances described below. To the extent possible such requests must be made before commencement of related construction at the Site.

1. Contractor shall submit sufficient information as provided below to allow Engineer to determine if the item of material or equipment proposed is functionally equivalent to that named and an acceptable substitute therefor. Engineer will not accept requests for review of proposed substitute items of equipment or material from anyone other than Contractor.

2. The requirements for review by Engineer will be as set forth in Paragraph 7.06.B, as supplemented by the Specifications, and as Engineer may decide is appropriate under the circumstances.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

3. Contractor shall make written application to Engineer for review of a proposed substitute item of equipment or material that Contractor seeks to furnish or use. The application:

    a. will certify that the proposed substitute item will:

        1) perform adequately the functions and achieve the results called for by the general design;

        2) be similar in substance to the item specified; and

        3) be suited to the same use as the item specified.

    b. will state:

        1) the extent, if any, to which the use of the proposed substitute item will necessitate a change in Contract Times;

        2) whether use of the proposed substitute item in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct contract with Owner for other work on the Project) to adapt the design to the proposed substitute item; and

        3) whether incorporation or use of the proposed substitute item in connection with the Work is subject to payment of any license fee or royalty.

    c. will identify:

        1) all variations of the proposed substitute item from the item specified; and

        2) available engineering, sales, maintenance, repair, and replacement services.

    d. will contain an itemized estimate of all costs or credits that will result directly or indirectly from use of such substitute item, including but not limited to changes in Contract Price, shared savings, costs of redesign, and claims of other contractors affected by any resulting change.

B. *Engineer's Evaluation and Determination*: Engineer will be allowed a reasonable time to evaluate each substitute request, and to obtain comments and direction from Owner. Engineer may require Contractor to furnish additional data about the proposed substitute item. Engineer will be the sole judge of acceptability. No substitute will be ordered, furnished, installed, or utilized until Engineer's review is complete and Engineer determines that the proposed item is an acceptable substitute. Engineer's determination will be evidenced by a Field Order or a proposed Change Order accounting for the substitution itself and all related impacts, including changes in Contract Price or Contract Times. Engineer will advise Contractor in writing of any negative determination.

C. *Special Guarantee*: Owner may require Contractor to furnish at Contractor's expense a special performance guarantee or other surety with respect to any substitute.

D. *Reimbursement of Engineer's Cost*: Engineer will record Engineer's costs in evaluating a substitute proposed or submitted by Contractor. Whether or not Engineer approves a substitute so proposed or submitted by Contractor, Contractor shall reimburse Owner for the reasonable charges of Engineer for evaluating each such proposed substitute. Contractor shall also reimburse Owner for the reasonable charges of Engineer for making changes in the Contract Documents (or in the provisions of any other direct contract with Owner) resulting from the acceptance of each proposed substitute.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

E. *Contractor's Expense*: Contractor shall provide all data in support of any proposed substitute at Contractor's expense.

F. *Effect of Engineer's Determination*: If Engineer approves the substitution request, Contractor shall execute the proposed Change Order and proceed with the substitution. The Engineer's denial of a substitution request will be final and binding, and may not be reversed through an appeal under any provision of the Contract. Contractor may challenge the scope of reimbursement costs imposed under Paragraph 7.06.D, by timely submittal of a Change Proposal.

7.07 *Concerning Subcontractors and Suppliers*

A. Contractor may retain Subcontractors and Suppliers for the performance of parts of the Work. Such Subcontractors and Suppliers must be acceptable to Owner. The Contractor's retention of a Subcontractor or Supplier for the performance of parts of the Work will not relieve Contractor's obligation to Owner to perform and complete the Work in accordance with the Contract Documents.

B. Contractor shall retain specific Subcontractors and Suppliers for the performance of designated parts of the Work if required by the Contract to do so.

C. Subsequent to the submittal of Contractor's Bid or final negotiation of the terms of the Contract, Owner may not require Contractor to retain any Subcontractor or Supplier to furnish or perform any of the Work against which Contractor has reasonable objection.

D. Prior to entry into any binding subcontract or purchase order, Contractor shall submit to Owner the identity of the proposed Subcontractor or Supplier (unless Owner has already deemed such proposed Subcontractor or Supplier acceptable during the bidding process or otherwise). Such proposed Subcontractor or Supplier shall be deemed acceptable to Owner unless Owner raises a substantive, reasonable objection within 5 days.

E. Owner may require the replacement of any Subcontractor or Supplier. Owner also may require Contractor to retain specific replacements; provided, however, that Owner may not require a replacement to which Contractor has a reasonable objection. If Contractor has submitted the identity of certain Subcontractors or Suppliers for acceptance by Owner, and Owner has accepted it (either in writing or by failing to make written objection thereto), then Owner may subsequently revoke the acceptance of any such Subcontractor or Supplier so identified solely on the basis of substantive, reasonable objection after due investigation. Contractor shall submit an acceptable replacement for the rejected Subcontractor or Supplier.

F. If Owner requires the replacement of any Subcontractor or Supplier retained by Contractor to perform any part of the Work, then Contractor shall be entitled to an adjustment in Contract Price or Contract Times, with respect to the replacement; and Contractor shall initiate a Change Proposal for such adjustment within 30 days of Owner's requirement of replacement.

G. No acceptance by Owner of any such Subcontractor or Supplier, whether initially or as a replacement, will constitute a waiver of the right of Owner to the completion of the Work in accordance with the Contract Documents.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

H. On a monthly basis, Contractor shall submit to Engineer a complete list of all Subcontractors and Suppliers having a direct contract with Contractor, and of all other Subcontractors and Suppliers known to Contractor at the time of submittal.

I. Contractor shall be solely responsible for scheduling and coordinating the work of Subcontractors and Suppliers.

J. The divisions and sections of the Specifications and the identifications of any Drawings do not control Contractor in dividing the Work among Subcontractors or Suppliers, or in delineating the Work to be performed by any specific trade.

K. All Work performed for Contractor by a Subcontractor or Supplier must be pursuant to an appropriate contractual agreement that specifically binds the Subcontractor or Supplier to the applicable terms and conditions of the Contract for the benefit of Owner and Engineer.

L. Owner may furnish to any Subcontractor or Supplier, to the extent practicable, information about amounts paid to Contractor for Work performed for Contractor by the Subcontractor or Supplier.

M. Contractor shall restrict all Subcontractors and Suppliers from communicating with Engineer or Owner, except through Contractor or in case of an emergency, or as otherwise expressly allowed in this Contract.

7.08 *Patent Fees and Royalties*

A. Contractor shall pay all license fees and royalties and assume all costs incident to the use in the performance of the Work or the incorporation in the Work of any invention, design, process, product, or device which is the subject of patent rights or copyrights held by others. If an invention, design, process, product, or device is specified in the Contract Documents for use in the performance of the Work and if, to the actual knowledge of Owner or Engineer, its use is subject to patent rights or copyrights calling for the payment of any license fee or royalty to others, the existence of such rights will be disclosed in the Contract Documents.

B. To the fullest extent permitted by Laws and Regulations, Owner shall indemnify and hold harmless Contractor, and its officers, directors, members, partners, employees, agents, consultants, and subcontractors, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device specified in the Contract Documents, but not identified as being subject to payment of any license fee or royalty to others required by patent rights or copyrights.

C. To the fullest extent permitted by Laws and Regulations, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement of patent rights or copyrights incident to the use in the performance of the Work or resulting from the incorporation in the Work of any invention, design, process, product, or device not specified in the Contract Documents.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

7.09 *Permits*

A. Unless otherwise provided in the Contract Documents, Contractor shall obtain and pay for all construction permits, licenses, and certificates of occupancy. Owner shall assist Contractor, when necessary, in obtaining such permits and licenses. Contractor shall pay all governmental charges and inspection fees necessary for the prosecution of the Work which are applicable at the time of the submission of Contractor's Bid (or when Contractor became bound under a negotiated contract). Owner shall pay all charges of utility owners for connections for providing permanent service to the Work.

7.10 *Taxes*

A. Contractor shall pay all sales, consumer, use, and other similar taxes required to be paid by Contractor in accordance with the Laws and Regulations of the place of the Project which are applicable during the performance of the Work.

7.11 *Laws and Regulations*

A. Contractor shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of the Work. Neither Owner nor Engineer shall be responsible for monitoring Contractor's compliance with any Laws or Regulations.

B. If Contractor performs any Work or takes any other action knowing or having reason to know that it is contrary to Laws or Regulations, Contractor shall bear all resulting costs and losses, and shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants, and subcontractors of each and any of them, from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such Work or other action. It is not Contractor's responsibility to make certain that the Work described in the Contract Documents is in accordance with Laws and Regulations, but this does not relieve Contractor of its obligations under Paragraph 3.03.

C. Owner or Contractor may give written notice to the other party of any changes after the submission of Contractor's Bid (or after the date when Contractor became bound under a negotiated contract) in Laws or Regulations having an effect on the cost or time of performance of the Work, including but not limited to changes in Laws or Regulations having an effect on procuring permits and on sales, use, value-added, consumption, and other similar taxes. If Owner and Contractor are unable to agree on entitlement to or on the amount or extent, if any, of any adjustment in Contract Price or Contract Times resulting from such changes, then within 30 days of such written notice Contractor may submit a Change Proposal, or Owner may initiate a Claim.

7.12 *Record Documents*

A. Contractor shall maintain in a safe place at the Site one printed record copy of all Drawings, Specifications, Addenda, Change Orders, Work Change Directives, Field Orders, written interpretations and clarifications, and approved Shop Drawings. Contractor shall keep such record documents in good order and annotate them to show changes made during construction. These record documents, together with all approved Samples, will be available to Engineer for reference. Upon completion of the Work, Contractor shall deliver these record documents to Engineer.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

7.13 *Safety and Protection*

A. Contractor shall be solely responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. Such responsibility does not relieve Subcontractors of their responsibility for the safety of persons or property in the performance of their work, nor for compliance with applicable safety Laws and Regulations.

B. Contractor shall designate a qualified and experienced safety representative whose duties and responsibilities are the prevention of Work-related accidents and the maintenance and supervision of safety precautions and programs.

C. Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury, or loss to:

1. all persons on the Site or who may be affected by the Work;

2. all the Work and materials and equipment to be incorporated therein, whether in storage on or off the Site; and

3. other property at the Site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, other work in progress, utilities, and Underground Facilities not designated for removal, relocation, or replacement in the course of construction.

D. All damage, injury, or loss to any property referred to in Paragraph 7.13.C.2 or 7.13.C.3 caused, directly or indirectly, in whole or in part, by Contractor, any Subcontractor, Supplier, or any other individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, shall be remedied by Contractor at its expense (except damage or loss attributable to the fault of Drawings or Specifications or to the acts or omissions of Owner or Engineer or anyone employed by any of them, or anyone for whose acts any of them may be liable, and not attributable, directly or indirectly, in whole or in part, to the fault or negligence of Contractor or any Subcontractor, Supplier, or other individual or entity directly or indirectly employed by any of them).

E. Contractor shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss; and shall erect and maintain all necessary safeguards for such safety and protection.

F. Contractor shall notify Owner; the owners of adjacent property; the owners of Underground Facilities and other utilities (if the identity of such owners is known to Contractor); and other contractors and utility owners performing work at or adjacent to the Site, in writing, when Contractor knows that prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation, and replacement of their property or work in progress.

G. Contractor shall comply with the applicable requirements of Owner's safety programs, if any. Any Owner's safety programs that are applicable to the Work are identified or included in the Supplementary Conditions or Specifications.

H. Contractor shall inform Owner and Engineer of the specific requirements of Contractor's safety program with which Owner's and Engineer's employees and representatives must comply while at the Site.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

I. Contractor's duties and responsibilities for safety and protection will continue until all the Work is completed, Engineer has issued a written notice to Owner and Contractor in accordance with Paragraph 15.06.C that the Work is acceptable, and Contractor has left the Site (except as otherwise expressly provided in connection with Substantial Completion).

J. Contractor's duties and responsibilities for safety and protection will resume whenever Contractor or any Subcontractor or Supplier returns to the Site to fulfill warranty or correction obligations, or to conduct other tasks arising from the Contract Documents.

7.14 *Hazard Communication Programs*

A. Contractor shall be responsible for coordinating any exchange of safety data sheets (formerly known as material safety data sheets) or other hazard communication information required to be made available to or exchanged between or among employers at the Site in accordance with Laws or Regulations.

7.15 *Emergencies*

A. In emergencies affecting the safety or protection of persons or the Work or property at the Site or adjacent thereto, Contractor is obligated to act to prevent damage, injury, or loss. Contractor shall give Engineer prompt written notice if Contractor believes that any significant changes in the Work or variations from the Contract Documents have been caused by an emergency, or are required as a result of Contractor's response to an emergency. If Engineer determines that a change in the Contract Documents is required because of an emergency or Contractor's response, a Work Change Directive or Change Order will be issued.

7.16 *Submittals*

A. *Shop Drawing and Sample Requirements*

1. Before submitting a Shop Drawing or Sample, Contractor shall:

a. review and coordinate the Shop Drawing or Sample with other Shop Drawings and Samples and with the requirements of the Work and the Contract Documents;

b. determine and verify:

1) all field measurements, quantities, dimensions, specified performance and design criteria, installation requirements, materials, catalog numbers, and similar information with respect to the Submittal;

2) the suitability of all materials and equipment offered with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the performance of the Work; and

3) all information relative to Contractor's responsibilities for means, methods, techniques, sequences, and procedures of construction, and safety precautions and programs incident thereto;

c. confirm that the Submittal is complete with respect to all related data included in the Submittal.

2. Each Shop Drawing or Sample must bear a stamp or specific written certification that Contractor has satisfied Contractor's obligations under the Contract Documents with respect to Contractor's review of that Submittal, and that Contractor approves the Submittal.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

3. With each Shop Drawing or Sample, Contractor shall give Engineer specific written notice of any variations that the Submittal may have from the requirements of the Contract Documents. This notice must be set forth in a written communication separate from the Submittal; and, in addition, in the case of a Shop Drawing by a specific notation made on the Shop Drawing itself.

B. *Submittal Procedures for Shop Drawings and Samples*: Contractor shall label and submit Shop Drawings and Samples to Engineer for review and approval in accordance with the accepted Schedule of Submittals.

1. *Shop Drawings*

a. Contractor shall submit the number of copies required in the Specifications.

b. Data shown on the Shop Drawings must be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Contractor proposes to provide, and to enable Engineer to review the information for the limited purposes required by Paragraph 7.16.C.

2. *Samples*

a. Contractor shall submit the number of Samples required in the Specifications.

b. Contractor shall clearly identify each Sample as to material, Supplier, pertinent data such as catalog numbers, the use for which intended and other data as Engineer may require to enable Engineer to review the Submittal for the limited purposes required by Paragraph 7.16.C.

3. Where a Shop Drawing or Sample is required by the Contract Documents or the Schedule of Submittals, any related Work performed prior to Engineer's review and approval of the pertinent submittal will be at the sole expense and responsibility of Contractor.

C. *Engineer's Review of Shop Drawings and Samples*

1. Engineer will provide timely review of Shop Drawings and Samples in accordance with the accepted Schedule of Submittals. Engineer's review and approval will be only to determine if the items covered by the Submittals will, after installation or incorporation in the Work, comply with the requirements of the Contract Documents, and be compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents.

2. Engineer's review and approval will not extend to means, methods, techniques, sequences, or procedures of construction, or to safety precautions or programs incident thereto.

3. Engineer's review and approval of a separate item as such will not indicate approval of the assembly in which the item functions.

4. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless Contractor has complied with the requirements of Paragraph 7.16.A.3 and Engineer has given written approval of each such variation by specific written notation thereof incorporated in or accompanying the Shop Drawing or Sample. Engineer will

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

document any such approved variation from the requirements of the Contract Documents in a Field Order or other appropriate Contract modification.

5. Engineer's review and approval of a Shop Drawing or Sample will not relieve Contractor from responsibility for complying with the requirements of Paragraphs 7.16.A and B.

6. Engineer's review and approval of a Shop Drawing or Sample, or of a variation from the requirements of the Contract Documents, will not, under any circumstances, change the Contract Times or Contract Price, unless such changes are included in a Change Order.

7. Neither Engineer's receipt, review, acceptance, or approval of a Shop Drawing or Sample will result in such item becoming a Contract Document.

8. Contractor shall perform the Work in compliance with the requirements and commitments set forth in approved Shop Drawings and Samples, subject to the provisions of Paragraph 7.16.C.4.

D. *Resubmittal Procedures for Shop Drawings and Samples*

1. Contractor shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Contractor shall direct specific attention in writing to revisions other than the corrections called for by Engineer on previous Submittals.

2. Contractor shall furnish required Shop Drawing and Sample submittals with sufficient information and accuracy to obtain required approval of an item with no more than two resubmittals. Engineer will record Engineer's time for reviewing a third or subsequent resubmittal of a Shop Drawing or Sample, and Contractor shall be responsible for Engineer's charges to Owner for such time. Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges.

3. If Contractor requests a change of a previously approved Shop Drawing or Sample, Contractor shall be responsible for Engineer's charges to Owner for its review time, and Owner may impose a set-off against payments due Contractor to secure reimbursement for such charges, unless the need for such change is beyond the control of Contractor.

E. *Submittals Other than Shop Drawings, Samples, and Owner-Delegated Designs*

1. The following provisions apply to all Submittals other than Shop Drawings, Samples, and Owner-delegated designs:

   a. Contractor shall submit all such Submittals to the Engineer in accordance with the Schedule of Submittals and pursuant to the applicable terms of the Contract Documents.

   b. Engineer will provide timely review of all such Submittals in accordance with the Schedule of Submittals and return such Submittals with a notation of either Accepted or Not Accepted. Any such Submittal that is not returned within the time established in the Schedule of Submittals will be deemed accepted.

   c. Engineer's review will be only to determine if the Submittal is acceptable under the requirements of the Contract Documents as to general form and content of the Submittal.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

d. If any such Submittal is not accepted, Contractor shall confer with Engineer regarding the reason for the non-acceptance, and resubmit an acceptable document.

2. Procedures for the submittal and acceptance of the Progress Schedule, the Schedule of Submittals, and the Schedule of Values are set forth in Paragraphs 2.03. 2.04, and 2.05.

F. Owner-delegated Designs: Submittals pursuant to Owner-delegated designs are governed by the provisions of Paragraph 7.19.

7.17 *Contractor's General Warranty and Guarantee*

A. Contractor warrants and guarantees to Owner that all Work will be in accordance with the Contract Documents and will not be defective. Engineer is entitled to rely on Contractor's warranty and guarantee.

B. Owner's rights under this warranty and guarantee are in addition to, and are not limited by, Owner's rights under the correction period provisions of Paragraph 15.08. The time in which Owner may enforce its warranty and guarantee rights under this Paragraph 7.17 is limited only by applicable Laws and Regulations restricting actions to enforce such rights; provided, however, that after the end of the correction period under Paragraph 15.08:

1. Owner shall give Contractor written notice of any defective Work within 60 days of the discovery that such Work is defective; and

2. Such notice will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the notice.

C. Contractor's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, or improper modification, maintenance, or operation, by persons other than Contractor, Subcontractors, Suppliers, or any other individual or entity for whom Contractor is responsible; or

2. normal wear and tear under normal usage.

D. Contractor's obligation to perform and complete the Work in accordance with the Contract Documents is absolute. None of the following will constitute an acceptance of Work that is not in accordance with the Contract Documents, a release of Contractor's obligation to perform the Work in accordance with the Contract Documents, or a release of Owner's warranty and guarantee rights under this Paragraph 7.17:

1. Observations by Engineer;

2. Recommendation by Engineer or payment by Owner of any progress or final payment;

3. The issuance of a certificate of Substantial Completion by Engineer or any payment related thereto by Owner;

4. Use or occupancy of the Work or any part thereof by Owner;

5. Any review and approval of a Shop Drawing or Sample submittal;

6. The issuance of a notice of acceptability by Engineer;

7. The end of the correction period established in Paragraph 15.08;

8. Any inspection, test, or approval by others; or

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

9. Any correction of defective Work by Owner.

E. If the Contract requires the Contractor to accept the assignment of a contract entered into by Owner, then the specific warranties, guarantees, and correction obligations contained in the assigned contract will govern with respect to Contractor's performance obligations to Owner for the Work described in the assigned contract.

7.18 *Indemnification*

A. To the fullest extent permitted by Laws and Regulations, and in addition to any other obligations of Contractor under the Contract or otherwise, Contractor shall indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them, from losses, damages, costs, and judgments (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals, and all court or arbitration or other dispute resolution costs) arising from third-party claims or actions relating to or resulting from the performance or furnishing of the Work, provided that any such claim, action, loss, cost, judgment or damage is attributable to bodily injury, sickness, disease, or death, or to damage to or destruction of tangible property (other than the Work itself), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable.

B. In any and all claims against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Contractor, any Subcontractor, any Supplier, or any individual or entity directly or indirectly employed by any of them to perform any of the Work, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 7.18.A will not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for Contractor or any such Subcontractor, Supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

7.19 *Delegation of Professional Design Services*

A. Owner may require Contractor to provide professional design services for a portion of the Work by express delegation in the Contract Documents. Such delegation will specify the performance and design criteria that such services must satisfy, and the Submittals that Contractor must furnish to Engineer with respect to the Owner-delegated design.

B. Contractor shall cause such Owner-delegated professional design services to be provided pursuant to the professional standard of care by a properly licensed design professional, whose signature and seal must appear on all drawings, calculations, specifications, certifications, and Submittals prepared by such design professional. Such design professional must issue all certifications of design required by Laws and Regulations.

C. If a Shop Drawing or other Submittal related to the Owner-delegated design is prepared by Contractor, a Subcontractor, or others for submittal to Engineer, then such Shop Drawing or other Submittal must bear the written approval of Contractor's design professional when submitted by Contractor to Engineer.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

D. Owner and Engineer shall be entitled to rely upon the adequacy, accuracy, and completeness of the services, certifications, and approvals performed or provided by the design professionals retained or employed by Contractor under an Owner-delegated design, subject to the professional standard of care and the performance and design criteria stated in the Contract Documents.

E. Pursuant to this Paragraph 7.19, Engineer's review, approval, and other determinations regarding design drawings, calculations, specifications, certifications, and other Submittals furnished by Contractor pursuant to an Owner-delegated design will be only for the following limited purposes:

1. Checking for conformance with the requirements of this Paragraph 7.19;

2. Confirming that Contractor (through its design professionals) has used the performance and design criteria specified in the Contract Documents; and

3. Establishing that the design furnished by Contractor is consistent with the design concept expressed in the Contract Documents.

F. Contractor shall not be responsible for the adequacy of performance or design criteria specified by Owner or Engineer.

G. Contractor is not required to provide professional services in violation of applicable Laws and Regulations.

ARTICLE 8—OTHER WORK AT THE SITE

8.01 *Other Work*

A. In addition to and apart from the Work under the Contract Documents, the Owner may perform other work at or adjacent to the Site. Such other work may be performed by Owner's employees, or through contracts between the Owner and third parties. Owner may also arrange to have third-party utility owners perform work on their utilities and facilities at or adjacent to the Site.

B. If Owner performs other work at or adjacent to the Site with Owner's employees, or through contracts for such other work, then Owner shall give Contractor written notice thereof prior to starting any such other work. If Owner has advance information regarding the start of any third-party utility work that Owner has arranged to take place at or adjacent to the Site, Owner shall provide such information to Contractor.

C. Contractor shall afford proper and safe access to the Site to each contractor that performs such other work, each utility owner performing other work, and Owner, if Owner is performing other work with Owner's employees, and provide a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such other work.

D. Contractor shall do all cutting, fitting, and patching of the Work that may be required to properly connect or otherwise make its several parts come together and properly integrate with such other work. Contractor shall not endanger any work of others by cutting, excavating, or otherwise altering such work; provided, however, that Contractor may cut or alter others' work with the written consent of Engineer and the others whose work will be affected.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

E. If the proper execution or results of any part of Contractor's Work depends upon work performed by others, Contractor shall inspect such other work and promptly report to Engineer in writing any delays, defects, or deficiencies in such other work that render it unavailable or unsuitable for the proper execution and results of Contractor's Work. Contractor's failure to so report will constitute an acceptance of such other work as fit and proper for integration with Contractor's Work except for latent defects and deficiencies in such other work.

F. The provisions of this article are not applicable to work that is performed by third-party utilities or other third-party entities without a contract with Owner, or that is performed without having been arranged by Owner. If such work occurs, then any related delay, disruption, or interference incurred by Contractor is governed by the provisions of Paragraph 4.05.C.3.

8.02 *Coordination*

A. If Owner intends to contract with others for the performance of other work at or adjacent to the Site, to perform other work at or adjacent to the Site with Owner's employees, or to arrange to have utility owners perform work at or adjacent to the Site, the following will be set forth in the Supplementary Conditions or provided to Contractor prior to the start of any such other work:

1. The identity of the individual or entity that will have authority and responsibility for coordination of the activities among the various contractors;

2. An itemization of the specific matters to be covered by such authority and responsibility; and

3. The extent of such authority and responsibilities.

B. Unless otherwise provided in the Supplementary Conditions, Owner shall have sole authority and responsibility for such coordination.

8.03 *Legal Relationships*

A. If, in the course of performing other work for Owner at or adjacent to the Site, the Owner's employees, any other contractor working for Owner, or any utility owner that Owner has arranged to perform work, causes damage to the Work or to the property of Contractor or its Subcontractors, or delays, disrupts, interferes with, or increases the scope or cost of the performance of the Work, through actions or inaction, then Contractor shall be entitled to an equitable adjustment in the Contract Price or the Contract Times. Contractor must submit any Change Proposal seeking an equitable adjustment in the Contract Price or the Contract Times under this paragraph within 30 days of the damaging, delaying, disrupting, or interfering event. The entitlement to, and extent of, any such equitable adjustment will take into account information (if any) regarding such other work that was provided to Contractor in the Contract Documents prior to the submittal of the Bid or the final negotiation of the terms of the Contract, and any remedies available to Contractor under Laws or Regulations concerning utility action or inaction. When applicable, any such equitable adjustment in Contract Price will be conditioned on Contractor assigning to Owner all Contractor's rights against such other contractor or utility owner with respect to the damage, delay, disruption, or interference that is the subject of the adjustment. Contractor's entitlement to an adjustment of the Contract Times or Contract Price is subject to the provisions of Paragraphs 4.05.D and 4.05.E.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. Contractor shall take reasonable and customary measures to avoid damaging, delaying, disrupting, or interfering with the work of Owner, any other contractor, or any utility owner performing other work at or adjacent to the Site.

1. If Contractor fails to take such measures and as a result damages, delays, disrupts, or interferes with the work of any such other contractor or utility owner, then Owner may impose a set-off against payments due Contractor, and assign to such other contractor or utility owner the Owner's contractual rights against Contractor with respect to the breach of the obligations set forth in this Paragraph 8.03.B.

2. When Owner is performing other work at or adjacent to the Site with Owner's employees, Contractor shall be liable to Owner for damage to such other work, and for the reasonable direct delay, disruption, and interference costs incurred by Owner as a result of Contractor's failure to take reasonable and customary measures with respect to Owner's other work. In response to such damage, delay, disruption, or interference, Owner may impose a set-off against payments due Contractor.

C. If Contractor damages, delays, disrupts, or interferes with the work of any other contractor, or any utility owner performing other work at or adjacent to the Site, through Contractor's failure to take reasonable and customary measures to avoid such impacts, or if any claim arising out of Contractor's actions, inactions, or negligence in performance of the Work at or adjacent to the Site is made by any such other contractor or utility owner against Contractor, Owner, or Engineer, then Contractor shall (1) promptly attempt to settle the claim as to all parties through negotiations with such other contractor or utility owner, or otherwise resolve the claim by arbitration or other dispute resolution proceeding or at law, and (2) indemnify and hold harmless Owner and Engineer, and the officers, directors, members, partners, employees, agents, consultants and subcontractors of each and any of them from and against any such claims, and against all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such damage, delay, disruption, or interference.

ARTICLE 9—OWNER'S RESPONSIBILITIES

9.01 *Communications to Contractor*

A. Except as otherwise provided in these General Conditions, Owner shall issue all communications to Contractor through Engineer.

9.02 *Replacement of Engineer*

A. Owner may at its discretion appoint an engineer to replace Engineer, provided Contractor makes no reasonable objection to the replacement engineer. The replacement engineer's status under the Contract Documents will be that of the former Engineer.

9.03 *Furnish Data*

A. Owner shall promptly furnish the data required of Owner under the Contract Documents.

9.04 *Pay When Due*

A. Owner shall make payments to Contractor when they are due as provided in the Agreement.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

9.05 *Lands and Easements; Reports, Tests, and Drawings*

A. Owner's duties with respect to providing lands and easements are set forth in Paragraph 5.01.

B. Owner's duties with respect to providing engineering surveys to establish reference points are set forth in Paragraph 4.03.

C. Article 5 refers to Owner's identifying and making available to Contractor copies of reports of explorations and tests of conditions at the Site, and drawings of physical conditions relating to existing surface or subsurface structures at the Site.

9.06 *Insurance*

A. Owner's responsibilities, if any, with respect to purchasing and maintaining liability and property insurance are set forth in Article 6.

9.07 *Change Orders*

A. Owner's responsibilities with respect to Change Orders are set forth in Article 11.

9.08 *Inspections, Tests, and Approvals*

A. Owner's responsibility with respect to certain inspections, tests, and approvals is set forth in Paragraph 14.02.B.

9.09 *Limitations on Owner's Responsibilities*

A. The Owner shall not supervise, direct, or have control or authority over, nor be responsible for, Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Owner will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

9.10 *Undisclosed Hazardous Environmental Condition*

A. Owner's responsibility in respect to an undisclosed Hazardous Environmental Condition is set forth in Paragraph 5.06.

9.11 *Evidence of Financial Arrangements*

A. Upon request of Contractor, Owner shall furnish Contractor reasonable evidence that financial arrangements have been made to satisfy Owner's obligations under the Contract (including obligations under proposed changes in the Work).

9.12 *Safety Programs*

A. While at the Site, Owner's employees and representatives shall comply with the specific applicable requirements of Contractor's safety programs of which Owner has been informed.

B. Owner shall furnish copies of any applicable Owner safety programs to Contractor.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ARTICLE 10—ENGINEER'S STATUS DURING CONSTRUCTION

10.01 *Owner's Representative*

A. Engineer will be Owner's representative during the construction period. The duties and responsibilities and the limitations of authority of Engineer as Owner's representative during construction are set forth in the Contract.

10.02 *Visits to Site*

A. Engineer will make visits to the Site at intervals appropriate to the various stages of construction as Engineer deems necessary in order to observe, as an experienced and qualified design professional, the progress that has been made and the quality of the various aspects of Contractor's executed Work. Based on information obtained during such visits and observations, Engineer, for the benefit of Owner, will determine, in general, if the Work is proceeding in accordance with the Contract Documents. Engineer will not be required to make exhaustive or continuous inspections on the Site to check the quality or quantity of the Work. Engineer's efforts will be directed toward providing for Owner a greater degree of confidence that the completed Work will conform generally to the Contract Documents. On the basis of such visits and observations, Engineer will keep Owner informed of the progress of the Work and will endeavor to guard Owner against defective Work.

B. Engineer's visits and observations are subject to all the limitations on Engineer's authority and responsibility set forth in Paragraph 10.07. Particularly, but without limitation, during or as a result of Engineer's visits or observations of Contractor's Work, Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work.

10.03 *Resident Project Representative*

A. If Owner and Engineer have agreed that Engineer will furnish a Resident Project Representative to represent Engineer at the Site and assist Engineer in observing the progress and quality of the Work, then the authority and responsibilities of any such Resident Project Representative will be as provided in the Supplementary Conditions, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.

B. If Owner designates an individual or entity who is not Engineer's consultant, agent, or employee to represent Owner at the Site, then the responsibilities and authority of such individual or entity will be as provided in the Supplementary Conditions.

10.04 *Engineer's Authority*

A. Engineer has the authority to reject Work in accordance with Article 14.

B. Engineer's authority as to Submittals is set forth in Paragraph 7.16.

C. Engineer's authority as to design drawings, calculations, specifications, certifications and other Submittals from Contractor in response to Owner's delegation (if any) to Contractor of professional design services, is set forth in Paragraph 7.19.

D. Engineer's authority as to changes in the Work is set forth in Article 11.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

E. Engineer's authority as to Applications for Payment is set forth in Article 15.

10.05 *Determinations for Unit Price Work*

A. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor as set forth in Paragraph 13.03.

10.06 *Decisions on Requirements of Contract Documents and Acceptability of Work*

A. Engineer will render decisions regarding the requirements of the Contract Documents, and judge the acceptability of the Work, pursuant to the specific procedures set forth herein for initial interpretations, Change Proposals, and acceptance of the Work. In rendering such decisions and judgments, Engineer will not show partiality to Owner or Contractor, and will not be liable to Owner, Contractor, or others in connection with any proceedings, interpretations, decisions, or judgments conducted or rendered in good faith.

10.07 *Limitations on Engineer's Authority and Responsibilities*

A. Neither Engineer's authority or responsibility under this Article 10 or under any other provision of the Contract, nor any decision made by Engineer in good faith either to exercise or not exercise such authority or responsibility or the undertaking, exercise, or performance of any authority or responsibility by Engineer, will create, impose, or give rise to any duty in contract, tort, or otherwise owed by Engineer to Contractor, any Subcontractor, any Supplier, any other individual or entity, or to any surety for or employee or agent of any of them.

B. Engineer will not supervise, direct, control, or have authority over or be responsible for Contractor's means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto, or for any failure of Contractor to comply with Laws and Regulations applicable to the performance of the Work. Engineer will not be responsible for Contractor's failure to perform the Work in accordance with the Contract Documents.

C. Engineer will not be responsible for the acts or omissions of Contractor or of any Subcontractor, any Supplier, or of any other individual or entity performing any of the Work.

D. Engineer's review of the final Application for Payment and accompanying documentation, and all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection, tests and approvals, and other documentation required to be delivered by Contractor under Paragraph 15.06.A, will only be to determine generally that their content complies with the requirements of, and in the case of certificates of inspections, tests, and approvals, that the results certified indicate compliance with the Contract Documents.

E. The limitations upon authority and responsibility set forth in this Paragraph 10.07 also apply to the Resident Project Representative, if any.

10.08 *Compliance with Safety Program*

A. While at the Site, Engineer's employees and representatives will comply with the specific applicable requirements of Owner's and Contractor's safety programs of which Engineer has been informed.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

ARTICLE 11—CHANGES TO THE CONTRACT

11.01 *Amending and Supplementing the Contract*

A. The Contract may be amended or supplemented by a Change Order, a Work Change Directive, or a Field Order.

B. If an amendment or supplement to the Contract includes a change in the Contract Price or the Contract Times, such amendment or supplement must be set forth in a Change Order.

C. All changes to the Contract that involve (1) the performance or acceptability of the Work, (2) the design (as set forth in the Drawings, Specifications, or otherwise), or (3) other engineering or technical matters, must be supported by Engineer's recommendation. Owner and Contractor may amend other terms and conditions of the Contract without the recommendation of the Engineer.

11.02 *Change Orders*

A. Owner and Contractor shall execute appropriate Change Orders covering:

1. Changes in Contract Price or Contract Times which are agreed to by the parties, including any undisputed sum or amount of time for Work actually performed in accordance with a Work Change Directive;

2. Changes in Contract Price resulting from an Owner set-off, unless Contractor has duly contested such set-off;

3. Changes in the Work which are: (a) ordered by Owner pursuant to Paragraph 11.05, (b) required because of Owner's acceptance of defective Work under Paragraph 14.04 or Owner's correction of defective Work under Paragraph 14.07, or (c) agreed to by the parties, subject to the need for Engineer's recommendation if the change in the Work involves the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters; and

4. Changes that embody the substance of any final and binding results under: Paragraph 11.03.B, resolving the impact of a Work Change Directive; Paragraph 11.09, concerning Change Proposals; Article 12, Claims; Paragraph 13.02.D, final adjustments resulting from allowances; Paragraph 13.03.D, final adjustments relating to determination of quantities for Unit Price Work; and similar provisions.

B. If Owner or Contractor refuses to execute a Change Order that is required to be executed under the terms of Paragraph 11.02.A, it will be deemed to be of full force and effect, as if fully executed.

11.03 *Work Change Directives*

A. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the modification ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order, following negotiations by the parties as to the Work Change Directive's effect, if any, on the Contract Price and Contract Times; or, if negotiations are unsuccessful, by a determination under the terms of the Contract Documents governing adjustments, expressly including Paragraph 11.07 regarding change of Contract Price.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

B. If Owner has issued a Work Change Directive and:

1. Contractor believes that an adjustment in Contract Times or Contract Price is necessary, then Contractor shall submit any Change Proposal seeking such an adjustment no later than 30 days after the completion of the Work set out in the Work Change Directive.

2. Owner believes that an adjustment in Contract Times or Contract Price is necessary, then Owner shall submit any Claim seeking such an adjustment no later than 60 days after issuance of the Work Change Directive.

11.04 *Field Orders*

A. Engineer may authorize minor changes in the Work if the changes do not involve an adjustment in the Contract Price or the Contract Times and are compatible with the design concept of the completed Project as a functioning whole as indicated by the Contract Documents. Such changes will be accomplished by a Field Order and will be binding on Owner and also on Contractor, which shall perform the Work involved promptly.

B. If Contractor believes that a Field Order justifies an adjustment in the Contract Price or Contract Times, then before proceeding with the Work at issue, Contractor shall submit a Change Proposal as provided herein.

11.05 *Owner-Authorized Changes in the Work*

A. Without invalidating the Contract and without notice to any surety, Owner may, at any time or from time to time, order additions, deletions, or revisions in the Work. Changes involving the design (as set forth in the Drawings, Specifications, or otherwise) or other engineering or technical matters will be supported by Engineer's recommendation.

B. Such changes in the Work may be accomplished by a Change Order, if Owner and Contractor have agreed as to the effect, if any, of the changes on Contract Times or Contract Price; or by a Work Change Directive. Upon receipt of any such document, Contractor shall promptly proceed with the Work involved; or, in the case of a deletion in the Work, promptly cease construction activities with respect to such deleted Work. Added or revised Work must be performed under the applicable conditions of the Contract Documents.

C. Nothing in this Paragraph 11.05 obligates Contractor to undertake work that Contractor reasonably concludes cannot be performed in a manner consistent with Contractor's safety obligations under the Contract Documents or Laws and Regulations.

11.06 *Unauthorized Changes in the Work*

A. Contractor shall not be entitled to an increase in the Contract Price or an extension of the Contract Times with respect to any work performed that is not required by the Contract Documents, as amended, modified, or supplemented, except in the case of an emergency as provided in Paragraph 7.15 or in the case of uncovering Work as provided in Paragraph 14.05.C.2.

11.07 *Change of Contract Price*

A. The Contract Price may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Price must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment of Contract Price must comply with the provisions of Article 12.

B. An adjustment in the Contract Price will be determined as follows:

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

1. Where the Work involved is covered by unit prices contained in the Contract Documents, then by application of such unit prices to the quantities of the items involved (subject to the provisions of Paragraph 13.03);

2. Where the Work involved is not covered by unit prices contained in the Contract Documents, then by a mutually agreed lump sum (which may include an allowance for overhead and profit not necessarily in accordance with Paragraph 11.07.C.2); or

3. Where the Work involved is not covered by unit prices contained in the Contract Documents and the parties do not reach mutual agreement to a lump sum, then on the basis of the Cost of the Work (determined as provided in Paragraph 13.01) plus a Contractor's fee for overhead and profit (determined as provided in Paragraph 11.07.C).

C. *Contractor's Fee*: When applicable, the Contractor's fee for overhead and profit will be determined as follows:

1. A mutually acceptable fixed fee; or

2. If a fixed fee is not agreed upon, then a fee based on the following percentages of the various portions of the Cost of the Work:

a. For costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2, the Contractor's fee will be 15 percent;

b. For costs incurred under Paragraph 13.01.B.3, the Contractor's fee will be 5 percent;

c. Where one or more tiers of subcontracts are on the basis of Cost of the Work plus a fee and no fixed fee is agreed upon, the intent of Paragraphs 11.07.C.2.a and 11.07.C.2.b is that the Contractor's fee will be based on: (1) a fee of 15 percent of the costs incurred under Paragraphs 13.01.B.1 and 13.01.B.2 by the Subcontractor that actually performs the Work, at whatever tier, and (2) with respect to Contractor itself and to any Subcontractors of a tier higher than that of the Subcontractor that actually performs the Work, a fee of 5 percent of the amount (fee plus underlying costs incurred) attributable to the next lower tier Subcontractor; provided, however, that for any such subcontracted Work the maximum total fee to be paid by Owner will be no greater than 27 percent of the costs incurred by the Subcontractor that actually performs the Work;

d. No fee will be payable on the basis of costs itemized under Paragraphs 13.01.B.4, 13.01.B.5, and 13.01.C;

e. The amount of credit to be allowed by Contractor to Owner for any change which results in a net decrease in Cost of the Work will be the amount of the actual net decrease in Cost of the Work and a deduction of an additional amount equal to 5 percent of such actual net decrease in Cost of the Work; and

f. When both additions and credits are involved in any one change or Change Proposal, the adjustment in Contractor's fee will be computed by determining the sum of the costs in each of the cost categories in Paragraph 13.01.B (specifically, payroll costs, Paragraph 13.01.B.1; incorporated materials and equipment costs, Paragraph 13.01.B.2; Subcontract costs, Paragraph 13.01.B.3; special consultants costs, Paragraph 13.01.B.4; and other costs, Paragraph 13.01.B.5) and applying to each such cost category sum the appropriate fee from Paragraphs 11.07.C.2.a through 11.07.C.2.e, inclusive.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

11.08 *Change of Contract Times*

A. The Contract Times may only be changed by a Change Order. Any Change Proposal for an adjustment in the Contract Times must comply with the provisions of Paragraph 11.09. Any Claim for an adjustment in the Contract Times must comply with the provisions of Article 12.

B. Delay, disruption, and interference in the Work, and any related changes in Contract Times, are addressed in and governed by Paragraph 4.05.

11.09 *Change Proposals*

A. *Purpose and Content*: Contractor shall submit a Change Proposal to Engineer to request an adjustment in the Contract Times or Contract Price; contest an initial decision by Engineer concerning the requirements of the Contract Documents or relating to the acceptability of the Work under the Contract Documents; challenge a set-off against payment due; or seek other relief under the Contract. The Change Proposal will specify any proposed change in Contract Times or Contract Price, or other proposed relief, and explain the reason for the proposed change, with citations to any governing or applicable provisions of the Contract Documents. Each Change Proposal will address only one issue, or a set of closely related issues.

B. *Change Proposal Procedures*

1. *Submittal*: Contractor shall submit each Change Proposal to Engineer within 30 days after the start of the event giving rise thereto, or after such initial decision.

2. *Supporting Data*: The Contractor shall submit supporting data, including the proposed change in Contract Price or Contract Time (if any), to the Engineer and Owner within 15 days after the submittal of the Change Proposal.

    a. Change Proposals based on or related to delay, interruption, or interference must comply with the provisions of Paragraphs 4.05.D and 4.05.E.

    b. Change proposals related to a change of Contract Price must include full and detailed accounts of materials incorporated into the Work and labor and equipment used for the subject Work.

    The supporting data must be accompanied by a written statement that the supporting data are accurate and complete, and that any requested time or price adjustment is the entire adjustment to which Contractor believes it is entitled as a result of said event.

3. *Engineer's Initial Review*: Engineer will advise Owner regarding the Change Proposal, and consider any comments or response from Owner regarding the Change Proposal. If in its discretion Engineer concludes that additional supporting data is needed before conducting a full review and making a decision regarding the Change Proposal, then Engineer may request that Contractor submit such additional supporting data by a date specified by Engineer, prior to Engineer beginning its full review of the Change Proposal.

4. *Engineer's Full Review and Action on the Change Proposal*: Upon receipt of Contractor's supporting data (including any additional data requested by Engineer), Engineer will conduct a full review of each Change Proposal and, within 30 days after such receipt of the Contractor's supporting data, either approve the Change Proposal in whole, deny it in whole, or approve it in part and deny it in part. Such actions must be in writing, with a copy provided to Owner and Contractor. If Engineer does not take action on the Change

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Proposal within 30 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of Engineer's inaction the Change Proposal is deemed denied, thereby commencing the time for appeal of the denial under Article 12.

5. *Binding Decision*: Engineer's decision is final and binding upon Owner and Contractor, unless Owner or Contractor appeals the decision by filing a Claim under Article 12.

C. *Resolution of Certain Change Proposals*: If the Change Proposal does not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters, then Engineer will notify the parties in writing that the Engineer is unable to resolve the Change Proposal. For purposes of further resolution of such a Change Proposal, such notice will be deemed a denial, and Contractor may choose to seek resolution under the terms of Article 12.

D. *Post-Completion*: Contractor shall not submit any Change Proposals after Engineer issues a written recommendation of final payment pursuant to Paragraph 15.06.B.

11.10 *Notification to Surety*

A. If the provisions of any bond require notice to be given to a surety of any change affecting the general scope of the Work or the provisions of the Contract Documents (including, but not limited to, Contract Price or Contract Times), the giving of any such notice will be Contractor's responsibility. The amount of each applicable bond will be adjusted to reflect the effect of any such change.

ARTICLE 12—CLAIMS

12.01 *Claims*

A. *Claims Process*: The following disputes between Owner and Contractor are subject to the Claims process set forth in this article:

1. Appeals by Owner or Contractor of Engineer's decisions regarding Change Proposals;

2. Owner demands for adjustments in the Contract Price or Contract Times, or other relief under the Contract Documents;

3. Disputes that Engineer has been unable to address because they do not involve the design (as set forth in the Drawings, Specifications, or otherwise), the acceptability of the Work, or other engineering or technical matters; and

4. Subject to the waiver provisions of Paragraph 15.07, any dispute arising after Engineer has issued a written recommendation of final payment pursuant to Paragraph 15.06.B.

B. *Submittal of Claim*: The party submitting a Claim shall deliver it directly to the other party to the Contract promptly (but in no event later than 30 days) after the start of the event giving rise thereto; in the case of appeals regarding Change Proposals within 30 days of the decision under appeal. The party submitting the Claim shall also furnish a copy to the Engineer, for its information only. The responsibility to substantiate a Claim rests with the party making the Claim. In the case of a Claim by Contractor seeking an increase in the Contract Times or Contract Price, Contractor shall certify that the Claim is made in good faith, that the supporting data are accurate and complete, and that to the best of Contractor's knowledge

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

and belief the amount of time or money requested accurately reflects the full amount to which Contractor is entitled.

C. *Review and Resolution*: The party receiving a Claim shall review it thoroughly, giving full consideration to its merits. The two parties shall seek to resolve the Claim through the exchange of information and direct negotiations. The parties may extend the time for resolving the Claim by mutual agreement. All actions taken on a Claim will be stated in writing and submitted to the other party, with a copy to Engineer.

D. *Mediation*

1. At any time after initiation of a Claim, Owner and Contractor may mutually agree to mediation of the underlying dispute. The agreement to mediate will stay the Claim submittal and response process.

2. If Owner and Contractor agree to mediation, then after 60 days from such agreement, either Owner or Contractor may unilaterally terminate the mediation process, and the Claim submittal and decision process will resume as of the date of the termination. If the mediation proceeds but is unsuccessful in resolving the dispute, the Claim submittal and decision process will resume as of the date of the conclusion of the mediation, as determined by the mediator.

3. Owner and Contractor shall each pay one-half of the mediator's fees and costs.

E. *Partial Approval*: If the party receiving a Claim approves the Claim in part and denies it in part, such action will be final and binding unless within 30 days of such action the other party invokes the procedure set forth in Article 17 for final resolution of disputes.

F. *Denial of Claim*: If efforts to resolve a Claim are not successful, the party receiving the Claim may deny it by giving written notice of denial to the other party. If the receiving party does not take action on the Claim within 90 days, then either Owner or Contractor may at any time thereafter submit a letter to the other party indicating that as a result of the inaction, the Claim is deemed denied, thereby commencing the time for appeal of the denial. A denial of the Claim will be final and binding unless within 30 days of the denial the other party invokes the procedure set forth in Article 17 for the final resolution of disputes.

G. *Final and Binding Results*: If the parties reach a mutual agreement regarding a Claim, whether through approval of the Claim, direct negotiations, mediation, or otherwise; or if a Claim is approved in part and denied in part, or denied in full, and such actions become final and binding; then the results of the agreement or action on the Claim will be incorporated in a Change Order or other written document to the extent they affect the Contract, including the Work, the Contract Times, or the Contract Price.

ARTICLE 13—COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 *Cost of the Work*

A. *Purposes for Determination of Cost of the Work*: The term Cost of the Work means the sum of all costs necessary for the proper performance of the Work at issue, as further defined below. The provisions of this Paragraph 13.01 are used for two distinct purposes:

1. To determine Cost of the Work when Cost of the Work is a component of the Contract Price, under cost-plus-fee, time-and-materials, or other cost-based terms; or

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

2. When needed to determine the value of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price. When the value of any such adjustment is determined on the basis of Cost of the Work, Contractor is entitled only to those additional or incremental costs required because of the change in the Work or because of the event giving rise to the adjustment.

B. *Costs Included*: Except as otherwise may be agreed to in writing by Owner, costs included in the Cost of the Work will be in amounts no higher than those commonly incurred in the locality of the Project, will not include any of the costs itemized in Paragraph 13.01.C, and will include only the following items:

1. Payroll costs for employees in the direct employ of Contractor in the performance of the Work under schedules of job classifications agreed upon by Owner and Contractor in advance of the subject Work. Such employees include, without limitation, superintendents, foremen, safety managers, safety representatives, and other personnel employed full time on the Work. Payroll costs for employees not employed full time on the Work will be apportioned on the basis of their time spent on the Work. Payroll costs include, but are not limited to, salaries and wages plus the cost of fringe benefits, which include social security contributions, unemployment, excise, and payroll taxes, workers' compensation, health and retirement benefits, sick leave, and vacation and holiday pay applicable thereto. The expenses of performing Work outside of regular working hours, on Saturday, Sunday, or legal holidays, will be included in the above to the extent authorized by Owner.

2. Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and Suppliers' field services required in connection therewith. All cash discounts accrue to Contractor unless Owner deposits funds with Contractor with which to make payments, in which case the cash discounts will accrue to Owner. All trade discounts, rebates, and refunds and returns from sale of surplus materials and equipment will accrue to Owner, and Contractor shall make provisions so that they may be obtained.

3. Payments made by Contractor to Subcontractors for Work performed by Subcontractors. If required by Owner, Contractor shall obtain competitive bids from subcontractors acceptable to Owner and Contractor and shall deliver such bids to Owner, which will then determine, with the advice of Engineer, which bids, if any, will be acceptable. If any subcontract provides that the Subcontractor is to be paid on the basis of Cost of the Work plus a fee, the Subcontractor's Cost of the Work and fee will be determined in the same manner as Contractor's Cost of the Work and fee as provided in this Paragraph 13.01.

4. Costs of special consultants (including but not limited to engineers, architects, testing laboratories, surveyors, attorneys, and accountants) employed or retained for services specifically related to the Work.

5. Other costs consisting of the following:

a. The proportion of necessary transportation, travel, and subsistence expenses of Contractor's employees incurred in discharge of duties connected with the Work.

b. Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office, and temporary facilities at the Site, which are

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

consumed in the performance of the Work, and cost, less market value, of such items used but not consumed which remain the property of Contractor.

1) In establishing included costs for materials such as scaffolding, plating, or sheeting, consideration will be given to the actual or the estimated life of the material for use on other projects; or rental rates may be established on the basis of purchase or salvage value of such items, whichever is less. Contractor will not be eligible for compensation for such items in an amount that exceeds the purchase cost of such item.

c. *Construction Equipment Rental*

1) Rentals of all construction equipment and machinery, and the parts thereof, in accordance with rental agreements approved by Owner as to price (including any surcharge or special rates applicable to overtime use of the construction equipment or machinery), and the costs of transportation, loading, unloading, assembly, dismantling, and removal thereof. All such costs will be in accordance with the terms of said rental agreements. The rental of any such equipment, machinery, or parts must cease when the use thereof is no longer necessary for the Work.

2) Costs for equipment and machinery owned by Contractor or a Contractor-related entity will be paid at a rate shown for such equipment in the equipment rental rate book specified in the Supplementary Conditions. An hourly rate will be computed by dividing the monthly rates by 176. These computed rates will include all operating costs.

3) With respect to Work that is the result of a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price ("changed Work"), included costs will be based on the time the equipment or machinery is in use on the changed Work and the costs of transportation, loading, unloading, assembly, dismantling, and removal when directly attributable to the changed Work. The cost of any such equipment or machinery, or parts thereof, must cease to accrue when the use thereof is no longer necessary for the changed Work.

d. Sales, consumer, use, and other similar taxes related to the Work, and for which Contractor is liable, as imposed by Laws and Regulations.

e. Deposits lost for causes other than negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, and royalty payments and fees for permits and licenses.

f. Losses and damages (and related expenses) caused by damage to the Work, not compensated by insurance or otherwise, sustained by Contractor in connection with the performance of the Work (except losses and damages within the deductible amounts of builder's risk or other property insurance established in accordance with Paragraph 6.04), provided such losses and damages have resulted from causes other than the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses include settlements made with the written consent and approval of Owner. No such losses, damages, and expenses will be included in the Cost of the Work for the purpose of determining Contractor's fee.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

g. The cost of utilities, fuel, and sanitary facilities at the Site.

h. Minor expenses such as communication service at the Site, express and courier services, and similar petty cash items in connection with the Work.

i. The costs of premiums for all bonds and insurance that Contractor is required by the Contract Documents to purchase and maintain.

C. *Costs Excluded*: The term Cost of the Work does not include any of the following items:

1. Payroll costs and other compensation of Contractor's officers, executives, principals, general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agents, expediters, timekeepers, clerks, and other personnel employed by Contractor, whether at the Site or in Contractor's principal or branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in Paragraph 13.01.B.1 or specifically covered by Paragraph 13.01.B.4. The payroll costs and other compensation excluded here are to be considered administrative costs covered by the Contractor's fee.

2. The cost of purchasing, renting, or furnishing small tools and hand tools.

3. Expenses of Contractor's principal and branch offices other than Contractor's office at the Site.

4. Any part of Contractor's capital expenses, including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

5. Costs due to the negligence of Contractor, any Subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of defective Work, disposal of materials or equipment wrongly supplied, and making good any damage to property.

6. Expenses incurred in preparing and advancing Claims.

7. Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in Paragraph 13.01.B.

D. *Contractor's Fee*

1. When the Work as a whole is performed on the basis of cost-plus-a-fee, then:

a. Contractor's fee for the Work set forth in the Contract Documents as of the Effective Date of the Contract will be determined as set forth in the Agreement.

b. for any Work covered by a Change Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work, Contractor's fee will be determined as follows:

1) When the fee for the Work as a whole is a percentage of the Cost of the Work, the fee will automatically adjust as the Cost of the Work changes.

2) When the fee for the Work as a whole is a fixed fee, the fee for any additions or deletions will be determined in accordance with Paragraph 11.07.C.2.

2. When the Work as a whole is performed on the basis of a stipulated sum, or any other basis other than cost-plus-a-fee, then Contractor's fee for any Work covered by a Change

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

Order, Change Proposal, Claim, set-off, or other adjustment in Contract Price on the basis of Cost of the Work will be determined in accordance with Paragraph 11.07.C.2.

E. *Documentation and Audit*: Whenever the Cost of the Work for any purpose is to be determined pursuant to this Article 13, Contractor and pertinent Subcontractors will establish and maintain records of the costs in accordance with generally accepted accounting practices. Subject to prior written notice, Owner will be afforded reasonable access, during normal business hours, to all Contractor's accounts, records, books, correspondence, instructions, drawings, receipts, vouchers, memoranda, and similar data relating to the Cost of the Work and Contractor's fee. Contractor shall preserve all such documents for a period of three years after the final payment by Owner. Pertinent Subcontractors will afford such access to Owner, and preserve such documents, to the same extent required of Contractor.

13.02 *Allowances*

A. It is understood that Contractor has included in the Contract Price all allowances so named in the Contract Documents and shall cause the Work so covered to be performed for such sums and by such persons or entities as may be acceptable to Owner and Engineer.

B. *Cash Allowances*: Contractor agrees that:

1. the cash allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the Site, and all applicable taxes; and

2. Contractor's costs for unloading and handling on the Site, labor, installation, overhead, profit, and other expenses contemplated for the cash allowances have been included in the Contract Price and not in the allowances, and no demand for additional payment for any of the foregoing will be valid.

C. *Owner's Contingency Allowance*: Contractor agrees that an Owner's contingency allowance, if any, is for the sole use of Owner to cover unanticipated costs.

D. Prior to final payment, an appropriate Change Order will be issued as recommended by Engineer to reflect actual amounts due Contractor for Work covered by allowances, and the Contract Price will be correspondingly adjusted.

13.03 *Unit Price Work*

A. Where the Contract Documents provide that all or part of the Work is to be Unit Price Work, initially the Contract Price will be deemed to include for all Unit Price Work an amount equal to the sum of the unit price for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Agreement.

B. The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Price. Payments to Contractor for Unit Price Work will be based on actual quantities.

C. Each unit price will be deemed to include an amount considered by Contractor to be adequate to cover Contractor's overhead and profit for each separately identified item.

D. Engineer will determine the actual quantities and classifications of Unit Price Work performed by Contractor. Engineer will review with Contractor the Engineer's preliminary determinations on such matters before rendering a written decision thereon (by recommendation of an Application for Payment or otherwise). Engineer's written decision

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

thereon will be final and binding (except as modified by Engineer to reflect changed factual conditions or more accurate data) upon Owner and Contractor, and the final adjustment of Contract Price will be set forth in a Change Order, subject to the provisions of the following paragraph.

E. *Adjustments in Unit Price*

1. Contractor or Owner shall be entitled to an adjustment in the unit price with respect to an item of Unit Price Work if:

a. the quantity of the item of Unit Price Work performed by Contractor differs materially and significantly from the estimated quantity of such item indicated in the Agreement; and

b. Contractor's unit costs to perform the item of Unit Price Work have changed materially and significantly as a result of the quantity change.

2. The adjustment in unit price will account for and be coordinated with any related changes in quantities of other items of Work, and in Contractor's costs to perform such other Work, such that the resulting overall change in Contract Price is equitable to Owner and Contractor.

3. Adjusted unit prices will apply to all units of that item.

ARTICLE 14—TESTS AND INSPECTIONS; CORRECTION, REMOVAL, OR ACCEPTANCE OF DEFECTIVE WORK

14.01 *Access to Work*

A. Owner, Engineer, their consultants and other representatives and personnel of Owner, independent testing laboratories, and authorities having jurisdiction have access to the Site and the Work at reasonable times for their observation, inspection, and testing. Contractor shall provide them proper and safe conditions for such access and advise them of Contractor's safety procedures and programs so that they may comply with such procedures and programs as applicable.

14.02 *Tests, Inspections, and Approvals*

A. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests, and shall cooperate with inspection and testing personnel to facilitate required inspections and tests.

B. Owner shall retain and pay for the services of an independent inspector, testing laboratory, or other qualified individual or entity to perform all inspections and tests expressly required by the Contract Documents to be furnished and paid for by Owner, except that costs incurred in connection with tests or inspections of covered Work will be governed by the provisions of Paragraph 14.05.

C. If Laws or Regulations of any public body having jurisdiction require any Work (or part thereof) specifically to be inspected, tested, or approved by an employee or other representative of such public body, Contractor shall assume full responsibility for arranging and obtaining such inspections, tests, or approvals, pay all costs in connection therewith, and furnish Engineer the required certificates of inspection or approval.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

D. Contractor shall be responsible for arranging, obtaining, and paying for all inspections and tests required:

1. by the Contract Documents, unless the Contract Documents expressly allocate responsibility for a specific inspection or test to Owner;

2. to attain Owner's and Engineer's acceptance of materials or equipment to be incorporated in the Work;

3. by manufacturers of equipment furnished under the Contract Documents;

4. for testing, adjusting, and balancing of mechanical, electrical, and other equipment to be incorporated into the Work; and

5. for acceptance of materials, mix designs, or equipment submitted for approval prior to Contractor's purchase thereof for incorporation in the Work.

Such inspections and tests will be performed by independent inspectors, testing laboratories, or other qualified individuals or entities acceptable to Owner and Engineer.

E. If the Contract Documents require the Work (or part thereof) to be approved by Owner, Engineer, or another designated individual or entity, then Contractor shall assume full responsibility for arranging and obtaining such approvals.

F. If any Work (or the work of others) that is to be inspected, tested, or approved is covered by Contractor without written concurrence of Engineer, Contractor shall, if requested by Engineer, uncover such Work for observation. Such uncovering will be at Contractor's expense unless Contractor had given Engineer timely notice of Contractor's intention to cover the same and Engineer had not acted with reasonable promptness in response to such notice.

14.03 *Defective Work*

A. *Contractor's Obligation*: It is Contractor's obligation to assure that the Work is not defective.

B. *Engineer's Authority*: Engineer has the authority to determine whether Work is defective, and to reject defective Work.

C. *Notice of Defects*: Prompt written notice of all defective Work of which Owner or Engineer has actual knowledge will be given to Contractor.

D. *Correction, or Removal and Replacement*: Promptly after receipt of written notice of defective Work, Contractor shall correct all such defective Work, whether or not fabricated, installed, or completed, or, if Engineer has rejected the defective Work, remove it from the Project and replace it with Work that is not defective.

E. *Preservation of Warranties*: When correcting defective Work, Contractor shall take no action that would void or otherwise impair Owner's special warranty and guarantee, if any, on said Work.

F. *Costs and Damages*: In addition to its correction, removal, and replacement obligations with respect to defective Work, Contractor shall pay all claims, costs, losses, and damages arising out of or relating to defective Work, including but not limited to the cost of the inspection, testing, correction, removal, replacement, or reconstruction of such defective Work, fines levied against Owner by governmental authorities because the Work is defective, and the costs of repair or replacement of work of others resulting from defective Work. Prior to final payment, if Owner and Contractor are unable to agree as to the measure of such claims, costs,

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

losses, and damages resulting from defective Work, then Owner may impose a reasonable set-off against payments due under Article 15.

14.04 *Acceptance of Defective Work*

A. If, instead of requiring correction or removal and replacement of defective Work, Owner prefers to accept it, Owner may do so (subject, if such acceptance occurs prior to final payment, to Engineer's confirmation that such acceptance is in general accord with the design intent and applicable engineering principles, and will not endanger public safety). Contractor shall pay all claims, costs, losses, and damages attributable to Owner's evaluation of and determination to accept such defective Work (such costs to be approved by Engineer as to reasonableness), and for the diminished value of the Work to the extent not otherwise paid by Contractor. If any such acceptance occurs prior to final payment, the necessary revisions in the Contract Documents with respect to the Work will be incorporated in a Change Order. If the parties are unable to agree as to the decrease in the Contract Price, reflecting the diminished value of Work so accepted, then Owner may impose a reasonable set-off against payments due under Article 15. If the acceptance of defective Work occurs after final payment, Contractor shall pay an appropriate amount to Owner.

14.05 *Uncovering Work*

A. Engineer has the authority to require additional inspection or testing of the Work, whether or not the Work is fabricated, installed, or completed.

B. If any Work is covered contrary to the written request of Engineer, then Contractor shall, if requested by Engineer, uncover such Work for Engineer's observation, and then replace the covering, all at Contractor's expense.

C. If Engineer considers it necessary or advisable that covered Work be observed by Engineer or inspected or tested by others, then Contractor, at Engineer's request, shall uncover, expose, or otherwise make available for observation, inspection, or testing as Engineer may require, that portion of the Work in question, and provide all necessary labor, material, and equipment.

1. If it is found that the uncovered Work is defective, Contractor shall be responsible for all claims, costs, losses, and damages arising out of or relating to such uncovering, exposure, observation, inspection, and testing, and of satisfactory replacement or reconstruction (including but not limited to all costs of repair or replacement of work of others); and pending Contractor's full discharge of this responsibility the Owner shall be entitled to impose a reasonable set-off against payments due under Article 15.

2. If the uncovered Work is not found to be defective, Contractor shall be allowed an increase in the Contract Price or an extension of the Contract Times, directly attributable to such uncovering, exposure, observation, inspection, testing, replacement, and reconstruction. If the parties are unable to agree as to the amount or extent thereof, then Contractor may submit a Change Proposal within 30 days of the determination that the Work is not defective.

14.06 *Owner May Stop the Work*

A. If the Work is defective, or Contractor fails to supply sufficient skilled workers or suitable materials or equipment, or fails to perform the Work in such a way that the completed Work will conform to the Contract Documents, then Owner may order Contractor to stop the Work,

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

or any portion thereof, until the cause for such order has been eliminated; however, this right of Owner to stop the Work will not give rise to any duty on the part of Owner to exercise this right for the benefit of Contractor, any Subcontractor, any Supplier, any other individual or entity, or any surety for, or employee or agent of any of them.

14.07 *Owner May Correct Defective Work*

A. If Contractor fails within a reasonable time after written notice from Engineer to correct defective Work, or to remove and replace defective Work as required by Engineer, then Owner may, after 7 days' written notice to Contractor, correct or remedy any such deficiency.

B. In exercising the rights and remedies under this Paragraph 14.07, Owner shall proceed expeditiously. In connection with such corrective or remedial action, Owner may exclude Contractor from all or part of the Site, take possession of all or part of the Work and suspend Contractor's services related thereto, and incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere. Contractor shall allow Owner, Owner's representatives, agents and employees, Owner's other contractors, and Engineer and Engineer's consultants access to the Site to enable Owner to exercise the rights and remedies under this paragraph.

C. All claims, costs, losses, and damages incurred or sustained by Owner in exercising the rights and remedies under this Paragraph 14.07 will be charged against Contractor as set-offs against payments due under Article 15. Such claims, costs, losses and damages will include but not be limited to all costs of repair, or replacement of work of others destroyed or damaged by correction, removal, or replacement of Contractor's defective Work.

D. Contractor shall not be allowed an extension of the Contract Times because of any delay in the performance of the Work attributable to the exercise by Owner of Owner's rights and remedies under this Paragraph 14.07.

ARTICLE 15—PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 *Progress Payments*

A. *Basis for Progress Payments*: The Schedule of Values established as provided in Article 2 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to Engineer. Progress payments for Unit Price Work will be based on the number of units completed during the pay period, as determined under the provisions of Paragraph 13.03. Progress payments for cost-based Work will be based on Cost of the Work completed by Contractor during the pay period.

B. *Applications for Payments*

1. At least 20 days before the date established in the Agreement for each progress payment (but not more often than once a month), Contractor shall submit to Engineer for review an Application for Payment filled out and signed by Contractor covering the Work completed as of the date of the Application and accompanied by such supporting documentation as is required by the Contract Documents.

2. If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the Site or at another location agreed to in writing, the Application for Payment must also be accompanied by: (a) a bill of sale, invoice, copies of subcontract or purchase order payments, or other documentation

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

establishing full payment by Contractor for the materials and equipment; (b) at Owner's request, documentation warranting that Owner has received the materials and equipment free and clear of all Liens; and (c) evidence that the materials and equipment are covered by appropriate property insurance, a warehouse bond, or other arrangements to protect Owner's interest therein, all of which must be satisfactory to Owner.

3. Beginning with the second Application for Payment, each Application must include an affidavit of Contractor stating that all previous progress payments received by Contractor have been applied to discharge Contractor's legitimate obligations associated with prior Applications for Payment.

4. The amount of retainage with respect to progress payments will be as stipulated in the Agreement.

C. *Review of Applications*

1. Engineer will, within 10 days after receipt of each Application for Payment, including each resubmittal, either indicate in writing a recommendation of payment and present the Application to Owner, or return the Application to Contractor indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Contractor may make the necessary corrections and resubmit the Application.

2. Engineer's recommendation of any payment requested in an Application for Payment will constitute a representation by Engineer to Owner, based on Engineer's observations of the executed Work as an experienced and qualified design professional, and on Engineer's review of the Application for Payment and the accompanying data and schedules, that to the best of Engineer's knowledge, information and belief:

   a. the Work has progressed to the point indicated;

   b. the quality of the Work is generally in accordance with the Contract Documents (subject to an evaluation of the Work as a functioning whole prior to or upon Substantial Completion, the results of any subsequent tests called for in the Contract Documents, a final determination of quantities and classifications for Unit Price Work under Paragraph 13.03, and any other qualifications stated in the recommendation); and

   c. the conditions precedent to Contractor's being entitled to such payment appear to have been fulfilled in so far as it is Engineer's responsibility to observe the Work.

3. By recommending any such payment Engineer will not thereby be deemed to have represented that:

   a. inspections made to check the quality or the quantity of the Work as it has been performed have been exhaustive, extended to every aspect of the Work in progress, or involved detailed inspections of the Work beyond the responsibilities specifically assigned to Engineer in the Contract; or

   b. there may not be other matters or issues between the parties that might entitle Contractor to be paid additionally by Owner or entitle Owner to withhold payment to Contractor.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

4. Neither Engineer's review of Contractor's Work for the purposes of recommending payments nor Engineer's recommendation of any payment, including final payment, will impose responsibility on Engineer:

    a. to supervise, direct, or control the Work;

    b. for the means, methods, techniques, sequences, or procedures of construction, or the safety precautions and programs incident thereto;

    c. for Contractor's failure to comply with Laws and Regulations applicable to Contractor's performance of the Work;

    d. to make any examination to ascertain how or for what purposes Contractor has used the money paid by Owner; or

    e. to determine that title to any of the Work, materials, or equipment has passed to Owner free and clear of any Liens.

5. Engineer may refuse to recommend the whole or any part of any payment if, in Engineer's opinion, it would be incorrect to make the representations to Owner stated in Paragraph 15.01.C.2.

6. Engineer will recommend reductions in payment (set-offs) necessary in Engineer's opinion to protect Owner from loss because:

    a. the Work is defective, requiring correction or replacement;

    b. the Contract Price has been reduced by Change Orders;

    c. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

    d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible; or

    e. Engineer has actual knowledge of the occurrence of any of the events that would constitute a default by Contractor and therefore justify termination for cause under the Contract Documents.

D. *Payment Becomes Due*

1. Ten days after presentation of the Application for Payment to Owner with Engineer's recommendation, the amount recommended (subject to any Owner set-offs) will become due, and when due will be paid by Owner to Contractor.

E. *Reductions in Payment by Owner*

1. In addition to any reductions in payment (set-offs) recommended by Engineer, Owner is entitled to impose a set-off against payment based on any of the following:

    a. Claims have been made against Owner based on Contractor's conduct in the performance or furnishing of the Work, or Owner has incurred costs, losses, or damages resulting from Contractor's conduct in the performance or furnishing of the Work, including but not limited to claims, costs, losses, or damages from workplace injuries, adjacent property damage, non-compliance with Laws and Regulations, and patent infringement;

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

b. Contractor has failed to take reasonable and customary measures to avoid damage, delay, disruption, and interference with other work at or adjacent to the Site;

c. Contractor has failed to provide and maintain required bonds or insurance;

d. Owner has been required to remove or remediate a Hazardous Environmental Condition for which Contractor is responsible;

e. Owner has incurred extra charges or engineering costs related to submittal reviews, evaluations of proposed substitutes, tests and inspections, or return visits to manufacturing or assembly facilities;

f. The Work is defective, requiring correction or replacement;

g. Owner has been required to correct defective Work in accordance with Paragraph 14.07, or has accepted defective Work pursuant to Paragraph 14.04;

h. The Contract Price has been reduced by Change Orders;

i. An event has occurred that would constitute a default by Contractor and therefore justify a termination for cause;

j. Liquidated or other damages have accrued as a result of Contractor's failure to achieve Milestones, Substantial Completion, or final completion of the Work;

k. Liens have been filed in connection with the Work, except where Contractor has delivered a specific bond satisfactory to Owner to secure the satisfaction and discharge of such Liens; or

l. Other items entitle Owner to a set-off against the amount recommended.

2. If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor immediate written notice (with a copy to Engineer) stating the reasons for such action and the specific amount of the reduction, and promptly pay Contractor any amount remaining after deduction of the amount so withheld. Owner shall promptly pay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed will be binding on Contractor unless it duly submits a Change Proposal contesting the reduction.

3. Upon a subsequent determination that Owner's refusal of payment was not justified, the amount wrongfully withheld will be treated as an amount due as determined by Paragraph 15.01.D.1 and subject to interest as provided in the Agreement.

15.02 *Contractor's Warranty of Title*

A. Contractor warrants and guarantees that title to all Work, materials, and equipment furnished under the Contract will pass to Owner free and clear of (1) all Liens and other title defects, and (2) all patent, licensing, copyright, or royalty obligations, no later than 7 days after the time of payment by Owner.

15.03 *Substantial Completion*

A. When Contractor considers the entire Work ready for its intended use Contractor shall notify Owner and Engineer in writing that the entire Work is substantially complete and request that Engineer issue a certificate of Substantial Completion. Contractor shall at the same time

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

submit to Owner and Engineer an initial draft of punch list items to be completed or corrected before final payment.

B. Promptly after Contractor's notification, Owner, Contractor, and Engineer shall make an inspection of the Work to determine the status of completion. If Engineer does not consider the Work substantially complete, Engineer will notify Contractor in writing giving the reasons therefor.

C. If Engineer considers the Work substantially complete, Engineer will deliver to Owner a preliminary certificate of Substantial Completion which will fix the date of Substantial Completion. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment. Owner shall have 7 days after receipt of the preliminary certificate during which to make written objection to Engineer as to any provisions of the certificate or attached punch list. If, after considering the objections to the provisions of the preliminary certificate, Engineer concludes that the Work is not substantially complete, Engineer will, within 14 days after submission of the preliminary certificate to Owner, notify Contractor in writing that the Work is not substantially complete, stating the reasons therefor. If Owner does not object to the provisions of the certificate, or if despite consideration of Owner's objections Engineer concludes that the Work is substantially complete, then Engineer will, within said 14 days, execute and deliver to Owner and Contractor a final certificate of Substantial Completion (with a revised punch list of items to be completed or corrected) reflecting such changes from the preliminary certificate as Engineer believes justified after consideration of any objections from Owner.

D. At the time of receipt of the preliminary certificate of Substantial Completion, Owner and Contractor will confer regarding Owner's use or occupancy of the Work following Substantial Completion, review the builder's risk insurance policy with respect to the end of the builder's risk coverage, and confirm the transition to coverage of the Work under a permanent property insurance policy held by Owner. Unless Owner and Contractor agree otherwise in writing, Owner shall bear responsibility for security, operation, protection of the Work, property insurance, maintenance, heat, and utilities upon Owner's use or occupancy of the Work.

E. After Substantial Completion the Contractor shall promptly begin work on the punch list of items to be completed or corrected prior to final payment. In appropriate cases Contractor may submit monthly Applications for Payment for completed punch list items, following the progress payment procedures set forth above.

F. Owner shall have the right to exclude Contractor from the Site after the date of Substantial Completion subject to allowing Contractor reasonable access to remove its property and complete or correct items on the punch list.

15.04 *Partial Use or Occupancy*

A. Prior to Substantial Completion of all the Work, Owner may use or occupy any substantially completed part of the Work which has specifically been identified in the Contract Documents, or which Owner, Engineer, and Contractor agree constitutes a separately functioning and usable part of the Work that can be used by Owner for its intended purpose without

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

significant interference with Contractor's performance of the remainder of the Work, subject to the following conditions:

1. At any time, Owner may request in writing that Contractor permit Owner to use or occupy any such part of the Work that Owner believes to be substantially complete. If and when Contractor agrees that such part of the Work is substantially complete, Contractor, Owner, and Engineer will follow the procedures of Paragraph 15.03.A through 15.03.E for that part of the Work.

2. At any time, Contractor may notify Owner and Engineer in writing that Contractor considers any such part of the Work substantially complete and request Engineer to issue a certificate of Substantial Completion for that part of the Work.

3. Within a reasonable time after either such request, Owner, Contractor, and Engineer shall make an inspection of that part of the Work to determine its status of completion. If Engineer does not consider that part of the Work to be substantially complete, Engineer will notify Owner and Contractor in writing giving the reasons therefor. If Engineer considers that part of the Work to be substantially complete, the provisions of Paragraph 15.03 will apply with respect to certification of Substantial Completion of that part of the Work and the division of responsibility in respect thereof and access thereto.

4. No use or occupancy or separate operation of part of the Work may occur prior to compliance with the requirements of Paragraph 6.04 regarding builder's risk or other property insurance.

15.05 *Final Inspection*

A. Upon written notice from Contractor that the entire Work or an agreed portion thereof is complete, Engineer will promptly make a final inspection with Owner and Contractor and will notify Contractor in writing of all particulars in which this inspection reveals that the Work, or agreed portion thereof, is incomplete or defective. Contractor shall immediately take such measures as are necessary to complete such Work or remedy such deficiencies.

15.06 *Final Payment*

A. *Application for Payment*

1. After Contractor has, in the opinion of Engineer, satisfactorily completed all corrections identified during the final inspection and has delivered, in accordance with the Contract Documents, all maintenance and operating instructions, schedules, guarantees, bonds, certificates or other evidence of insurance, certificates of inspection, annotated record documents (as provided in Paragraph 7.12), and other documents, Contractor may make application for final payment.

2. The final Application for Payment must be accompanied (except as previously delivered) by:

   a. all documentation called for in the Contract Documents;

   b. consent of the surety, if any, to final payment;

   c. satisfactory evidence that all title issues have been resolved such that title to all Work, materials, and equipment has passed to Owner free and clear of any Liens or other title defects, or will so pass upon final payment.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

d. a list of all duly pending Change Proposals and Claims; and

e. complete and legally effective releases or waivers (satisfactory to Owner) of all Lien rights arising out of the Work, and of Liens filed in connection with the Work.

3. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

B. *Engineer's Review of Final Application and Recommendation of Payment*: If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract have been fulfilled, Engineer will, within 10 days after receipt of the final Application for Payment, indicate in writing Engineer's recommendation of final payment and present the final Application for Payment to Owner for payment. Such recommendation will account for any set-offs against payment that are necessary in Engineer's opinion to protect Owner from loss for the reasons stated above with respect to progress payments. Otherwise, Engineer will return the Application for Payment to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application for Payment.

C. *Notice of Acceptability*: In support of its recommendation of payment of the final Application for Payment, Engineer will also give written notice to Owner and Contractor that the Work is acceptable, subject to stated limitations in the notice and to the provisions of Paragraph 15.07.

D. *Completion of Work*: The Work is complete (subject to surviving obligations) when it is ready for final payment as established by the Engineer's written recommendation of final payment and issuance of notice of the acceptability of the Work.

E. *Final Payment Becomes Due*: Upon receipt from Engineer of the final Application for Payment and accompanying documentation, Owner shall set off against the amount recommended by Engineer for final payment any further sum to which Owner is entitled, including but not limited to set-offs for liquidated damages and set-offs allowed under the provisions of this Contract with respect to progress payments. Owner shall pay the resulting balance due to Contractor within 30 days of Owner's receipt of the final Application for Payment from Engineer.

15.07 *Waiver of Claims*

A. By making final payment, Owner waives its claim or right to liquidated damages or other damages for late completion by Contractor, except as set forth in an outstanding Claim,

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

appeal under the provisions of Article 17, set-off, or express reservation of rights by Owner. Owner reserves all other claims or rights after final payment.

B. The acceptance of final payment by Contractor will constitute a waiver by Contractor of all claims and rights against Owner other than those pending matters that have been duly submitted as a Claim, or appealed under the provisions of Article 17.

15.08 *Correction Period*

A. If within one year after the date of Substantial Completion (or such longer period of time as may be prescribed by the Supplementary Conditions or the terms of any applicable special guarantee required by the Contract Documents), Owner gives Contractor written notice that any Work has been found to be defective, or that Contractor's repair of any damages to the Site or adjacent areas has been found to be defective, then after receipt of such notice of defect Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions:

1. correct the defective repairs to the Site or such adjacent areas;
2. correct such defective Work;
3. remove the defective Work from the Project and replace it with Work that is not defective, if the defective Work has been rejected by Owner, and
4. satisfactorily correct or repair or remove and replace any damage to other Work, to the work of others, or to other land or areas resulting from the corrective measures.

B. Owner shall give any such notice of defect within 60 days of the discovery that such Work or repairs is defective. If such notice is given within such 60 days but after the end of the correction period, the notice will be deemed a notice of defective Work under Paragraph 7.17.B.

C. If, after receipt of a notice of defect within 60 days and within the correction period, Contractor does not promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk of loss or damage, Owner may have the defective Work corrected or repaired or may have the rejected Work removed and replaced. Contractor shall pay all costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such correction or repair or such removal and replacement (including but not limited to all costs of repair or replacement of work of others). Contractor's failure to pay such costs, losses, and damages within 10 days of invoice from Owner will be deemed the start of an event giving rise to a Claim under Paragraph 12.01.B, such that any related Claim must be brought within 30 days of the failure to pay.

D. In special circumstances where a particular item of equipment is placed in continuous service before Substantial Completion of all the Work, the correction period for that item may start to run from an earlier date if so provided in the Specifications.

E. Where defective Work (and damage to other Work resulting therefrom) has been corrected or removed and replaced under this paragraph, the correction period hereunder with respect to such Work will be extended for an additional period of one year after such correction or removal and replacement has been satisfactorily completed.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

F. Contractor's obligations under this paragraph are in addition to all other obligations and warranties. The provisions of this paragraph are not to be construed as a substitute for, or a waiver of, the provisions of any applicable statute of limitation or repose.

ARTICLE 16—SUSPENSION OF WORK AND TERMINATION

16.01 *Owner May Suspend Work*

A. At any time and without cause, Owner may suspend the Work or any portion thereof for a period of not more than 90 consecutive days by written notice to Contractor and Engineer. Such notice will fix the date on which Work will be resumed. Contractor shall resume the Work on the date so fixed. Contractor shall be entitled to an adjustment in the Contract Price or an extension of the Contract Times directly attributable to any such suspension. Any Change Proposal seeking such adjustments must be submitted no later than 30 days after the date fixed for resumption of Work.

16.02 *Owner May Terminate for Cause*

A. The occurrence of any one or more of the following events will constitute a default by Contractor and justify termination for cause:

1. Contractor's persistent failure to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workers or suitable materials or equipment, or failure to adhere to the Progress Schedule);

2. Failure of Contractor to perform or otherwise to comply with a material term of the Contract Documents;

3. Contractor's disregard of Laws or Regulations of any public body having jurisdiction; or

4. Contractor's repeated disregard of the authority of Owner or Engineer.

B. If one or more of the events identified in Paragraph 16.02.A occurs, then after giving Contractor (and any surety) 10 days' written notice that Owner is considering a declaration that Contractor is in default and termination of the Contract, Owner may proceed to:

1. declare Contractor to be in default, and give Contractor (and any surety) written notice that the Contract is terminated; and

2. enforce the rights available to Owner under any applicable performance bond.

C. Subject to the terms and operation of any applicable performance bond, if Owner has terminated the Contract for cause, Owner may exclude Contractor from the Site, take possession of the Work, incorporate in the Work all materials and equipment stored at the Site or for which Owner has paid Contractor but which are stored elsewhere, and complete the Work as Owner may deem expedient.

D. Owner may not proceed with termination of the Contract under Paragraph 16.02.B if Contractor within 7 days of receipt of notice of intent to terminate begins to correct its failure to perform and proceeds diligently to cure such failure.

E. If Owner proceeds as provided in Paragraph 16.02.B, Contractor shall not be entitled to receive any further payment until the Work is completed. If the unpaid balance of the Contract Price exceeds the cost to complete the Work, including all related claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects,

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

attorneys, and other professionals) sustained by Owner, such excess will be paid to Contractor. If the cost to complete the Work including such related claims, costs, losses, and damages exceeds such unpaid balance, Contractor shall pay the difference to Owner. Such claims, costs, losses, and damages incurred by Owner will be reviewed by Engineer as to their reasonableness and, when so approved by Engineer, incorporated in a Change Order. When exercising any rights or remedies under this paragraph, Owner shall not be required to obtain the lowest price for the Work performed.

F. Where Contractor's services have been so terminated by Owner, the termination will not affect any rights or remedies of Owner against Contractor then existing or which may thereafter accrue, or any rights or remedies of Owner against Contractor or any surety under any payment bond or performance bond. Any retention or payment of money due Contractor by Owner will not release Contractor from liability.

G. If and to the extent that Contractor has provided a performance bond under the provisions of Paragraph 6.01.A, the provisions of that bond will govern over any inconsistent provisions of Paragraphs 16.02.B and 16.02.D.

16.03 *Owner May Terminate for Convenience*

A. Upon 7 days' written notice to Contractor and Engineer, Owner may, without cause and without prejudice to any other right or remedy of Owner, terminate the Contract. In such case, Contractor shall be paid for (without duplication of any items):

1. completed and acceptable Work executed in accordance with the Contract Documents prior to the effective date of termination, including fair and reasonable sums for overhead and profit on such Work;

2. expenses sustained prior to the effective date of termination in performing services and furnishing labor, materials, or equipment as required by the Contract Documents in connection with uncompleted Work, plus fair and reasonable sums for overhead and profit on such expenses; and

3. other reasonable expenses directly attributable to termination, including costs incurred to prepare a termination for convenience cost proposal.

B. Contractor shall not be paid for any loss of anticipated profits or revenue, post-termination overhead costs, or other economic loss arising out of or resulting from such termination.

16.04 *Contractor May Stop Work or Terminate*

A. If, through no act or fault of Contractor, (1) the Work is suspended for more than 90 consecutive days by Owner or under an order of court or other public authority, or (2) Engineer fails to act on any Application for Payment within 30 days after it is submitted, or (3) Owner fails for 30 days to pay Contractor any sum finally determined to be due, then Contractor may, upon 7 days' written notice to Owner and Engineer, and provided Owner or Engineer do not remedy such suspension or failure within that time, terminate the contract and recover from Owner payment on the same terms as provided in Paragraph 16.03.

B. In lieu of terminating the Contract and without prejudice to any other right or remedy, if Engineer has failed to act on an Application for Payment within 30 days after it is submitted, or Owner has failed for 30 days to pay Contractor any sum finally determined to be due, Contractor may, 7 days after written notice to Owner and Engineer, stop the Work until payment is made of all such amounts due Contractor, including interest thereon. The

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

provisions of this paragraph are not intended to preclude Contractor from submitting a Change Proposal for an adjustment in Contract Price or Contract Times or otherwise for expenses or damage directly attributable to Contractor's stopping the Work as permitted by this paragraph.

ARTICLE 17—FINAL RESOLUTION OF DISPUTES

17.01 *Methods and Procedures*

A. *Disputes Subject to Final Resolution*: The following disputed matters are subject to final resolution under the provisions of this article:

1. A timely appeal of an approval in part and denial in part of a Claim, or of a denial in full, pursuant to Article 12; and

2. Disputes between Owner and Contractor concerning the Work, or obligations under the Contract Documents, that arise after final payment has been made.

B. *Final Resolution of Disputes*: For any dispute subject to resolution under this article, Owner or Contractor may:

1. elect in writing to invoke the dispute resolution process provided for in the Supplementary Conditions;

2. agree with the other party to submit the dispute to another dispute resolution process; or

3. if no dispute resolution process is provided for in the Supplementary Conditions or mutually agreed to, give written notice to the other party of the intent to submit the dispute to a court of competent jurisdiction.

ARTICLE 18—MISCELLANEOUS

18.01 *Giving Notice*

A. Whenever any provision of the Contract requires the giving of written notice to Owner, Engineer, or Contractor, it will be deemed to have been validly given only if delivered:

1. in person, by a commercial courier service or otherwise, to the recipient's place of business;

2. by registered or certified mail, postage prepaid, to the recipient's place of business; or

3. by e-mail to the recipient, with the words "Formal Notice" or similar in the e-mail's subject line.

18.02 *Computation of Times*

A. When any period of time is referred to in the Contract by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day will be omitted from the computation.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

18.03 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract. The provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

18.04 *Limitation of Damages*

A. With respect to any and all Change Proposals, Claims, disputes subject to final resolution, and other matters at issue, neither Owner nor Engineer, nor any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, shall be liable to Contractor for any claims, costs, losses, or damages sustained by Contractor on or in connection with any other project or anticipated project.

18.05 *No Waiver*

A. A party's non-enforcement of any provision will not constitute a waiver of that provision, nor will it affect the enforceability of that provision or of the remainder of this Contract.

18.06 *Survival of Obligations*

A. All representations, indemnifications, warranties, and guarantees made in, required by, or given in accordance with the Contract, as well as all continuing obligations indicated in the Contract, will survive final payment, completion, and acceptance of the Work or termination of the Contract or of the services of Contractor.

18.07 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Project is located.

18.08 *Assignment of Contract*

A. Unless expressly agreed to elsewhere in the Contract, no assignment by a party to this Contract of any rights under or interests in the Contract will be binding on the other party without the written consent of the party sought to be bound; and, specifically but without limitation, money that may become due and money that is due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law), and unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract.

18.09 *Successors and Assigns*

A. Owner and Contractor each binds itself, its successors, assigns, and legal representatives to the other party hereto, its successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.

18.10 *Headings*

A. Article and paragraph headings are inserted for convenience only and do not constitute parts of these General Conditions.

Copyright© 2018 National Society of Professional Engineers, American Council of Engineering Companies, and American Society of Civil Engineers. All rights reserved.

SECTION 00800
SUPPLEMENTARY CONDITIONS

These Supplementary Conditions amend or supplement the Standard General Conditions of the Construction Contract (EJCDC Document No. C-700, 2018 edition) and other provisions of the Contract Documents as indicated below. All provisions which are not so amended or supplemented remain in full force and effect.

ARTICLE 1 – DEFINITIONS AND TERMINOLOGY

1.01 A.8. Add the following after "signed by Contractor":

", Engineer,"

1.01 A.12 Add the following to the beginning:

"The Contract Documents form the Contract for Construction. The Contract represents …"

1.01 A.13 Delete definition in its entirety and insert the following in its place:

"The Contract Documents establish the rights and obligations of the parties and include the Agreement, Addenda, Contractor's Bid (including documentation accompanying the Bid and any post Bid documentation submitted prior to the Notice of Award) when attached as an exhibit to the Agreement, the Notice to Proceed, the Bonds, these General Conditions, the Supplementary Conditions, the Specifications and the Drawings as the same are more specifically identified in the Agreement, together with all Written Amendments, Change Orders, Work Change Directives, Field Orders, and Engineer's written interpretations and clarifications issued on or after the Effective Date of the Agreement. Approved Shop Drawings and the reports and drawings of subsurface and physical conditions are not Contract Documents. Only printed or hard copies of the items listed in this paragraph are Contract Documents. Files in electronic media format of text, data, graphics, and the like that may be furnished by Owner to Contractor are not Contract Documents."

1.01 A.20 Delete definition in its entirety and insert the following in its place:

"The individual or entity duly appointed by the Owner to undertake the duties and powers herein assigned to the Engineer, acting either directly or through duly appointed representatives."

1.01 A.42 Delete entirely and insert the following in its place:

"Substantial Completion shall be interpreted in accordance with Massachusetts General Law Chapter 30, Section 39G or 39K as appropriate."

1.01 A.51 Add the following new definition:

"*Governing Laws and Building Code*-- The term 'governing laws and building code,' whenever used, shall mean all laws, ordinances, rules, regulations, and lawful orders of any public authority, federal, state, or local bearing on the performance of the Work and the building code or codes legally applicable to work."

1.01 A.52 Add the following new definition:

"*Modification*--A Modification is (1) a written amendment to the Contract signed by both parties; (2) a Change Order; (3) a Work Change Directive; or (4) a written order for a minor change in the Work issued by the Engineer in one of the following ways (a) a Field Order; (b) Engineer's approval of a Shop Drawing or Sample; or (iii) Engineer's written interpretation or clarification."

1.02 B.1 Add the following after the word "satisfactory,":

"'necessary,' 'as directed,' 'when directed,' 'good and sufficient,'"

1.02 B.2 Add the following new subsection:

"The terms 'approval,' 'approved,' 'approved equal,' 'or equal,' or 'other approved' mean as approved by the Engineer."

ARTICLE 2 – PRELIMINARY MATTERS

2.01 C Delete in its entirety.

2.03 B Add the following new paragraph:

"Notwithstanding the time limitations provided in paragraph 2.03A, the Owner may desire to commence the Contract Times later than the sixtieth day after the bid opening. The Owner and Contractor, upon mutual agreement, may extend the commencement of the Contract Times to any date that they elect. Owner must obtain Contractor's approval for extending the time beyond the dates/times stated in the Contract Documents."

ARTICLE 3 –DOCUMENTS: INTENT, REQUIREMENTS, REUSE

3.01 A. Add the following to the end of the paragraph:

"Each and every provision of law and clause required by law to be inserted in these Contract Documents shall be deemed to be inserted herein, and they shall be read and enforced as though it were included herein, and if through mistake or otherwise, any such provision is not inserted, or if not correctly inserted, then upon the application of either party, the Contract Documents shall forthwith be physically amended to make such insertion. All work mentioned or indicated in the Contract Documents shall be performed by the Contractor as part of the Contract unless it is specifically indicated in the Contract Documents that such Work is to be done by others."

3.01 A.1 Add the following new subsection:

"In the event of conflict in or between the Contract Documents, the Contractor shall be held to the highest standard therein. Where compliance with two or more industry standards or set of requirements is specified, and overlapping of those different standards or requirements established different or conflicting minimums or level of quality, the most stringent requirements is intended."

3.01 A.2 Add the following new subsection:

"In the event of an conflict between any provision or language of the Contract and any provision or language of the Contract Documents, the provision or language of the Contract shall control. In the event of any conflict or inconsistency between this Contract, the Contract Documents and any applicable state law, the applicable statutory provisions shall prevail."

3.01 H. Add the following new section:

"Organization of the Specifications into divisions, sections and articles, and arrangement of Drawings shall not control the Contractor in dividing the Work among Subcontractors or in establishing the extent of Work to be performed by any trade, except sections designated for Filed Sub-Bids as otherwise required by law. The General Contractor and all Subcontractors shall refer to all of the Drawings, including those showing primarily the work of the mechanical, electrical, and other specialized trades, and to all of the sections of the specifications, and shall perform all Work reasonably inferable therefrom as being necessary to produce the indicated results."

3.01 I. Add the following new section:

"Test boring and soil test information provided in the Project Manual was obtained by the Owner for use by the Engineer in the design of the Project. The Owner does not hold out such information to the Contractor as an accurate or approximate indication of subsurface conditions, and no claim for extra cost or extension of time resulting from the Contractor's reliance upon such information shall be permitted."

3.01 J. Add the following new section:

"The Drawings and Specifications are intended to supplement one another. Materials and workmanship described are not necessarily found in both. Drawings are not intended to be scaled or to act as shop drawings. Inadvertent discrepancies or omissions shown on one drawing but not on others shall not be cause for additional charges or claims. In case of discrepancies, figured dimensions shall take precedence over smaller scale drawings. Specifications shall take precedence over Drawings for quality of materials and general performance of the work."

3.01 K. Add the following new section:

"Whenever an item is specified and/or shown on the Drawings by details or reference, it

shall be considered typical for other items which are obviously intended to be the same even though not so designated or specifically named but do serve the same function for this project."

3.02 A.2 Delete entirely and insert the following in its place:

"Owner and Contractor recognize that other rights, duties, and obligations with respect to public construction contracts are also provided by statute, notwithstanding the fact that they are not specifically enumerated herein. Accordingly, any provisions required by statute to be included in this contract shall be deemed to be so included as though fully set forth herein. However, compliance with a statute does not diminish the Contractor's responsibilities hereunder."

3.02 A.3 Add the following new subsection:

"Where reference is made to ASTM Specifications, it shall mean the standard specific specifications of the American Society for Testing and Materials of the most recent designation."

3.02 A.4 Add the following new subsection:

"Similarly, where reference is made to Specifications, Standards or requirements of A.S.M.E. or A.S.H. & V.E., they shall mean respectively those American Society for Mechanical Engineers and the American Society for Heating and Ventilating Engineers, and shall be from the latest editions."

3.02 A.5 Add the following new subsection:

"Where compliance with two or more industry standards or set of requirements is specified, and overlapping of those different standards or requirements established different or conflicting minimums or level of quality, the most stringent requirements is intended."

3.02 A.5.a Add the following new subsection:

"The standards referred to, except as modified in the Contract Documents, shall have full force and effect as though printed in the Contract Documents. These standards are not furnished to the Contractor for the reason that the manufacturers and trades involved are assumed to be familiar with their requirements. The Contractor shall make himself aware of the contents of such documents and furnish the field office with one full set of each."

3.02 A.5.b Add the following new subsection:

"Where no explicit quality or standards for material or workmanship are established for work, such work is to be of as good quality of the surrounding work and of the construction of the Project generally."

3.02 A.5.c. Add the following new subsection:

"All manufactured articles, materials, and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the manufacturer's written or printed directions and instructions unless otherwise indicated in the Contract Documents."

3.03 A.1 Add the following to the end of the paragraph:

"Should the work proceed, after the discovery of errors, conflict, or omissions by the Engineer and clarification has not been received from the Engineer, the Contractor will be held fully responsible for replacement or correction of the affected area, as directed by the Engineer, at the Contractor's expense."

3.03 A.2 Add the following new subsection and move existing subsection down to 3.03A.3 and delete original 3.03A.3:

"*Contractor's Review of the Site.* The Contractor shall thoroughly acquaint himself with all the existing conditions at the site and shall take all such conditions into consideration as they may affect the work under his Contract. No allowance will be made in the Contract or the Work under the Contract for failure of the Contractor to visit the site."

3.03 A.2.a Add the following new subsection:

"Before ordering any material or doing any work, each trade shall verify all measurements at this project and shall be responsible for the correctness of the same. No extra charge or compensation will be allowed on account of difference between actual dimensions and the measurements indicated on the Drawings, any difference which may be found shall be submitted to the Engineer for consideration before proceeding with the work."

3.03 A.3 Add the following to the end of the new subsection 3.03A.3 (formerly 3.03.A.2):

"Should the work proceed, after the discovery of such conflict, error, ambiguity or discrepancy by the Engineer and clarification has not been received from the Engineer, the Contractor will be held fully responsible for replacement or correction of the affected area, as directed by the Engineer, at the Contractor's expense."

3.03 B Delete entirely.

3.04 B Delete ", and on Owner, unless it appeals by filing a Claim" and substitute the following therefor:

"or unless the Owner makes a decision contrary to the Engineer's determination. The Owner shall be the final interpreter of all matters."

ARTICLE 4 – COMMENCEMENT AND PROGRESS OF THE WORK

4.01 A Delete entirely and replace with the following:

"The Contract Times will commence on the day indicated in the Notice to Proceed."

4.03 B Add the following new subsection:

"Engineer may check the lines, elevations, reference marks, batter boards, etc., set by Contractor, and Contractor shall correct any errors disclosed by such check. Such a check shall not be considered as approval of Contractor's work and shall not relieve Contractor of the responsibility for accurate construction of the entire Work. Contractor shall furnish personnel to assist Engineer in checking lines and grades."

4.05 A Delete entirely and replace with the following:

"The Contractor hereby agrees that the Contractor shall have no claim for damages of any kind against the Owner or the Engineer on account of any delay in the commencement of the work and/or any hindrance delay or suspension of any portion of the Work, whether such delay is caused by the Owner, the Engineer, or otherwise, except as and to the extent expressly provided under M.G.L. c.30, §39O. The Contractor acknowledges that the Contractor's sole remedy for any such delay and/or suspension will be an extension of time provided the Contractor complies with notice requirements contained in this Agreement."

4.05 C Delete entirely and replace with the following:

"No extension of time shall be granted because of seasonal, normal or abnormal variations in temperature, humidity, or precipitation, which conditions shall be wholly at the risk of the Contractor, whether occurring within the time originally scheduled for completion or within the period of any extension granted. Any additional cost of operations or conditions resulting therefrom shall be the responsibility of the Contractor."

4.05 F Delete entirely and replace with the following:

"Differing Site Conditions (M.G.L. c. 30, § 39N). If, during the progress of the work, the Contractor or the awarding authority discovers that the actual subsurface or latent physical conditions encountered at the Site differ substantially or materially from those shown on the plans or indicated in the contract documents either the contractor or the contracting authority may request an equitable adjustment in the contract price of the contract applying to work affected by the differing Site conditions. A request for such an adjustment shall be in writing and shall be delivered by the party making such claim to the other party as soon as possible after such conditions are discovered. Upon receipt of such a claim from a contractor, or upon its own initiative, the contracting authority shall make an investigation of such physical conditions, and, if they differ substantially or materially from those shown on the plans or indicated in the contract documents or from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the plans and contract documents and are of such a nature as to cause an increase or decrease in the cost of performance of the work or a change in the construction methods required for the

performance of the work which results in an increase or decrease in the cost of the work, the contracting authority shall make an equitable adjustment in the contract price and the contract shall be modified in writing accordingly."

4.05 G Delete entirely.

4.06 Add the following new 4.06 A-D:

"*Time is of the Essence; Liquidated Damages*

A. If the Contractor shall neglect, fail or refuse to complete the work within the time herein specified, or any proper extension thereof granted by the Owner, then the Contractor does hereby agree, as a part consideration for the awarding of this Contract, to pay to the Owner the amount specified in the Contract, not as a penalty but as liquidated damages for such breach of contract as hereinafter set forth, for each and every calendar day that the Contract shall be in default after the time stipulated in the Contract for completing the work. Such damages may be retained from time to time by the Owner from progress payments or any amounts owing to the Contractor, or otherwise collected.

B. The said amount is fixed and agreed upon by and between the Contractor and the Owner because of the impracticability and extreme difficulty of fixing and ascertaining the actual damages the Owner would in such event sustain, and said amount is agreed to be the amount of damages which the Owner would sustain and said amount shall be retained from time to time by the Owner from current periodical estimates.

C. It is further agreed that time is of the essence of each and every portion of this Contract and of the specifications wherein as definite and certain length of times if fixed for the performance of any act whatsoever; and where under the Contract an additional time is allowed for the completion of any work, the new time limit fixed by such extension shall be of the essence of this Contract. Provided that the Contractor shall not be charged with liquidated damages of any excess cost when the Owner determines that the Contractor is without fault and the Contractor's reasons for the time extension are acceptable to the Owner; Provided, further, that the Contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due:

1. to any preference, priority or allocation order duly issued by the Government;

2. to unforeseeable cause beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God, or of the public enemy, acts of the Owner, acts of another Contractor in the performance of a contract with the Owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and severe weather; and

3. to any delays of subcontractors or suppliers occasioned by any of the causes

specified in subsections C.1. and C.2., above;

D. Provided, further, that the Contractor shall, within thirty (30) days from the beginning of such delay, unless the Owner shall grant a further period of time prior to the date of final settlement of the Contract, notify the Owner, in writing, of the causes of the delay, who shall ascertain the facts and extent of the delay and notify the Contractor within a reasonable time of its decision in the matter."

ARTICLE 5 – AVAILABILITY OF LANDS; SUBSURFACE AND PHYSICAL CONDITIONS; HAZARDOUS ENVIRONMENTAL CONDITIONS

5.01 A. Delete entirely and replace with the following:

"Owner shall furnish portions of the Site as indicated in the Contract Documents. Owner shall notify Contractor of any encumbrances or restrictions not of general application but specifically related to use of said furnished portions of the Site with which Contractor must comply in performing the Work."

5.01 B Delete entirely.

5.01 C Delete entirely and replace with the following:

"Owner shall provide land, as indicated in the Contract Documents, for temporary construction facilities, stockpiling and storage of materials, and equipment and access thereto. Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment, that are required in excess of the lands provided by Owner."

5.03 A Delete entirely and replace with the following:

A. *Reports and Drawings*: The Contract Documents identify:

1. Those reports of explorations and tests of subsurface conditions at or contiguous to the Site that Engineer has used in preparing the Contract Documents. Engineer has relied upon the data obtained from subsurface investigations made at the site in the form of test borings. Such data is in the form of boring logs which are included in the Appendix to the Project Manual. The locations of the test borings are indicated on the Drawings. Such logs and samples are not part of the Contract Documents.

2. In the preparation of Drawings and Specifications, the Engineer has relied upon the following reports and tests of subsurface physical conditions at the site. Copies of these reports are included in the appendix to the Project Manual. Such reports are not part of the Contract Documents.

5.03 C Delete entirely, keeping subparagraphs. Replace 5.03 C with the following:

"Reliance by Contractor on Technical Data Authorized: The Owner makes no warranties as to the accuracy or completeness of such material and such reports and drawings are not Contract Documents. Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors, with respect to:"

5.04 A Add the following to the end of the paragraph:

"Adjustments resulting from subsurface or latent physical conditions will be in accordance with Massachusetts General Law Chapter 30, Section 39N."

5.04 C Delete entirely.

5.05 E Delete entirely.

5.05 F.1 (1) Delete the word "shall" and replace it with "may"
(2) Delete the words "or was not shown or indicated with reasonable accuracy,"

5.06 A Delete the words "Supplementary Conditions" and replace them with "Contract Documents"

5.06 B Delete opening paragraph entirely and replace with the following:

"*Reliance by Contractor on Technical Data Authorized*: The Owner makes no warranties as to the accuracy or completeness of such material and such reports and drawings are not Contract Documents. Contractor may not rely upon or make any claim against Owner or Engineer, or any of their officers, directors, members, partners, employees, agents, consultants, or subcontractors with respect to:"

ARTICLE 6 – BONDS AND INSURANCE

6.01 A Delete entirely and replace with the following:

"The Contractor shall furnish a performance bond for the full amount of the Contract, and also a labor and materials payment bond for the full amount of the Contract, the form of which bonds are set forth in the Contract Documents, each of a surety company qualified to do business under state laws and satisfactory to the Owner, the premiums for which are to be included in the Contract Price and paid by the Contractor. These bonds shall (a) guarantee the faithful performance by the Contractor of all its obligations under this contract and (b) constitute the security required by Massachusetts General Laws Chapter 149, Section 29 and Chapter 30, Section 39A, as amended, for payment by the Contractor or its subcontractors used or employed in connection with the contract. Each bond shall incorporate by reference the terms of this contract. These bonds shall remain in effect for the entire guarantee period for each phase of the work, which shall commence on the date of

Substantial Completion, as defined in Paragraph 8.1.3. The Surety Company providing the bonds shall have a rating of A or better within the Best Key Rating Guide and be licensed by the Massachusetts Division of Insurance. The Contractor shall pay the premiums for such Bonds."

6.01 C Delete entirely.

6.02 A (1) Delete "Owner and"
(2) Delete "Supplementary Conditions" and replace with "Contract Documents"

6.02 B (1) Delete "Owner or"
(2) Delete "Supplementary Conditions" and replace with "Contract Documents"

6.02 D (1) Delete ", in the Supplementary Conditions"
(2) after the word "Contract" add "Documents"
(3) after "certificates of insurance" add "and copies of policies"

6.02 E Delete entirely.

6.02 F (1) Delete each instance of "or Contractor"
(2) Delete each instance of "other party's" and replace with "Contractor's"

6.02 I Delete entirely and replace with the following:

"If Contractor does not purchase or maintain all of the insurance required of it by the Contract, the Contractor shall notify the Owner in writing of such failure to purchase prior to the start of the Work, or of such failure to maintain prior to any change in the required coverage."

6.02 K Delete entirely and replace with the following:

"Without prejudice to any other right or remedy, if the Contractor has failed to obtain required insurance, the Owner may elect to obtain equivalent insurance to protect such its interests at the expense of the Contractor, and the Contract Price shall be adjusted accordingly."

6.02 L Delete entirely.

6.03 A After "…Commercial General Liability… " add ", employer's liability insurance,"

6.04 D After Paragraph 6.03, add 6.04 D. Minimum Insurance Coverages: Contractor shall maintain in full force and effect insurance coverages of the types and in the amounts in no event less than the following coverages:

a. Worker's Compensation Insurance and Employee Liability Policies in the statutory amount required where the work is to be performed.

b. Automobile Liability Policies. $1,000,000 combined single limit for each occurrence because of bodily injury, sickness or disease, including death at any time, resulting therefrom, sustained by any person, caused by accident and arising out of the ownership, maintenance or use of owned, non-owned or hired automobiles and for damage because of injury to or destruction of property, including the loss of the use thereof, caused by accident and arising out of the ownership, maintenance or use of owned, non-owed or hired automobiles.

c. General Liability insurance shall be furnished with the limits of not less than $2,000,000 per occurrence, $4,000,000 aggregate and shall provide a minimum insurance limit of $1,000,000 CSL.

d. Umbrella liability policy shall be in a minimum amount of $2,000,000.

6.02 (1) Delete each occurrence of the words “Supplementary Conditions” and replace with “Contract Documents”
(2) Before the word “members” add the word “board”

6.02 E Add the following new subsection:

“Contractor shall provide copies of all policies as well as evidence of its insurance coverage on the ACORD certificate of insurance form and shall include the following statement in its entirety in the section of the form entitled “Description of Operations/Locations/Vehicles/Special Items”.

The Town of Dudley and their officers, directors, partners, employees and other consultants and subcontractors are named as additional insureds with respect to the insured’s Commercial General Liability and Automobile Liability Insurance Policies. All insurance is primary for all claims covered thereby. Commercial General Liability Insurance includes contractual liability coverage.”

6.04 Delete entirely, including all subsections.

6.05 Delete entirely, including all subsections.

6.06 Delete entirely, including all subsections.

6.07 Delete entirely, including all subsections.

ARTICLE 7 – CONTRACTOR'S RESPONSIBILITIES

7.00 Add the following new section:

"*General/Review of Contract Documents and Field Conditions by Contractor*"

7.00 A Add the following new subsection:

"*Contractor's Financial Condition*. The Contractor represents and warrants that its financial condition is sound and that the Contractor is capable of performing the work required pursuant to the Contract Documents. Upon request by the Owner, the Contractor shall make available to the Owner such audited and unaudited financial statements of the Contractor as the Owner may reasonably request. The Contractor shall promptly advise the Owner of any occurrence, event, fact, or other matter that has had, will have, or might reasonably be predicted to have a material adverse effect upon the financial condition of the Contractor."

7.00 B Add the following new subsection:

"Since the Contract Documents are complementary, before starting each portion of the Work, the Contractor shall carefully study and compare the various Drawings and other Contract Documents relative to that portion of the Work, as well as the information furnished by the Owner, shall take field measurements of any existing conditions related to that portion of the Work and shall observe any conditions at the site affecting it. These obligations are for the purpose of facilitating construction by the Contractor and are not for the purpose of discovering errors, omissions, or inconsistencies in the Contract Documents; however, any errors, inconsistencies or omissions discovered by the Contractor shall be reported promptly to the Engineer, in writing, as a request for information. Before starting the work and at frequent intervals during the progress thereof, the Contractor shall carefully study and compare the contract documents with each other and with the information furnished by the Owner and shall at once report to the Engineer any error, inconsistency or omission the Contractor may discover. Any necessary change will be ordered as provided in Article 11, subject to the requirements of Article 3 and other provisions of the Contract Documents. If the Contractor proceeds with the Work without such notice, the Engineer, having discovered such errors, inconsistencies or omissions, or if by reasonable study of the Contract Documents he could be discovered such, the Contractor shall bear all cost arising therefrom."

7.00 C Add the following new subsection:

"Any design errors or omissions noted by the Contractor during this review shall be reported promptly to the Engineer, in writing, but it is recognized that the Contractor's review is made in the Contractor's capacity as a contractor and not as a licensed design professional unless otherwise specifically provided in the Contract Documents. The Contractor is not required to ascertain that the Contract Documents are in accordance with applicable laws, statutes, ordinances, building codes, and rules and regulations, but any nonconformity discovered by or made known to the Contractor shall be reported promptly

to the Engineer, in writing."

7.00 D Add the following new subsection:

"If the Contractor believes that additional cost or time is involved because of clarifications or instructions issued by the Engineer in response to the Contractor's notices or requests for information pursuant to Sections 7.00.B. and 7.00.C., the Contractor shall make Claims as provided in Article 12. If the Contractor fails to perform the obligations of Sections 7.00.B. and 7.00.C., the Contractor shall pay such costs and damages to the Owner that would have been avoided if the Contractor had performed such obligations.

7.00 E Add the following new subsection:

"The Contractor shall reimburse the Owner for costs incurred by the Engineer for design and construction administration services which are caused by the Contractor's inefficient or otherwise faulty administration or execution of its Work. These may include but are not limited to the cost of the Engineer to perform:"

7.00 E.1. Add the following new subsection:

"Repeated review of the Contractor's resubmittals, substantially out of sequence from the submittal schedule provided by the Contractor and agreed to by the Engineer."

7.00 E.2. Add the following new subsection:

"An extensive number of responses to the Contractor's requests for information where such information is available to the Contractor from a careful study and comparison of the Contract Documents, field conditions, other Owner-provided information, Contractor-prepared coordination drawings, or prior Project correspondence or documentation."

7.00 E.3. Add the following new subsection:

"An extensive number of Change Orders and Work Change Directives requiring evaluation of proposals and the preparation or revision of Instruments of Service and not otherwise caused by the design defects of the Engineer."

7.00 E.4. Add the following new subsection:

"Consultation regarding replacement of Work resulting from fire or other cause during construction."

7.00 E.5. Add the following new subsection:

"Evaluation of an extensive number of claims not otherwise caused by design defect."

7.00 E.6. Add the following new subsection:

"Evaluation of substitutions proposed by the Contractor and making subsequent revisions to Instruments of Services resulting therefrom."

7.00 E.7. Add the following new subsection:

"Preparation of design and documentation for alternate bid or proposal requests proposed by the Contractor."

7.00 E.8. Add the following new subsection:

"Contract administration services provided sixty (60) days or more after Substantial Completion."

7.00 F Add the following new subsection:

"*Preconstruction inspection.* The Contractor shall notify the Owner and Engineer in writing of any existing damage to the property or any unsafe conditions at the site prior to commencing the Work."

7.00 G Add the following new subsection:

"The Contractor shall give the Engineer timely notice of any additional design drawings, specifications or instructions required to define the Work in greater detail, or to permit the proper progress of the Work."

7.00 H Add the following new subsection:

"The Contractor shall not proceed with any work not clearly and consistently defined in detail in the Contract Documents, but shall request additional drawings or instructions from the Engineer as provided in Subparagraph 7.00.D. If the General Contractor proceeds with such work without obtaining further drawings or instructions, he shall correct work incorrectly done at his own expense."

7.01 A Add the following new third sentence:

"If the Contract Documents give specific instructions concerning constructions means, methods, techniques, sequences or procedures, the Contractor shall evaluate the jobsite safety thereof and, except as stated below, shall be fully and solely responsible for jobsite safety of such means, methods, techniques, sequences or procedures. If the Contractor determines that such means, methods, techniques, sequences or procedures may not be safe, the Contractor shall give timely written notice to the Owner and the Engineer. All loss, damage, or liability, or cost of correcting defective work arising from the employment of any construction means, methods, techniques, sequences or procedures shall be born by the Contractor notwithstanding that such construction means, methods, techniques, sequences

or procedures are referred to, indicated or implied by the Contract Documents, unless the Contractor has given timely notice to the Owner and the Engineer in writing that such means, methods, techniques, sequences or procedures are not safe or suitable, and the Owner has then instructed the Contractor in writing to proceed at the Owner's risk."

7.02 B Delete entirely and insert the following in its place:

"At the site of the Work the Contractor shall employ a full-time construction superintendent or foreman who shall have full authority to act for the Contractor. It is understood that such representative shall be acceptable to the Engineer and shall be one who will be continued in the capacity for the particular job involved unless the representative ceases to be on the Contractor's payroll. If at any time during the Work the representative is deemed by the Engineer to be no longer acceptable, the representative shall be promptly replaced by the Contractor. All communications to the superintendent shall be as binding as if given to the Contractor."

7.02 A Add the following to the end of the subsection:

"The Contractor shall be responsible to the Owner for acts and omissions of all entities or persons performing or supplying the Work."

7.03 A.1. Add the following new subsection:

"The Contractor shall neither permit nor suffer smoking where it creates a hazard, nor the introduction or use of spirituous or intoxicating liquors upon or about the works embraced in this Contract or upon any of the ground occupied by him."

7.03 B Add the following sentence after the words "own acts and omissions.":

"Contractor shall make payments to Subcontractors in accordance with Massachusetts General Law c.30, §39F which is included in PART II of these Supplementary Conditions."

7.03 C Add the following new subsection:

"This Agreement is subject to the applicable provisions of the Contract Work Hours and Safety Standards Act, Public Law 87-581, 87th Congress. No Contractor or Subcontractor contracting for any part of the Work shall require or permit any laborer or mechanic to be employed on the Work in excess of forty hours in any work week unless such laborer or mechanic receives compensation at a rate not less than one and one-half times that person's basic rate of pay for all hours worked in excess of forty hours in such work week."

7.03 D Add the following new subsection:

"The Contractor shall employ workers competent to perform the work required by the contract and, upon written request of the Owner, remove and replace workers whom the Owner deems to be disorderly, careless or incompetent, or to be employed in violation of

the terms of the Contract Documents, at no increase in the Contract Price or the Contract Time."

7.03 E Add the following new subsection:

"Contractor and Subcontractors shall, insofar as practicable, give preference in the hiring of workers for the Project to qualified local residents with first preference being given to citizens of the United States who have served in the armed forces of the United States and have been honorably discharged therefrom or released from active duty therein."

7.03 F Add the following new subsection:

"Contractor and all subcontractors shall comply with the Massachusetts Prevailing Wage law as contained in M.G.L. c.149 §§26-27 which are included in Part II of these Supplementary Conditions."

7.04 A.1 Add the following new subsection:

"*Sanitary Facilities*. The Contractor shall provide and maintain in a neat and sanitary condition such accommodations for the use of his employees as may be necessary to comply with the requirements of the appropriate authorities. The maintenance of all sanitary facilities shall be subject to the laws of the Commonwealth and to the rules and regulations of the State Board of Health and the Board of Health for the Town."

7.04 D Add the following new subsection:

"The Contractor shall be solely responsible for determining that all materials furnished for the work meet all of the requirements of the Contract Documents. The Engineer may require the Contractor to produce reasonable evidence that a material meets such requirements, such as certified reports of past tests by qualified testing laboratories, reports of studies by qualified experts, or other evidence which, in the opinion of the Engineer, would lead to a reasonable certainty that any material used or proposed to be used, and the work meets the requirements of the Contract Documents all such data shall be furnished at the Contractor's expense. This provision shall not require the Contractor to pay for periodic testing of different batches of the same material, unless such testing is specifically required by the Contract Documents to be performed at the Contractor's expense."

7.05 A Delete the second sentence and insert the following in its place:

"Unless the specification indicates that a proprietary item is called for, other items of material or equipment or material or equipment of other suppliers may be submitted to Engineer for review under the circumstances described below."

7.05 F Add the following to the end of the paragraph:

"Any additional costs, or any loss or damage arising from the substitution of any material or

any method of those originally specified shall be born by the Contractor, not withstanding approval or acceptance of such substitution by the Owner or the Engineer, unless such substitution was made at the written request or direction of the Owner or Engineer."

7.07 A Delete entirely and substitute the following therefor:

"Contractor shall not employ any Subcontractor, Supplier or other person or organization, (including those who are to furnish the principal items of materials or equipment), whether initially or as a substitute, against whom Owner may have reasonable objection. Acceptance of any Subcontractor, other person or organization by Owner shall not constitute a waiver of any right of Owner to reject defective Work. Contractor shall not be required to employ any Subcontractor, other person or organization against whom Contractor has reasonable objection."

7.07 E Add the following sentence to the end of the paragraph:

"Owner or Engineer may furnish to any such Subcontractor, Supplier or other person or organization, to the extent practicable, information about amounts paid on their behalf to Contractor in accordance with Contractor's Applications for Payment."

7.07 F Delete entirely.

7.08 B Delete entirely.

7.10 A Delete entirely and substitute the following therefor:

A. The Owner is exempt from payment of certain Sales and Use taxes applicable in the Commonwealth of Massachusetts. At the Contractor's request, Tax Exemption Certificates will be furnished by the Owner to the Contractor with respect to such tax exempt articles as may be required under this Contract.

B. The Contractor shall not pay, and the Town shall not reimburse or pay the Contractor or any other party either directly or indirectly for any tax for which an exemption is provided under law.

7.11 C Delete entirely and substitute the following therefor:

"The Contractor shall keep itself fully informed of and comply with all existing and future federal, state and municipal laws and regulations and all orders and decrees of any governmental bodies or tribunals (hereinafter also referred to as 'laws') having jurisdiction in any manner which affect this contract or construction, including but not limited to such laws affecting those engaged or employed in the work, the materials used in the work or in any way affecting the conduct of the work. If any clause in this contract does not conform to such law, then such clause shall be void and the law operative shall be inserted in lieu thereof. If any discrepancy or inconsistency is discovered in the specifications, drawings, or

contract documents in violation of the law, the Contractor shall forthwith report the same in writing to the Town. The Contractor shall cause its employees, agents and subcontractors to also observe and comply with all such laws. It shall protect and indemnify the Town and its officials, employees and duly appointed agents against any claim or liability arising from or based on any violation, whether by the Contractor or its officials, employees or subcontractors, of any such law."

7.11 D Add the following new section:

"The Contractor shall comply with all applicable provisions Chapter 30, Section 39R of the Massachusetts General Laws regarding, Contractor's records."

7.11 E Add the following new section:

"Compliance with Tax Laws. By executing the Contract Documents, the Contractor certifies under the pains and penalties of perjury pursuant to Chapter 62C, Section 49A(b) of the Massachusetts General Laws that the Contractor has complied with all of the laws of the Commonwealth of Massachusetts relating to taxes."

7.15 A Delete last sentence and insert the following in its place:

"If Engineer determines that the incident giving rise to the emergency action was not the responsibility of the Contractor and that a change in the Contract Document is required because of the action taken by the Contractor in response to such an emergency, a Work Change Directive or Change Order will be issued."

7.17 A Delete "all Work will be in accordance with the Contract Documents and will not be defective." and substitute the following therefor:

"the materials and equipments furnished under the contract will be new and of recent manufacture and that all work will be of good quality, free from faults and defect, and in conformance with the Contract Documents."

7.17 B Delete entirely and insert the following in its place:

"The Contractor guarantees that the Work and Services to be performed under the Contract, and all workmanship, materials and equipment performed, furnished, used or installed in the construction of the same shall be free from defects and flaws, and shall be performed and furnished in strict accordance with the Drawings, Specifications, and other Contract Documents, that the strength of all parts of all manufactured equipment shall be adequate and as specified and that the performance test requirements of the Contract shall be fulfilled. This guarantee shall be for a period of one year from and after the date of completion and acceptance of the Work as stated in the final estimate. If part of the Work is accepted in accordance with that subsection of this AGREEMENT titled "Partial Acceptance," the guarantee for that part of the Work shall be for a period of one year from the date fixed for such acceptance.

1. If at any time within the said period of guarantee any part of the Work requires repairing, correction or replacement, the Owner may notify the Contractor in writing to make the required repairs, correction or replacements. If the Contractor neglects to commence making such repairs, corrections or replacements to the satisfaction of the Owner within seven (7) days from the date of receipt of such notice, or having commenced fails to prosecute such Work with diligence, the Owner may employ other persons to make said repairs, correction or replacements, and charge the costs, including compensation for additional professional services, to the Contractor.

2. The Contractor's guarantee under this clause is in addition to the Contractor's express or implied warranties under this Agreement and State law and in no way diminish any other rights that the Owner may have against the Contractor."

7.17 E Add the following new subsection:

"Materials, supplies, or equipment to be incorporated into the Work shall not be purchased by the Contractor subject to a chattel mortgage or under a conditional sale contract or other agreement by which an interest is retained by the seller. All materials are to be of the best and finest quality of their several kinds."

7.17 F Add the following new subsection:

"The Contractor guarantees and warrants to the Owner that all labor furnished under this Contract will be competent to perform the tasks undertaken that the product of such labor will yield only first-class results."

7.17 G Add the following new subsection:

"The warranty provided in this Section 7.17 shall be in addition to and not in limitation of any warranty required by the Contract Documents or otherwise described by law."

7.17 H Add the following new subsection:

"The Contractor shall secure and deliver to the Engineer, no later than the date claimed by the Contractor as the date of Substantial Completion, all special warranties required by the Contract Documents. Delivery by the Contractor shall constitute the Contractor's guarantee to the Owner that the warranty will be performed in accordance with its terms and conditions."

7.17 I Add the following new subsection:

"All warranties and guarantees shall commence on the date of completion and acceptance of the Work as stated in the final estimate. Warranties and guarantees shall extend for a minimum of one year. Notwithstanding the forgoing, any special warranties, as defined by the Engineer, required by the Contract Documents or manufacturers' standard warranties,

extending longer than one year, shall remain in effect for the full warranty period."

7.17 J Add the following new subsection:

"Manufacturer's Guaranty/Warranty

1. The Contractor shall obtain the following guaranty/warranty from the manufacturer of all major pieces of equipment furnished and installed on this Project. Such guaranty/warranty shall be for the benefit of Owner and be furnished in writing by the manufacturer. The Contractor's and manufacturer's obligations under this provision are in addition to other express or implied warranties under the Contract Documents and under the law and in no way diminish any other right that the Owner may have against the Contractor or manufacturer for faulty material, equipment or work. The warranty period shall not be interpreted as a limitation on the time in which the Owner can enforce such other duties, obligations, rights, or remedies.
2. The manufacturer warrants and guarantees for a period of one year from the date of Substantial Completion, or such longer period that may be specified in the Contract Documents, that all materials and equipment furnished and installed shall be free from flaws, defects in material and workmanship and shall be in conformance with the Contract Documents.
3. All guarantees and warranties required in the various Sections of the Specifications which originate with a Subcontractor or Manufacturer must be delivered to the Owner before final payment to the Contractor may be made for the amount of that sub trade or for the phase of work to which the guarantee or warranty relates. The failure to deliver a required guarantee or warranty shall be held to constitute a failure of the Subcontractor to fully complete his work in accordance with the Contract Documents. The Contractor's obligation to correct work is in addition to, and not in substitution of, such guarantees or warranties as may be required in the various Sections of the Specifications."

7.18 A Delete entirely and insert the following in its place:

"To the fullest extent permitted by law, the Contractor shall defend, indemnify in whole or in part, defend, pay-on-behalf of and hold harmless the Owner, the Engineer, Engineer's consultants, and the agents and employees of each from and against all claims, damages, losses and expenses, including but not limited to attorneys' fees and loss of use caused by the acts or omissions of the Contractor, a Subcontractor, anyone directly or indirectly employed by them or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or reduce other rights or obligations of indemnity which would otherwise exist as to a party or person described in this Section 7.17 A"

7.18 B Move the existing subsection 7.18 B to subsection 7.18 C and add the following new subsection 7.18 B:

"The Contractor shall bear all loses resulting from the use or storage of explosives and highly inflammable materials and shall indemnify, defend and save harmless the Town and all of its officers, agents, and employees from all suits, damages, claims, liabilities or judgments for bodily injuries or death to any person and for property damage or damage destruction arising out of the use or storage of explosives and highly inflammable materials."

7.18 C Add the following new subsection:

"The Contractor further covenants to indemnify, defend and hold harmless the Town, its officers, agents, and employees from and against each and every demand, claim, judgment or liability for or on account of the use of any patented invention, article or appliance included in the materials and equipment agreed to be furnished, supplied or used under this contract."

7.19 F Delete the words "specified by Owner or Engineer" and replace with "contained in the Contract Documents."

ARTICLE 8 – OTHER WORK AT THE SITE

8.03 A Delete entirely.

ARTICLE 9 – OWNER'S RESPONSIBILITIES

9.01 Delete in its entirety.

9.02 Delete ", provided Contractor makes no reasonable objection to the replacement engineer"

9.06 Delete in its entirety.

ARTICLE 10 – ENGINEER'S STATUS DURING CONSTRUCTION

10.01 B Add the following new paragraph:

Nothing contained in the Contract Documents shall be construed to create a contractual relationship of any kind (1) between the Engineer and Contractor; (2) between the Owner and a Subcontractor; (3) between the Owner and Engineer; or between (4) any persons or entities other than the Owner and Contractor. The Engineer shall, however, be entitled to performance and enforcement of obligations under the Contract Documents intended to facilitate performance of the Engineer's duties."

10.03 C Add the following new paragraph:

"Engineer will conduct periodic visits to observe the performance of Work. Engineer will not furnish a Resident Project Representative. Owner will designate an agent to represent Owner at the Site who is not Engineer's agent or employee. The duties and responsibilities of the agent will be as enumerated in the agent's agreement with Owner, a copy of which will be furnished to Contractor upon written request."

10.04 A Add the following language at the end of paragraph:

"The Engineer's interpretation will be made in accordance with the requirements of Massachusetts General Law Chapter 30, Section 39P."

ARTICLE 11 – AMENDING THE CONTRACT DOCUMENTS; CHANGES IN THE WORK

11.07 C.2.a. Delete "15 percent" and replace with "10 percent"

11.07 C.2.c. Delete "15 percent" and replace with "10 percent"

11.08 C.1 Add the following new subsection:

"The Contractor's failure to provide written notice in strict accordance with this paragraph will result in the Contractor's having waived its Claim."

11.08 E Add the following new subsection:

"Time limits stated in the Contract Documents are of the essence. The Contractor and its Subcontractors shall perform and coordinate all Work without delay. By executing the Agreement the Contractor confirms that the Contract Time is a reasonable period for performing the Work."

ARTICLE 12 – CLAIMS

12.01 D.1 Delete entirely and replace with the following:

"At any time after initiation of a Claim, Owner may demand that Owner and Contractor submit to mediation of the underlying dispute. Such demand to mediate shall stay the Claim submittal and response process."

12.01 D.2 Delete entirely.

ARTICLE 13 – COST OF THE WORK; ALLOWANCES; UNIT PRICE WORK

13.01 B.5.a. Delete entirely.

13.01 B.5.d. Delete entirely.

13.02 Delete entirely, including subsections.

ARTICLE 14 – TESTS AND INSPECTIONS; CORRECTION, REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

14.01 B Add the following new subsection:

"If Owner stops Work under Paragraph 14.01A. Contractor shall not be entitled to any extension of Contract Time or increase in Contract Price."

14.02 A Delete entirely and substitute the following therefor:

"All material and workmanship (if not otherwise designated by the Contract Documents) shall be subject to inspection, examination, and test by the Engineer at any and all times during manufacture and/or construction and at any and all places where such manufacture and/or construction are carried on. The Engineer shall have the right to reject defective material and workmanship or require its correction. Contractor shall give Engineer timely notice of readiness of the Work (or specific parts thereof) for all required inspections and tests and shall cooperate with inspection and testing personnel to facilitate required inspections and tests. If the Contractor fails to proceed at once with the replacement of rejected material and/or the correction of defective workmanship, the Owner may by contract or otherwise replace such material and/or correct such workmanship and charge the cost to the Contractor, or may terminate the right of the Contractor to proceed, the Contractor and Surety being liable for any damage to the same extent as provided."

14.02 F Delete entirely and substitute the following therefor:

"The Contractor shall keep the Engineer informed of the progress of his work. No work shall be closed or covered until it has been duly inspected and approved. Should uninspected work be covered, the Contractor shall, at his own expense, uncover all such work so that it can be properly inspected and after such inspection, he shall properly repair and replace all work interfered with."

ARTICLE 15 – PAYMENTS TO CONTRACTOR; SET-OFFS; COMPLETION; CORRECTION PERIOD

15.01 B.3.a. Add the following new subsection:

"Each Application for Payment or periodic estimate requesting payment shall be accompanied by a certificate signed by each Subcontractor under pains and penalties of perjury stating that the Subcontractor has been paid all amounts due the Subcontractor on the basis of the previous periodic payment to the Contractor, or else stating the amount not so paid and the reason for the discrepancy. In the event of any such discrepancy, the

Contractor shall furnish the Contractor's own written explanation to the Owner through the Engineer. Such waiver or certificate shall be in a form acceptable to the Owner."

15.01 C Add the following new subsections Subsection C and move the existing subsections down:

"The Contractor, his Subcontractors and Sub-subcontractors shall obtain prior written approval from the Owner through the Engineer for permission to store materials to be incorporated in the Work, for which Progress Payments will be requested, at off-site locations. In no case shall stored materials or equipment, whether stored at the site or at some other location, be considered payment unless, in the sole judgment of the Owner, the materials or equipment are ready for and actually scheduled for prompt use. Written request for payment of stored material must be made thirty (30) days in advance of the due date for the Application for Payment. Any and all charges for storage, including insurance, shall be borne solely by the Contractor. Before approval, the Owner will require proper proof of insurance and a letter in which is furnished: (a) the name of the Contractor and/or the Subcontractor or Sub-subcontractor leasing the storage area; (b) the location of such leased space; (c) the leased area: the entire premises or certain areas of a warehouse given the number of floors or portions thereof; (d) the date on which the material is first stored; and (e)he value of the material stored.

1. The Contractor, his Subcontractors and Sub-subcontractors shall notify the Engineer and the Owner to inspect, at least once each month, the materials being stored at any location.
2. The Contractor, his Subcontractors and Sub-subcontractors shall mark each sealed carton with the name of the Project and the Engineer.
3. A perpetual inventory shall be maintained for all materials held in storage for which payment has been requested.
4. Payment for materials stored off site shall be at the sole discretion of the Owner. Any additional costs to the Owner resulting from storage of material off site for which payment is requested, such as, but not limited to, travel expenses and time for inspectors, shall be charged to, and paid by, the Contractor.
5. Contractor shall furnish evidence that payment received on the basis of materials and equipment not incorporated and suitably stored, has in fact been paid to the respective supplier(s) within sixty days of payment by Owner. Failure to provide such evidence of payment may result in the withdrawal of previous approval(s) and removal of the cost of related materials and equipment from the next submitted Application for Payment."

15.01 E Delete existing 15.01 D and replace with the following new subsection 15.01 E:

"*Payment Becomes Due:*

A. Payment to the Contractor shall be made by the Town in accordance with Massachusetts General Laws Chapter 30, Section 39G, which is incorporated by reference herein. The payment shall be in full less 5% retainage for furnishing all

materials, supplies, labor, services, supervision, tools and equipment and use thereof. Acceptance of periodic payments by the Contractor shall constitute a waiver of claims known or knowable at the time by the Contractor except those previously made in writing and identified by the Contractor as unsettled at the time of periodic payment.

e. Until Substantial Completion of the entire project, the Owner will pay ninety-five percent (95%) of the amount due the Contractor on account of progress payments. This retainage of five percent (5%), less any amount due from the Contractor for Liquidated Damages and applicable costs of the Engineer and Engineer's Consultants, and less amounts based on the established value of punch list items and any other Owner claims or back-charges against the Contractor, will be paid within sixty-five (65) days of Substantial Completion in accordance with M.G.L. c.30, §39K.

15.01 F.1 Add the following new subsections 15.01 F.1.m-s.:

"m. third party claims filed or reasonable evidence indicating probable filing of such claims unless security acceptable to the Owner is provided by the Contractor;

n. failure of the Contractor to make payments properly to Subcontractors for labor, materials or equipment;

o. reasonable evidence that the Work cannot be completed for the unpaid balance of the Contract Price;

p. damage to the Owner or another contractor;

q. reasonable evidence that the Work will not be completed within the Contract Time, and that the retainage currently held by the Owner would not be adequate to cover actual or liquidated damages for the anticipated delay;

r. failure to carry out the Work in accordance with the Contract Documents; or

s. failure of mechanical trade or electrical trade, or any other trade, subcontractor to comply with mandatory requirements for maintaining record drawings. The Contractor shall check record drawings each month. Written confirmation that the record drawings are current will be required by the Engineer before approval of the Contractor's monthly payment requisition."

15.01 F.2 Delete entirely and substitute the following therefor:

"If Owner imposes any set-off against payment, whether based on its own knowledge or on the written recommendations of Engineer, Owner will give Contractor written notice (with a copy to Engineer) stating the reasons for such action and pay Contractor any amount

remaining after deduction of the amount so withheld. Owner shall ay Contractor the amount so withheld, or any adjustment thereto agreed to by Owner and Contractor, if Contractor remedies the reasons for such action. The reduction imposed shall be binding on Contractor unless it duly submits a Change Proposal contesting the reduction."

15.01 F.3 Delete entirely

15.02 A Delete entirely and substitute the following therefor:

"Contractor warrants and guarantees that title to all work, material and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to Owner no later than at the time of Application for Payment free and clear of all liens. Contractor shall provide written transfer of title and a certified paid invoice provided by the supplier."

15.02 B Add the following new subsection:

"Contractor shall defend, indemnify and save Owner and Engineer harmless from all claims growing out of the lawful demands of Subcontractors, laborers, workmen, mechanics, materialmen, and furnishers of machinery and parts thereof, equipment, power tools, and all supplies, including commissary, incurred in the furtherance of the performance of this Contract. Contractor shall at Owner's request, furnish satisfactory evidence that all obligations of the nature hereinabove designated have been paid, discharged, or waived. If Contractor fails to do so, then Owner may, after having served written notice on the said Contractor either pay unpaid bills, of which Owner has written notice, direct, or withhold from the Contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to Contractor shall be resumed, in accordance with the terms of this Contract, but in no event shall the provisions of this sentence be construed to impose any obligations upon Owner to either Contractor or Contractor's Surety. In paying any unpaid bills of the Contractor, Owner shall be deemed the agent of Contractor and any payment so made by Owner shall be considered as payment made under the Contract by Owner to Contractor and Owner shall not be liable to Contractor for any such payment made in good faith."

15.03 A Add the following to the beginning of the subsection:

"The term "Substantial Completion" as used in this Contract shall mean the point at which as certified in writing by the Engineer, the entire Work is at a level of completion in strict compliance with this Contract such that the Owner or its designee can enjoy beneficial use and can use or operate it in all respects for its intended purpose and only minor items which can be corrected or completed without any material interference with the Owner's use of the Work remain to be corrected or completed. Partial use of the Project shall not result in the Project being deemed substantially complete, and such partial use shall not be evidence of substantial completion. The Contractor shall submit, prior to requesting Substantial Completion, written certification that the Project has been completed and is ready for final

inspection. Prior to requesting Substantial Completion, the Contractor shall also submit the following: (1) Contractor's Affidavit of Payments for Debts and Claims (2) Contractor's Affidavit of Release of Liens (3) Consent of Surety to Final Payment; and (4) Maintenance Guarantee."

15.03 A.1 Add the following new subsection:

"Contractor shall submit, prior to requesting final inspection, written certification that: (1) Work has been completed in accordance with Contract Documents; and (2) the Project has been inspected for compliance with Contract Documents. If the Engineer does not consider the work finally complete, the Contractor will be notified, in writing, with the reasons stated. The Contractor will take immediate steps to correct the stated deficiencies and then submit a second written certification to the Engineer."

15.03 A.2 Add the following new subsection:

"Should the Engineer be required to reinspect the work because of failure of the Contractor to comply with the certification listed in 15.03.A.1., the Engineer will bill the Owner for all related cost incurred, such cost will be deducted from the Contractor's payment."

15.03 C Delete entirely and substitute the following therefor:

"If Owner, with the advice and recommendation of the Engineer, considers the Work or the designated portion thereof substantially complete, the Owner will determine the date of Substantial Completion and the Engineer will prepare a certificate of Substantial Completion reflecting such date of Substantial Completion that shall establish the responsibilities of the Owner and Contractor for security, maintenance, heat, utilities, damage to the Work and insurance, and shall fix the time within which the Contractor shall finish all items on the list accompanying the Certificate. Engineer shall attach to the certificate a punch list of items to be completed or corrected before final payment."

15.03 D Delete entirely.

15.04 A Delete ", subject to the following conditions:" and delete subsections 1 – 4 that immediately follow.

15.05 A.1 Add the following new subsection:

"Contractor shall submit, prior to requesting final inspection, written certification that: (1) Work has been completed in accordance with Contract Documents; and (2) the Project has been inspected for compliance with Contract Documents. If the Engineer does not consider the work finally complete, the Contractor will be notified, in writing, with the reasons stated. The Contractor will take immediate steps to correct the stated deficiencies and then submit a second written certification to the Engineer."

15.05 A.2 Add the following new subsection:

"Should the Engineer be required to reinspect the work because of failure of the Contractor to comply with the certification listed in 15.05.A.1., the Engineer will bill the Owner for all related cost incurred, such cost will be deducted from the Contractor's payment."

15.06 A.1 After "opinion of" add the words "Owner and"

15.06 B Delete entirely and substitute the following therefor:

"*Engineer's Review of Final Application and Recommendation of Payment:* If, on the basis of Engineer's observation of the Work during construction and final inspection, and Engineer's review of the final Application for Payment and accompanying documentation - all as required by the Contract Documents, Engineer is satisfied that the Work has been completed and Contractor's other obligations under the Contract Documents have been fulfilled, Engineer will indicate in writing Engineer's recommendation of payment and present the Application to Owner for payment. Thereupon Engineer will give written notice to Owner and Contractor that the Work is acceptable subject to the provisions of paragraph 15.07. Otherwise, Engineer will return the Application to Contractor, indicating in writing the reasons for refusing to recommend final payment, in which case Contractor shall make the necessary corrections and resubmit the Application. If the Application and accompanying documentation are appropriate as to form and substance, Owner shall in accordance with the applicable Massachusetts General Law, pay Contractor the amount recommended by Engineer."

15.06 D Delete entirely.

15.06 E Delete entirely.

15.08 A Delete entirely, including subsections, and substitute the following therefor:

"If within one year after the date of Final Completion or such longer period of time as may be prescribed by Laws or Regulations or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any work is found to be defective, Contractor shall promptly, without cost to Owner and in accordance with Owner's written instructions: (i) correct such defective work, or, if it has been rejected by Owner, remove it from the site and replace it with work that is not defective, and (ii) satisfactorily correct or remove and replace any damage to other work or the work of others therefrom. If Contractor does not begin the repairs within ten (10) days of receipt of written notification and promptly comply with the terms of Owner's written instructions, or in an emergency where delay would cause serious risk, loss or damage, Owner may have the defective work corrected or the rejected work removed and replaced, and all claims, costs, losses and damages caused by or resulting from such removal and replacement (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor."

ARTICLE 16 – SUSPENSION OF WORK AND TERMINATION

16.01 A Delete entirely and substitute the following therefor:

"Owner may order, at any time and without cause, suspension of the Work in accordance with Massachusetts General Law c.30, §39O."

16.02 A.4 Delete the "." and substitute the following therefor:

";"

16.02 A.5 Add the following new paragraph:

"If Contractor abandons the Work, or sublets this Contract or any part thereof, without the previous written consent of Owner, or if the Contract or any claim thereunder shall be assigned by Contractor otherwise than as herein specified;"

16.02 A.6 Add the following new subsection:

"If the Contractor is adjudged a bankrupt, or if the Contractor makes a general assignment for the benefit of the Contractor's creditors or if a receiver is appointed on account of the Contractor's insolvency; or"

16.02 A.7 Add the following new subsection:

"Contractor fails to make prompt payment to the Subcontractors of for materials or labor."

16.02 C Delete entirely.

16.02 E Add the following to the end of the final sentence:

"any claim for damages against the Contractor relating to the Contractor's performance under this Contract shall survive any termination hereunder."

16.03 A.1 Delete the following words:

"including fair and reasonable sums for overhead and profit on such Work;"

16.03 A.2 Delete the following words:

"plus fair and reasonable sums for overhead and profit on such expenses;"

16.03 A.3 Delete entirely.

16.03 C Add the following new subsection:

"The Contractor shall not be relieved of liability to the Owner by virtue of any termination of this Contract, and any claim for damages against the Contractor relating to the Contractor's performance under this Contract shall survive any termination hereunder."

16.04 A Delete entirely.

ARTICL 17 – FINAL RESOLUTION OF DISPUTES

17.01 B Delete entirely, including subsections, and insert the following in its place:

Decision of Engineer: Claims, including those alleging an error or omission by the Engineer shall be referred initially to the Engineer for decision as provided in Article 10.05. An initial decision by the Engineer shall be required as a condition precedent to mediation or litigation of all Claims between the Contractor and Owner arising prior to the date final payment is due, unless 30 days have passed after the Claim has been referred to the Engineer with no decision having been rendered by the Engineer.

17.01 C Add the following new subsection:

"Claims, disputes or other matters in question between the parties to this Agreement arising out of or relating to this Agreement or breach thereof shall be subject to and decided by the Superior Court of Massachusetts in Worcester County, if jurisdiction exists, and if jurisdiction does not exist in the Superior Court, said action shall be brought in the Framingham District Court of Massachusetts. A claim, dispute or other matter may be submitted to mediation, in accordance with the provisions of the American Arbitration Association, at the sole discretion of the Owner."

ARTICLE 18 – MISCELLANEOUS

18.11 A Add the following new subsection:

"Assignment and Transfer of Contract.

The Contractor shall not sell, transfer, assign by power of attorney or otherwise, sublet, or otherwise dispose of the work or any part thereof, without the previous written consent of the Town by its Contracting Officer. Nor shall the Contractor either legally or equitably assign any of the moneys payable under this Contract or any claim thereto unless by and with like written consent on the part of the Contracting Officer and the Town Treasurer."

18.12 A Add the following new subsection:

"Severability.

If any provision of this Agreement shall be invalid or unenforceable to any extent or in any application, then the remainder of this Agreement and of such terms and conditions, except

to such extent or in such application, shall not be affected thereby, and each and every term and condition of this Agreement shall be valid and enforced to the fullest extent and in the broadest application permitted by law"

18.13 A Add the following new subsection:

"Dig Safe Laws.

A. The Contractor shall fully comply with the Dig Safe Laws.

B. The Contractor shall at all times during the construction period protect the excavation, trenches, and building from damage from water caused by rain, springs, ground water, back-up for drains and sewer work that is in his contract, or from any source under his control. He shall provide and maintain pumps and other equipment, coffer dams, ditches and other protection required. He shall construct and maintain all necessary temporary drainage and do all pumping required to keep the excavation and the building areas free from water at all times.

C. If, during construction, public or private property is damaged or destroyed as a result of Contractor's neglect, the Contractor shall, at his own expense, restore such property to a condition similar or equal to that existing before such damage or injury was done by repairing, rebuilding or replacing it, or otherwise making good such damage or destruction in an acceptable manner."

18.14 A Add the following new subsection:

"*Subject to Appropriation.*

The obligations of the Owner hereunder shall be subject to appropriation on a fiscal year basis. In the absence of appropriation, this agreement shall be terminated immediately without liability of the Owner for damages, lost profits, penalties, or other charges arising from early termination"

18.15 Add the following new paragraphs:

"Conflict of Interest

A. Both the Town and the Contractor stipulate to the applicability of the State Conflict of Interest Law (General Laws Chapter 268A), and this contract expressly prohibits any activity which shall constitute a violation of that law. The Contractor shall be deemed to have investigated its applicability to the performance of this contract; and by executing the contract documents the Contractor certifies to the Town that neither it nor its agents, employees or subcontractors are thereby in violation of General Laws Chapter 268A.

B. The Contractor warrants that it has complied with all provisions of law

regarding the award of this contract and that it, or its employees, agents, officers, directors or trustees have not offered or attempted to offer anything of any value to any official or employee of the Town in connection with this Contract.

C. The Contractor further warrants that no official or employee of the Town including unpaid members of Town boards and commissions, serves as an officer, director, trustee or employee of the Contractor, and that no official or employee of the Town has or will have a direct or indirect financial interest in this Contract.

D. The Contractor shall not during the term of this Contract hire or employ on either a full-time or part-time basis any person or persons employed by the Town.

E. Violation of this Article shall be a material breach of this contract and shall be grounds for immediate termination of this contract by the Town without regard to any enforcement activities undertaken or contemplated by any enforcement agency. Termination of this contract pursuant to this Article shall not waive any claims for damages the Town may have against the Contractor resulting from the Contractor's violation of the terms of this Article."

18.16 A Add the following new section entitled "Liability of Public Officials":

"*Liability of Public Officials.*

A. To the fullest extent permitted by law, no official, employee, agent, or representative of the Town of Reading shall be individually or personally liable on any obligation of the Town under this contract."

18.17 A Add the following new section entitled "Independent Contractor":

"*Independent Contractor*.

"A. The Contractor is not an employee or agent of the Town, but is an independent contractor."

18.18 A Add the following new section entitled "Certification of Non-Debarment or Suspension":

"*Certification of Non-Debarment or Suspension.*

A. By execution of this Contract, the Contractor, pursuant to Section 29F of Chapter 29 of the Massachusetts General Laws, certifies under the penalties of perjury that it is not presently debarred or suspended from doing public construction work in the Commonwealth pursuant to said section, or any applicable debarment or suspension provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder."

22116.00 **SECTION 00850**
04/26 **WAGE RATES**

PART 1 – GENERAL

1.01 WAGE RATES

A. Minimum wage rates shall be in accordance with the Commonwealth of Massachusetts Department of Labor Standards (MGL C. 149 §§ 26-27: C. 5, §1; c.71, §7A and c.121B, §29).

B. The prevailing wage rates to be applied are those that are effective as of the date of the awarding of the contract to the general contractor.

C. Contractors must also adjust employees' hourly wage rates (if applicable) every year on the anniversary of the date of contract authorization.

D. It is the responsibility of all bidders to check and confirm that their rates meet current guidelines. Incorrect rates will result in disqualification of bid.

E. Every contractor/subcontractor awarded a contract for public works shall submit completed Certified Weekly Payroll forms listing all employees working on the job-site to the awarding authority on a monthly basis for all work completed in the preceding month. Substituting this form with company payroll forms, or other state or federal forms is not acceptable.

F. The Town of Dudley may withhold the next scheduled payment to any contractor or subcontractor who fails to comply with the above provisions, as well as any further payments until they comply.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

END OF SECTION

PART 1.00 DRAWINGS DEVELOPED SPECIFICALLY FOR THIS CONTRACT

A. The Following Drawings accompany the Specifications and are a part thereof, and are referred to throughout the Contract Documents as "the Drawings". These drawings are the property of the Owner and shall not be used for any purpose other than that contemplated by this Contract.

Sheet	Title
0.0	Cover Sheet
1.0	Notes and Legend
2.0	Overall Site Plan
2.1	Existing Site Plan
3.0	Proposed Site Plan
3.1	Site Access Plan
3.2	Proposed Sections and Details
4.0	Impoundment Restoration Plan
4.1	Wetland Impact Plan
4.2	Restoration Planting Plan
5.0	Miscellaneous Details

PART 2.00 DRAWINGS AND SPECIFICATIONS

A. The Contractor shall keep on the job site, a copy of the Drawings and Specifications and shall, at all times, give the Owner and Owner's Representatives access thereto. Anything mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, shall be of like effect as if shown or mentioned in both.

B. In cases of conflict between the Drawings and Specifications as to the type of material to be used, the Specifications shall govern. In case of discrepancy either in the figures in the Drawings or in the Specifications, the matter shall be promptly submitted to the Owner who shall promptly make a determination in writing. Any adjustment by the Contractor without such a determination shall be at the Contractor's own risk and expense. The Owner may furnish from time-to-time such detailed Drawings and other information as he may consider necessary unless otherwise provided.

C. In case of conflict between the Drawings and Specifications as to the extent or location of materials, the following order of precedence shall be used: Large scale drawings; Small scale drawings; Finish schedules; Specifications.

END OF SECTION

Town of Dudley

Carpenter Pond Dam Removal

DIVISION 1 - GENERAL

22116.00 **SECTION 01000**
04/26 **SUMMARY OF WORK**

PART 1.00 - GENERAL

1.01 RELATED DOCUMENTS:

A. Drawings, General Provisions of the Contract, and Division-1 Specification Sections apply to the work of this Section.

1.01 PROJECT IDENTIFICATION:

A. General: Project name is the Carpenter Pond Dam Removal.

B. Contract Documents: The work to be performed under this Contract is shown in the Contract Documents prepared by Pare Corporation of Foxboro, Massachusetts.

1.03 SUMMARY OF WORK:

A. The work required by these specifications shall include furnishing all labor, skill, supervision, tools, construction plant, equipment and materials, and performing all operations necessary to properly complete contract work as shown on the Drawings, as mentioned in these specifications, and as evidently required, to the complete satisfaction of the Owner and the Engineer.

B. The work on Carpenter Pond Dam Removal includes:

1. Prior to contractor's mobilization:
    a. Town will remove the gate post at the site entrance and stockpile onsite (to be reset at project completion by contractor). Town will install the stabilized construction access pad as shown on the drawings.
    b. Initial debris removal / pond drawdown: town will remove accumulated debris from the spillway crest prior to contractor mobilization. Town will remove the top 2 feet± of stones from a portion of the spillway to initiate drawdown. Town will not be responsible for maintaining the spillway clear upon completion of debris removal.
    c. Clearing: town will clear and remove small trees (3-inch dbh) and brush from the limits of work. Contractor shall be responsible of any additional grubbing required for trees marked to be cleared, as well as disposal of the roots and stumps.
2. Mobilize to the site. Establish access ways and staging areas.
3. Install erosion and sediment control devices as required.
4. Install control of water devices including diversions; commence impoundment drawdown:
    a. Install diversion pipe
    b. Install temporary upstream and tailwater cofferdams
5. Complete removal of the dam:
    a. Demolish the stone masonry spillway section; implement drawdown
        i. Sequentially demolish spillway to implement drawdown in accordance with allowable drawdown rate; stockpile stone for reuse
        ii. Excavate upstream soils as required to implement drawdown during spillway demolition
    b. Excavate to proposed grades and lines to create the proposed channel
        i. Remove boulders; stockpile for reuse
        ii. Remove concrete (if any) and unsuitable material; dispose of offsite
        iii. Material trucking & disposal: town will provide trucking and disposal for stone masonry, earth fill, and organic materials resulting from embankment excavation and breach creation. Contractor shall segregate materials prior to loading into town truck. Contractor shall

assume that the town will provide one 12.5 ton dump truck with a round trip travel time to the disposal facility of 30 minutes operating during normal business hours only.

c. Install bank protection river right; place stockpiled boulders where indicated; establish vegetation within channel as indicated on plan
d. Remove cofferdams; divert flow to constructed channel and remove diversion pipe
e. Complete excavation of the embankment to the limits shown

6. Site finishing and demobilization
   a. Install other surface finished as specified (i.e. plantings, shrub, coir logs, loam, seed, etc.)
   b. Unless otherwise noted, install loam and establish grass in all areas disturbed by construction activities.
   c. Restore site access ways including grading improvements, erosion control, and stabilization.
   d. Demobilize

C. The work is located at Carpenter Pond Dam off of New Boston Road in Dudley, Massachusetts. Equipment and personnel access are the access road off of New Boston Road, as shown on the drawings.

D. During the construction, monitoring will be ongoing and the Contractor shall accommodate the Owner's representatives as necessary

E. Coordinate all work with the Owner and Engineer and maintain the site in a clean, orderly condition during and upon completion of work.

F. The Contractor shall be responsible for maintaining the level of the impoundment in accordance with the Contract Documents.

G. In cases where the Specifications and Drawings include the provision for particular work, equipment or systems as part of the Contract, but do not completely specify all work incidental to such a provision, or do not provide complete detailed designs for all parts of the provision, then the Contractor will provide or perform such incidental work or necessary design services using generally accepted standards of engineering, material, and construction. All Contractor designs shall be approved in writing by the Engineer prior to proceeding with the work.

1.04 PERMITS

A. Work shall not commence on any phase of the work requiring a permit until the permit is obtained. All Work shall be performed in accordance with the Order of Condition from the Dudley Conservation Commission or any other regulatory agency having jurisdiction over any portion of the work.
B. The following permits have been obtained or applications submitted therefore; copies of received permits are included in Appendix A:

1. US Army Corps 404 Permit
2. DEP 401 Water Quality Certification
3. MassDEP Restoration Order of Conditions
4. Office of Dam Safety Ch. 253 Permit
5. DEP Ch. 91 Permit/License (pending)

PART 2.00 - PRODUCTS

Not Used

PART 3.00 - EXECUTION

Not Used

END OF SECTION

22116.00 **SECTION 01019**
04/26 **CONTRACT CONSIDERATIONS**

PART 1.00 - GENERAL

1.01 RELATED SECTIONS

A. Owner-Contractor Agreement: Contract sum/price including allowances. Bonds and Insurance Requirements.

B. Section 01700 - Contract Close Out.

1.02 INSPECTION AND TESTING

A. The Contractor shall be responsible for engaging an inspection or testing firm, execution of inspection or tests, and reporting results.

B. The Contractor will cooperate with the Owner and provide its agents with the facilities necessary to sample and inspect during each phase of construction at no cost to the Owner. The Contractor shall be responsible for all costs associated with retesting areas that have previously failed.

1.03 APPLICATIONS FOR PAYMENT

A. Submit three (3) copies of each applications on EJCDC C-620 - Application for Payment Form or AIA Form G.703.

B. For each item, provide a column for listing: Item Number; Description of Work; Scheduled Value, Previous Applications; Work in Place and Stored Materials under this Application; Authorized Change Orders; Total Completed and Stored to Date of Applications; Percentage of Completion; Balance to Finish; and Retainage.

C. Present required information in typewritten form.

D. Execute certification by signature of authorized officer.

E. Use data from approved Schedule F Values. Provide dollar value in each column for each line item for portion of work performed and for stored Products.

F. List each authorized Change Order as an extension on continuation sheet, listing Change Order number and dollar amount as for an original item of Work.

G. Prepare Application for Final Payment as specified in Section 01700 - Contract Closeout.

1.04 CHANGE PROCEDURES

A. The Engineer/Owner will advise of minor changes in the Work not involving an adjustment to Contract Sum/Price or Contract Time as authorized by the Engineer/Owner, by issuing written supplemental instructions.

B. The Engineer/Owner may issue a Notice of Change which includes a detailed description of a proposed change with supplementary or revised Drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor will prepare and submit an estimate within 7 days.

C. The Contractor may propose a change by submitting a request for change to the Engineer/Owner, describing the proposed change and its full effect on the Work. Include a statement describing the reason for the change, and the effect on the Contract Sum/Price and Contract Time with full documentation and a statement describing the effect on Work by separate or other contractors. Document any requested substitutions in accordance with Section 01340. No change will be allowed except under written approval and Notice of Change from the Engineer/Owner, verbal orders are not binding.

D. Stipulated Sum/Price Change Order: Based on Notice of Change and Contractor's estimated price quotation.

E. Unit Price Change Order: For pre-determined unit prices and quantities, the Change Order will be executed on a fixed unit price basis. For unit costs or quantities of units of work which are not pre-determined, execute Work under a Work Directive Change. Changes in Contract Sum/Price or Contract Time will be computed as specified for Time and Material Change Order.

F. Work Directive Change: The Engineer/Owner may issue a directive, on EJCDC C-940 Work Directive Change signed by the Owner, instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order. Document will describe changes in the Work, and designate method of determining any change in Contract Sum/Price or Contract Time. Promptly execute the change.

G. Time and Material Change Order: Submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract. The Engineer/Owner will determine the change allowable in Contract Sum/Price and Contract Time as provided in the Contract Documents.

H. Maintain detailed records of work done on Time and Material basis. Provide full information required for evaluation of proposed changes, and to substantiate costs for changes in the Work.

I. Change Order Forms: EJCDC C-941 Change Order.

J. Execution of Change Orders: The Engineer/Owner will issue Change Orders for signature of parties as provided in the Conditions of the Contract.

1.05 SUBSTANTIAL COMPLETION

A. For the purposes of this project, substantial completion shall be considered after a point when all site work is completed and the contractor is prepared to demobilize from the site. Work to be completed subsequent to substantial completion shall be limited to achieving satisfactory stands of grass in seeded areas, monitoring, and replacing plantings which do not survive, invasive species monitoring requirements, and project closeout requirements.

PART 2.00 – PRODUCTS

Not Used

PART 3.00 – EXECUTION

Not Used

END OF SECTION

22116.00 **SECTION 01025**
04/26 **MEASUREMENT AND PAYMENT**

PART 1.00 - GENERAL

1.01 ADMINISTRATIVE SUBMITTALS

A. Application for Payment: In accordance with the General Conditions and as specified herein.

B. Final Application for Payment: As specified herein.

1.02 APPLICATION FOR PAYMENT

A. Reference the General Conditions.

B. Use separate, detailed Application for Payment Form suitable to Owner for each pay application.

C. Preparation:

1. List each Change Order and Written Amendment executed prior to date of submission as separate line item.

2. Submit three (3) copies of Application for Payment Form, and such supporting data as may be requested by Owner.

1.03 MEASUREMENT - GENERAL

A. Reference the General Conditions for additional requirements on Unit Price Work.

B. All unit prices which are specified for measurement by the linear foot (LF) shall be measured from the beginning to the termination point of the unit being measured.

C. Units of measure shown on the Bid Form shall be as follows unless specified otherwise.

Item	Method of Measurement
TON	Ton-Certified Truck Scale
CY	Cubic Yard-Truck Slip
LS	Lump Sum-Unit is one; no measurement will be made.
SF	Square Foot-Field Measured by Engineer

D. Measurement and payment for all bid items shall include furnishing all equipment, material, plant, and personnel required for completion the work in accordance with the contract documents unless otherwise provided for under a separate bid item.

1.04 PAYMENT

A. General: Progress payment requests shall be submitted monthly as specified in the General Conditions.

B. Payment for Lump Sum Work covers all personnel, equipment, materials, and incidentals required to furnish, install and/or complete the Work as specified, indicated, and directed as indicated in the Construction Documents for the following items.

C. Payment for unit price items covers all personnel, equipment, materials, and incidentals required to furnish, install and/or complete the Work as specified, indicated, and directed as indicated in the Construction Documents for the following items

SECTION 01025
MEASUREMENT AND PAYMENT

Bid Item No.	Description
1	**Contract Bonds**: Furnish Performance, Labor, and Materials Bonds. *Measurement for this item shall be lump sum.*
2	**General Requirements**: Provide work plans, schedules, temporary construction facilities, temporary office trailers with amenities and equipment, temporary controls, permits, QC/QA, closeout, easements, Record Drawings, and any other general requirements. Provide project management and field supervisions; attend required project meetings. *Measurement for this item shall be lump sum.*
3	**Mobilization & Demobilization**: Move in personnel, equipment and materials, install necessary signs, establish construction access, removal of the existing entrance gate, installation of temporary construction fencing and gate, and prepare the site for construction. Establish and maintain access ways and construction entrances as required. Furnish, install, and maintain the temporary wetland crossing. Coordinate and establish staging areas. Protect existing structures, utilities, and site features to remain. Protect trees as indicated in the plans. Move out personnel, equipment and unused material, restore and clean entire site and entrances, reset the existing entrance gate, remove and dispose of signs and remove all debris and rubbish, remove the temporary wetland crossing, restore disturbed areas of the site including but not limited to the wetland areas and access ways to preconstruction conditions. *Measurement for this item shall be lump sum.*
4	**Erosion & Sediment Control:** Furnish, install, and maintain filter socks, straw bales, silt fence, turbidity barriers, impermeable screen and any other erosion and sediment control devices as shown on the Drawings and as needed for erosion and sediment control Remove erosion and sediment controls in their entirety at completion. *Measurement for this item shall be lump sum.*
5	**Control of Water:** Furnish all material, labor, and equipment to establish Control of Water requirements including but not limited to the diversion pipe and temporary upstream and downstream cofferdams. Remove all elements when no longer required. *Measurement for this item shall be lump sum*
6	**Dam Removal:** Furnish all material, labor, and equipment to excavate to proposed grades and lines to create the proposed channel and remove the dam. Remove and stockpile boulders/stone for reuse. The Town will provide trucking and disposal for stone masonry, earth fill, and organic materials resulting from embankment excavation and breach creation. The contractor shall segregate materials prior to loading into Town truck. Contractor shall assume that the Town will provide one 12.5 ton dump truck with a round trip travel time to the disposal facility of 30 minutes operating during normal business hours only. *Measurement for this item shall be lump sum.*
7	**Breach Stabilization/Site Restoration:** Install bedding stones, armor stones, anchor stones, loam, seed, coir logs, stakes, plantings, stepping stones, stone slab steps, dense grade pathway, and other finishing materials as indicated on the plans. Reuse existing stone onsite prior to importing stone. Remove temporary access roads/work platforms. *Measurement for this item shall be lump sum.*
8a	**Import Armor Stone:** Furnish all material, labor, and equipment to import Armor Stone atop the bedding stone for the right bank protection to the grades shown on the drawings. *Measurement for this item shall be per ton of stone imported and permanently placed.*
8b	**Import Bedding Stone:** Furnish all material, labor, and equipment to import R-3 bedding stone atop prepared bearing surface and geotextile for the right bank protection to provide a level surface for riprap installation. Excess materials brought to site shall be removed at no cost to the owner. *Measurement for this item shall be per ton of stone imported and permanently placed.*
8c	**Import Anchor Stone:** Furnish all material, labor, and equipment to import armor stone atop at the toe of the channel slopes. *Measurement for this item shall be per ton of stone imported and permanently placed.*
8d	**Import Loam:** Furnish all material, labor, and equipment to import loam to the grades shown

Bid Item No.	Description
	on the drawings. *Measurement for this item shall be per cubic yard imported.*
Add/Alt #1	**Stabilized Entrance Pad:** Furnish all material, labor, and equipment to **c**onstruct the stabilized construction access as shown in the drawings. After demobilization, remove the stabilized construction access and restore to preconstruction conditions. Furnishing and installing stone and geotextile fabric incidental to this bid item. *Measurement for this item shall be lump sum.*
Add/Alt #2	**Small Tree Clearing:** Furnish all material, labor, and equipment to clear and dispose trees noted in the Drawings. *Measurement for this item shall be lump sum.*
Add/Alt #3	**Debris/Initial Drawdown:** Remove and dispose accumulated debris, branches, and beaver debris from the spillway and work area; dispose all material offiste. Remove top course of stone from the spillway in a gradual manner to initiate drawdown; stockpile stone for reuse. *Measurement for this item shall be lump sum.*
Add/Alt #4	**Material Trucking & Disposal:** Furnish labor and equipment to load excess material from embankment excavation. Remove material from site and dispose. *Measurement for this item shall be ton.*

D. Payment for equipment, materials and labor for items not included on the Bid or described in Article PAYMENT, herein, shall be considered incidental and no separate payment will be made.

1.05 NONPAYMENT FOR REJECTED OR UNUSED PRODUCTS

A. Payment will not be made for following:

1. Loading, hauling, and disposing of rejected material.
2. Quantities of material wasted or disposed of in manner not called for under the Contract Documents.
3. Rejected loads of material, including material rejected after it has been placed by Contractor.
4. Material not unloaded from transporting vehicle.
5. Defective Work not accepted by the Engineer.
6. Material remaining on hand after completion of Work.

1.06 PARTIAL PAYMENT FOR STORED MATERIALS AND EQUIPMENT

A. Final Payment: Will be made only for materials incorporated into the Work in the Contract; no partial payments shall be made for equipment or materials delivered to the site but not used.

1.07 FINAL APPLICATION FOR PAYMENT

A. Reference the General Conditions, and as may otherwise be required in the Contract Documents.

B. Prior to submitting final application, make acceptable delivery of required documents.

PART 2.00 PRODUCTS

Not Used

PART 3.00 EXECUTION

Not Used

END OF SECTION

22116.00 **SECTION 01070**
04/26 **ABBREVIATIONS, SYMBOLS, AND DEFINITIONS**

PART 1.00 - GENERAL

1.01 STANDARD SPECIFICATIONS:

A. Wherever a reference is made to any standard specifications, it shall mean the most recent specification, code, standard or tentative specification of the organization referred to, and these standard specifications shall be considered a part of these Contract Documents to the extent indicated. Abbreviations which may be used refer to the following organizations:

1.	AA	Aluminum Association
2.	AAMA	Architectural Aluminum Manufacturers Association
3.	AASHTO	American Association of State Highway and Transportation Officials
4.	ACI	American Concrete Institute
5.	AISC	American Institute of Steel Construction
6.	AISI	American Iron and Steel Institute
7.	ANSI	American National Standards Institute
8.	ASTM	American Society for Testing and Materials
9.	AWS	American Welding Society
10.	MADEP	Massachusetts Department of Environmental Protection
11.	MADCR	Massachusetts Department of Conservation and Recreation
12.	MASSDOT	Massachusetts Department of Transportation
13.	MHD	Massachusetts Highway Department (now MASSDOT)
14.	MTA	Massachusetts Turnpike Authority
15.	NFPA	National Fire Protection Association
16.	OSHA	Occupational Safety and Health Administration
17.	PTI	Post-tensioning Institute
18.	UL	Underwriter's Laboratory

1.02 DEFINITIONS

A. General:

A substantial amount of specification language consists of definitions of terms found in other Contract Documents, including the drawings. Certain terms used in Contract Documents are defined in this article. Definitions and explanations contained in this section are not necessarily either complete or exclusive, but are general for the Work to the extent that they are not stated more explicitly in another element of the Contract Documents.

1. Construction Documents: Refers to the contract documents inclusive of the Contractors Bid, the Contract, General Conditions, Supplementary Conditions, Technical Specifications, Permits, and Construction Drawings.
2. Tree: Refers to woody growth with a trunk diameter equal to or greater than six (6) inches at a height of four (4) feet measured from the ground surface.
3. Brush: Refers to woody and non-woody vegetation with diameter less than six (6) inches at a height of four (4) feet measurement from the ground surface.

B. Owner of the Dam: The Town of Dudley is the current owner of the property and is referred to as the Owner in the Contract Documents.

C. Engineer: Refers to the engineer of record, PARE CORPORATION of Foxboro, Massachusetts and its representatives.

D. Regulatory Agencies: Refers to the following agencies having jurisdiction over all or part of the work:

1. Massachusetts Department of Conservation and Recreation Office of Dam Safety
2. Massachusetts Department of Environmental Protection
3. Army Corps of Engineers
4. Dudley Conservation Commission

E. Work: Refers to all construction activities associated with the removal to the Carpenter Pond Dam as specified in the Contract Documents and specified herein.

F. Components of the Dam:

1. Downstream:	Refers to the area generally south of the dam and spillway.
2. Upstream:	Refers to the area generally north of the dam and the spillway including the impoundment.
3. Left:	In general, this is the area to the left when facing downstream.
4. Right:	In general, this is the area to the right when facing downstream.
5. Normal Pool:	Refers to the elevation of the impoundment during normal operating conditions. The normal pool at Carpenter Pond Dam is the crest of the spillway El. 474.0 (NAVD88).

PART 2.00 - PRODUCTS

Not Used

PART 3.00 – EXECUTION

Not Used

END OF SECTION

22116.00 **SECTION 01200**
04/26 **PROJECT MEETINGS**

PART 1.00 - GENERAL

1.01 REQUIREMENTS INCLUDED

A. The Owner or Owner's Representative shall schedule and administer the preconstruction conference. The Owner or Owner's Representative shall:

1. Prepare the agenda for the meeting.
2. Notify all parties required to attend meeting.
3. Make physical arrangements for meeting.
4. Preside at meeting.
5. Record the minutes, including significant proceedings and decisions.
6. Reproduce and distribute copies of minutes within seven (7) calendar days after the meeting to participants in the meeting and other parties affected by decisions made at the meeting.

B. The Engineer shall schedule and administer a construction kick-off meeting. The Engineer shall:

1. Prepare agenda for meetings.
2. Make physical arrangements for meetings.
3. Preside at meetings.
4. Record the minutes, including significant proceedings and decisions.
5. Reproduce and distribute copies of minutes within seven (7) calendar days after each meeting to participants in the meeting and other parties affected by decisions made at the meeting.

C. Representatives of Contractors, Subcontractors and suppliers attending meetings shall be qualified and authorized to act on behalf of the entity each represents.

1.02 PRE-CONSTRUCTION CONFERENCE

A. Attendance:

1. Owner and/or representative.
2. Resident project representative.
3. Contractor's superintendent.
4. Major Subcontractors.
5. Major suppliers.
6. Others as appropriate.

B. Suggested Agenda:

1. Distribution and discussion of
   a. List of major Subcontractors and suppliers.
   b. Projected construction schedules.
2. Critical work sequencing.
3. Major equipment deliveries and priorities.
4. Project coordination.
   a. Designation of responsible personnel.
5. Procedures and processing of:
   a. Field decisions.

b. Proposal requests.
c. Submittals.
d. Change orders.
e. Applications for payment.

6. Adequacy of distribution of Contract Documents.
7. Procedures for maintaining record documents.
8. Use of premises:
   a. Office, work and storage areas.
   b. Owner's requirements.
9. Construction facilities, controls and construction aids.
10. Traffic Maintenance Plan.
11. Temporary utilities.
12. Safety and first-aid procedures.
13. Security procedures.
14. Housekeeping procedures.
15. Place, date and time for regular progress meetings.

1.03 PROGRESS MEETINGS

A. Conduct scheduled progress meetings at place, dates and times agreed upon at Pre-Construction Conference. Contractor shall plan on weekly progress meetings.

B. Conduct additional meetings as progress of the Work dictates.

C. Attendance:

1. Engineer and his/her professional consultants as needed.
2. Owner or Representative, when required.
3. MADCR - ODS
4. Contractor's superintendent.
5. Subcontractors as appropriate to the agenda.
6. Suppliers as appropriate to the agenda.
7. Others.

D. Suggested Agenda:

1. Review approval of minutes of previous meeting.
2. Review of work progress since previous meeting.
3. Field observations, problems, and conflicts.
4. Problems which impede construction schedule.
5. Review of off-site fabrication, delivery schedules.
6. Corrective measures and procedures to regain projected schedule.
7. Revisions to construction schedule.
8. Progress schedule during succeeding work period.
9. Maintenance of quality standards.
10. Pending changes and substitutions.
11. Coordination of schedules.
12. Review submittal schedules; expedite as required.
13. Review proposed changes for:
    a. Effect on construction schedule and on completion date.
    b. Effect on subcontracts of the project.

14. Other business.

PART 2.00 - PRODUCTS

Not Used

PART 3.00 - EXECUTION

Not Used

END OF SECTION

22116.00 **SECTION 01310**
04/26 **CONSTRUCTION SCHEDULES**

PART 1.00 - GENERAL

1.01 REQUIREMENTS INCLUDED

A. At least five (5) calendar days before the scheduled Pre-Construction Conference, prepare and submit to Owner or Owner's Representative the initial construction schedule for the Work, with sub schedules, if required, of related activities that are essential to its progress.

B. Submit revised progress schedules at least 1 day prior to the first progress meeting of each new calendar month.

1.02 FORM OF SCHEDULES

A. Prepare schedules using Microsoft Project (V.4.0 or later) in the form of a horizontal bar chart.

B. Provide a separate horizontal bar for each item of work that matches verbatim the breakdown of the contract price toward which partial payments will be made to the Contractor.

C. Horizontal Time Scale: Identify the first workday of each week.

D. Scale and Spacing: To allow space for notations and future revisions.

E. Minimum Sheet Size: 8-1/2" by 11".

1.03 CONTENT OF SCHEDULES

A. Construction Progress Schedule: Include the following:

1. The name of the project and name and address of the Contractor.
2. The name and address of the Owner.
3. Date indicating the end of the construction period being reported.
4. Legend showing a solid line representing estimated construction and a dotted line representing actual construction.
5. Columns showing the percentage of the total contract of each item, the percentage of completion to date of each item and the weighted percentage of completion of each item to the project as a whole.
6. Starting and completion dates of the contract.
7. Projected percentage of completion for each item, as of the first day of each month.

B. Submittals Schedule for Shop Drawings, Product Data and Samples: Show the following:

1. The dates for Contractor's submittals.
2. The dates reviewed submittals will be required from the Engineer/Owner.

1.04 MONTHLY PROGRESS REPORTS

A. Monthly progress reports shall be submitted at least 1 day prior to the first progress meeting of each new calendar month.

B. Indicate progress of each activity to date of submission.

C. Show changes occurring since previous submission of schedule:

1. Major changes in scope.
2. Activities modified since previous submission.
3. Revised projections of progress and completion.
4. Other identifiable changes.

C. Provide a narrative report as needed to define:

1. Problem areas, anticipated delays, and the impact on the schedule.
2. Corrective action recommended, and its effect.
3. The effect of changes on schedules of other prime Contractors.

1.05 SUBMISSIONS

A. Submit initial schedule at least three (3) calendar days before the scheduled Pre-Construction Conference.

1. Owner will review schedule prior to the scheduled Pre-Construction Conference.
2. If required, resubmit within three (3) calendar days after return of review copy.

B. Submit revised progress schedules:

1. With each application for payment.
2. Each time there is a change and/or delay to the projects critical path.

C. Submit initial schedule and schedule updates in accordance with Section 01340 Submittals.

1.06 DISTRIBUTION

A. Distribute copies of the reviewed schedules to:

1. Job site file.
2. Subcontractors.
3. Other concerned parties.

B. Instruct recipients to report promptly to the Contractor, in writing, any problems anticipated by the projections shown in the schedules.

PART 2.00 - PRODUCTS

Not Used

PART 3.00 - EXECUTION

Not Used

END OF SECTION

PART 1.00 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings, General Provisions of Contract, and Division-1 Specification Sections, apply to work of this section.

1.02 DESCRIPTION OF REQUIREMENTS

A. General: This section specifies procedural requirements for non-administrative submittals including shop drawings, product data, samples and other miscellaneous work-related submittals. Shop drawings, product data, samples and other work-related submittals are required to amplify, expand and coordinate the information contained in the Contract Documents.

1. Refer to other Division-1 sections and other Contract Documents for specifications on administrative, non-work-related submittals. Such submittals include, but are not limited to the following items:

a. Permits.
b. Written consents.
c. Manifests
d. Payment applications.
e. Performance and payment bonds.
f. Insurance certificates.
g. Inspection and test reports.
h. Progress reports.
i. Listing of Subcontractors.
j. Construction schedules.

B. Shop drawings are technical drawings and data that have been specially prepared for this project, including but not limited to the following items:

1. Fabrication and installation drawings.
2. Coordination drawings (for use on-site).
3. Schedules.
4. Design mix formulas.

C. Product data includes standard printed information on manufactured products that has not been specially-prepared for this project, including but not limited to the following items:

1. Manufacturer's product specifications and installation instructions.
2. Catalog cuts.
3. Roughing-in diagram and templates.
4. Standard wiring diagrams.
5. Printed performance curves.
6. Operational range diagrams.

D. Samples are physical examples of work, including but not limited to the following items:

1. Partial sections of manufactured or fabricated work.
2. Small cuts or containers of materials.

3. Complete units of repetitively-used materials.

E. Miscellaneous submittals are work-related, non-administrative submittals that do not fit in the three previous categories, including, but not limited to the following:

1. Specially-prepared and standard printed warranties.
2. Project photographs.
3. Testing and certification reports.
4. Record drawings.
5. Field measurement data.
6. Keys and other security protection devices.

1.03 SUBMITTAL PROCEDURES

A. General: Refer to the General Conditions for basic procedures for submittal handling.

B. Coordination: Coordinate the preparation and processing of submittals with the performance of the work. Coordinate each separate submittal with other submittals and related activities such as testing, purchasing, fabrication, delivery and similar activities that require sequential activity.

1. Coordinate the submittal of different units of interrelated work so that one submittal will not be delayed by the Engineer/Owner/Owner's Representative need to review a related submittal. The Engineer/Owner/Owner's Representative reserves the right to withhold action on any submittal requiring coordination with other submittals until related submittals are forthcoming.

C. Scheduling: In each appropriate administrative submittal, such as the progress schedule, show the principal work-related submittals and time requirements for coordination of submittal activity with related work.

D. Coordination of Submittal Times: Prepare and transmit each submittal to the Engineer/Owner sufficiently in advance of the scheduled performance of related work and other applicable activities. Transmit different kinds of submittals for the same unit of work so that processing will not be delayed by the Engineer/Owner's need to review submittals concurrently for coordination.

E. Review Time: Allow sufficient time so that the installation will not be delayed as a result of the time required to properly process submittals, including time for resubmittal, if necessary. Advise the Engineer/Owner on each submittal, as to whether processing time is critical to the progress of the work, and if the work would be expedited if processing time could be shortened.

1. Allow seven (7) calendar days for the Engineer/Owner's initial processing of each submittal. Allow a longer time period where processing must be delayed for coordination with subsequent submittals. The Engineer/Owner will advise the Contractor promptly when it is determined that a submittal being processed must be delayed for coordination.

2. Allow five (5) calendar days for reprocessing each submittal.

3. No extension of time will be authorized because of the Contractor's failure to transmit submittals to the Engineer/Owner sufficiently in advance of the work.

F. Submittal Preparation: Mark each submittal with a permanent label for identification. Provide the following information on the label for proper processing and recording of action taken.

1. Project name.
2. Date.
3. Name and address of Owner.
4. Name and address of Contractor.
5. Name and address of supplier.
6. Name of manufacturer.
7. Number and title of appropriate specification section.
8. Drawing number and detail references, as appropriate.
9. Similar definitive information as necessary.
10. Provide a space on the label for the Contractor's review and approval markings, and a space for the Engineer/Owner's "Action" marking.
11. All submittals shall be labeled: Submittal Number (Alpha Revision as required) – Submittal Name – Specification Section Number.

G. Hardcopy Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit three (3) copies, plus the number of copies the Contractor wants returned to him, after review of each submittal from the Contractor to the Engineer/Owner, and to other destinations as required, by use of a transmittal form. Prepare a separate transmittal form for each division of work and identify each submittal by specification section number on the transmittal form. Submittals received from sources other than the Contractor will be returned to the sender "without action".

1. Record relevant information and requests for data on the transmittal form. On the transmittal form, or on a separate sheet attached to the form, record deviations from the requirements of the Contract Documents, if any, including minor variations and limitations.
2. No submittals will be accepted by the Engineer/Owner if transmitted via FAX machine.
3. Include the Contractor's signed certification stating that information submitted complies with requirements of the Contract Documents.
4. Sequentially number the transmittal forms; resubmittals to have original number with an alphabetic suffix.

H. Electronic Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit one (1) copy by email. If the file is too big for an email submission the contractor shall submit, including a transmittal form, to the Contractor’s Folder on the Job specific Sharepoint File site provide by Pare at the start of construction. Emailed submittals shall be sent to the Engineer in the same format. Prepare a separate transmittal form for each division of work and identify each submittal by specification section number on the transmittal form.

1. Record relevant information and requests for data on the transmittal form. On the transmittal form, or on a separate sheet attached to the form, record deviations from the requirements of the Contract Documents, if any, including minor variations and limitations.
2. Include the Contractor's signed certification stating that information submitted complies with requirements of the Contract Documents.
3. Sequentially number the transmittal forms; resubmittals to have original number with an alphabetic suffix.

4. Where appropriate, submittals shall be in Adobe PDF format. Where appropriate, File formats shall be compatible with Microsoft Office 2010.
5. In the event of a discrepancy between the electronically transmitted submittal and the hardcopy, the hardcopy shall prevail.
6. Contractor shall be responsible for notifying Engineer in writing when new submittals are posted to the FTP site.
7. All submittals shall be numbered: 22116.00 – CarpenterPondDamRemoval – Submittal No.#_Rev#_*provide a brief description of the submittal contents here.*

I. Contractor Review: Stamp of approval indicates to Owner and Engineer/Owner that all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data have been determined and verified, and that each submittal has been reviewed or coordinated with requirements of work and Contract Documents.

J. No portion of Work requiring shop drawings shall be started or any materials be fabricated, delivered to site, or installed prior to approval of such items. Fabrication performed, materials purchased or on-site construction accomplished which does not conform to approved shop drawings and data shall be at Contractor's risk. Owner will not be liable for any expense or delay due to corrections or remedies required to accomplish conformity.

K. Project work, materials, fabrications, and installation shall conform to approved shop drawings.

1.04 SPECIFIC SUBMITTAL REQUIREMENTS

A. Miscellaneous Submittals:

1. Inspection and Test Reports: Classify each inspection and test report as being either "shop drawings" or "product data" depending on whether the report is specially prepared for the project, or a standard publication of workmanship control testing at the point of production. Process inspection and test reports accordingly.
2. Survey Data: Provide copies of all survey data collected for property surveys, field measurements, quantitative records of actual work, damage surveys and similar data required by the individual sections of these specifications. None of the specified copies will be returned.
3. Standards: Where submittal of a copy of standards is indicated, and except where copies of standards are specified as an integral part of a "Product Data" submittal, submit a single copy of standards for the Engineer/Owner's use. Where workmanship, whether at the project site or elsewhere, is governed by a standard, furnish additional copies of the standard to installers, Owner’s field representative, and others involved in the performance of the work.
4. Closeout Submittals: Refer to section "Project Closeout" and to individual sections of these specifications for specific submittal requirements of project closeout information, materials, tools, and similar items.
   a. Record Documents: Furnish set of original documents as maintained on the project site.
5. General Distribution: Provide additional distribution of submittals to Subcontractors, suppliers, fabricators, installers, governing authorities and others as necessary for the proper performance of the work. Include such additional copies of submittals in the transmittal to the Engineer/Owner where the submittals are required to receive "Action" marking before final distribution. Record distributions on transmittal forms.

1.05 ENGINEER/OWNER'S ACTION

A. General: Except for submittals for the record and similar purposes, where action and return on submittals is required or requested, the Engineer/Owner will review each submittal, mark with appropriate "Action", and where possible return within seven (7) calendar days of receipt. Where the submittal must be held for coordination the Engineer/Owner will so advise the Contractor without delay.

B. Action Stamp: The Engineer/Owner will stamp, sign and date each submittal copy to be returned to Contractor and indicate disposition of each submittal in accordance with the following grading requirements:

1. "No Exceptions Taken" indicates that Engineer/Owner notes no exception to the intent of the Contract Documents. Fabrication of item may commence.
2. "Furnish as Corrected" indicates that with minor corrections or additions, Engineer/Owner notes no exception to the intent of the Contract Documents. Item may be fabricated on basis of corrections noted. No further checking will be required.
3. "Revise and Resubmit". No fabrication may commence.
4. "Rejected" indicates nonconformance with the contract requirements, or that too many corrections would be necessary. The Engineer/Owner will state the reasons for rejections.
5. “Submit Specified Item” indicates missing portions of the submissions. Fabrication may commence upon submission and approval of specified item.
6. “Reviewed” indicates that the Engineer/Owner has received and processed the submittal. No determination of conformance was completed/necessary.

C. Engineer/Owner Review:

1. Engineer/Owner's review of submitted drawings and data will cover only general conformity to drawings and specification, external connections, and dimensions which affect layout.
2. Engineer/Owner's review does not indicate thorough review of all dimensions.
3. Engineer/Owner's review of submittals does not relieve Contractor's responsibility for errors, omissions, or deviations, nor responsibility for compliance with Contract Documents.

1.06 RESUBMISSION REQUIREMENTS

A. Make any corrections or changes in the submittals required by the Engineer/Owner and resubmit until they are denoted "No Exceptions Taken" or "Furnish as Corrected" by the Engineer/Owner. Resubmission requirements specified in individual specification sections, which differ from these requirements, will take precedence over these requirements.

B. Shop Drawings and Product Data:

1. Revise initial drawings or data, and resubmit as specified for the initial submittal.
2. Indicate any changes which have been made other than those requested by the Engineer/ Owner.

C. Samples: Submit new samples as required for initial submittal.

1.07 DISTRIBUTION

A. Distribute reproductions of shop drawings and copies of product data which carry the Engineer's stamp denoting "No Exceptions Taken" or " Furnish as Corrected" to:

1. Job site file.
2. Record documents file.
3. Subcontractors.
4. Supplier or fabricator.

B. Distribute samples which carry the Engineer/Owner's stamp denoting "No Exceptions Taken" or "Furnish as Corrected" as directed by the Engineer/Owner.

PART 2.00 - PRODUCTS

Not Used

PART 3.00 - EXECUTION

Not Used

END OF SECTION

22116.00 **SECTION 01400**
04/26 **QUALITY CONTROL/QUALITY ASSURANCE**

PART 1.00 - GENERAL

1.01 SECTION INCLUDES

A. Quality Control that the Contractor will perform during the performance of this work.

B. Quality Assurance that the Owner will perform during the performance of this work.

1.02 SUBMITTALS

A. Submit Quality Control Plan to the Owner/Owner's Representative at least three (3) calendar days before starting work which includes the following information:

1. Statement and description of Contractor's overall Quality Control (QC) program as described below. Each Sub-contractor shall submit a separate QC program applicable to their scope of work to the Contractor.
2. Procedures to be used in obtaining field samples of materials except where required for submittal under other sections.
3. Name, qualifications, and prior experience of inspection and testing laboratories that Contractor proposes for Owner/Owner's Representative's consideration.

1.03 QUALITY CONTROL (QC) PROGRAM

A. Formulation, Submission, Details and Acceptance of Plan:

1. Contractor shall develop a QC program appropriate to the scale of the project.
2. The plan shall identify personnel, and establish procedures, instructions, records, and forms to be used.
3. The Contractor's QC Plan shall include as a minimum, the following:
   a. A description of the Contractor's QC organization, including a chart showing lines of authority, and acknowledgement that the Contractor's QC staff shall conduct inspections for all aspects of the work specified.
   b. The name, qualifications, responsibilities, and authority of each person assigned to the Contractor's QC function.
   c. Procedures for scheduling and managing submittals, including those of Subcontractor, fabricators, suppliers, and purchasing agents.
   d. Control procedures to be promulgated.
   e. Control testing procedures for each specific test, including field sampling.
   f. Reporting procedures including proposed reporting formats.
3. Acceptance of Plan: Acceptance of the Contractor's plan by the Owner/Owner's Representative is required prior to the start of construction. Acceptance is conditional, and its continuation will depend on satisfactory performance by the Contractor during construction. The Owner/Owner's Representative reserves the right to require the Contractor to make changes in the Contractor's QC Plan and operations as necessary to obtain the quality specified at no additional cost to the Owner.
4. Notification of Changes: After acceptance of the Contractor's QC Plan, the Contractor shall notify the Owner/Owner's Representative in writing of any proposed change. The proposed changes will be subject to acceptance by the Owner/Owner's Representative.

B. Implementation of QC Plan:

1. General:
   a. Comply with the highest industry standards except when specified requirements indicate more rigid standards, or more precise workmanship is required.
   b. Provide personnel to produce work of specified quality.
   c. Secure, protect, and maintain products and Work completed or in progress from damage during the progress of remaining Work.
2. Preparatory Inspection: This shall be performed prior to beginning any segment of Work. It shall include a review of Contract requirements; a check to assure that all materials and or equipment are on hand, and have been tested, samples submitted and approved; a check to assure that provisions have been made to do required control testing; examination of the work that has been completed; and a physical examination of materials, equipment and sample work to assure that they conform to approved shop drawings or submittal data. Contractor shall instruct each Subcontractor contributing work as to the acceptable level of workmanship required in the Contractor's QC Plan in order to meet Specifications.
3. Initial Inspection: This shall be performed as soon as a representative portion of a particular segment of Work has been accomplished, and shall include examination of the quality of workmanship and materials, a review of control testing for compliance with Contract requirements, and inspection for omissions and dimensional requirements.
4. Follow-up Inspections: These shall be performed regularly to assure continuing compliance with Contract requirements, including control testing, until Completion. Final follow-up inspections shall be conducted and deficiencies corrected prior to final acceptance of segments of Work.
5. Tests: A list of QC tests, and the frequency of their performance, which the Contractor understands he is to perform, and on which he is to submit reports shall satisfy the requirements described under 3.03(B) of this section.
6. Prompt turn-around is required for all analyses, so as not to jeopardize the project schedule. Verbal turn-around time on soil samples is not to exceed 48 hours and written turn-around time is not to exceed 72 hours.
7. The Contractor shall submit the list of tests, and the frequency of their performance, as a part of the Contractor's QC Plan, to the Owner/Owner's Representative. The list shall give the test name, Specification Paragraph containing the test requirements, and the personnel and laboratory responsible for each type of test. The Contractor shall perform the following activities:
   a. Verify that testing procedures comply with Contract requirements.
   b. Verify that facilities and testing equipment are available and comply with testing standards.
   c. Check test instrument calibration data against certified standards.
   d. Verify that recording forms, including all of the test documentation requirements, have been prepared.
8. Testing for Laboratory Capability:
   a. Capability Check: Owner/Owner's Representative shall have the right to check laboratory equipment in proposed laboratories for compliance with testing procedures.
   b. Capability Rechecks: If the selected laboratory(ies) fails the capability check the Contractor shall be assessed actual costs to reimburse the Owner/Owner's Representative for each succeeding recheck of the laboratory or the checking of a subsequently-selected laboratory.
9. Documentation:

a. The Contractor shall maintain records of QC operations, activities and tests performed including the work of suppliers and Subcontractors. These records shall be on an acceptable form and shall include a description of the trades working on the project, the number of personnel working, weather conditions encountered, and delays encountered, and acknowledgement of deficiencies noted along with corrective actions taken on current or previous deficiencies. Additionally these records shall include evidence that required activities or tests have been performed, including but not limited to the following:
   i. Type and number of control activities and tests performed.
   ii. Results of control activities or tests, including nature of any defects, causes for rejection, and other information related to deficient features.
   iii. Proposed remedies and accomplished corrections.
b. These records shall cover both conforming and defective features, and shall include a statement that supplies and materials incorporated in the Work comply with the Contract requirements. Legible copies of these records shall be submitted to the Owner/Owner's Representative.
c. Notification of Noncompliance: Owner/Owner's Representative will notify the Contractor or his designated representative of any observed noncompliance with requirements of this Section. If the Contractor fails or refuses to comply promptly, the Owner/Owner's Representative may issue an order stopping all or part of the Work until satisfactory corrective action has been taken.

1.04 QUALITY ASSURANCE (QA) PROGRAM

A. The Contractor shall provide for all costs associated with implementing a QA testing program within the bid price for General Requirements.

B. In general, QA testing will be performed at a frequency equal to about 10 percent of the QC testing frequency or as directed by the Owner/Owner's Representative.

1.05 WEIGHTS AND MEASURES

A. The Contractor shall weigh and measure its own materials.

B. Give one copy of each delivery's weight or measurement to Owner/Owner's Representative prior to stockpiling or storage.

1.06 REFERENCE STANDARDS

A. Where reference to an industry standard does not include a date of issue, conform to issue current as of date of Contract Documents.

B. Where reference to an industry standard includes a date of issue, conform to issue current as of the date specified.

1.07 INSPECTION AND TESTING LABORATORIES

A. Independent testing laboratories shall perform inspections, tests, and other services specified in individual specification sections, the Contractor's Quality Control Plan, and as required for QA by the Owner/Owner's Representative.

B. Reports and test results shall be submitted by the independent testing laboratory directly to the Owner, indicating observations and results of tests and indicating compliance or noncompliance with the requirements of the specifications.

C. Contractor shall provide access to the work and fully cooperate with laboratory firms. Notify Owner at least 48 hours prior to expected time when work is ready for inspection, sampling, or testing, if not otherwise specified for the particular work to be tested.

D. Retesting required due to nonconformance to specified requirements shall be performed by the same independent testing laboratories on instructions from the Owner/Owner's Representative. Retesting costs shall be borne by the Contractor and will not be applied to any unit price items.

PART 2.00 – PRODUCTS

2.01 MATERIALS

A. See applicable Specification Sections for types of material and equipment used on this project.

PART 3.00 – EXECUTION

3.01 PRECONSTRUCTION TESTING

A. Prior to construction, identify sources for soil, rock, steel, grout, and timber materials and test samples of each material from each source to determine whether they meet the required material specifications.

B. Document all tests. Soil, rock, and bituminous materials shall be accepted or rejected according to the test results. Some or all of the following tests shall be performed in the evaluation of the material properties for construction purposes:

1. ASTM D422 – Particle Size Analysis
2. ASTM D1557 – Moisture/Density Relationship
3. ASTM D2216 – Moisture Content
4. ASTM D2488 – Unified Soils Classification
5. ASTM D854 – Specific Gravity

C. All material evaluation tests shall be performed by the independent testing laboratory retained by the Contractor and approved for use by the Owner/Owner's Representative.

3.02 CONSTRUCTION TESTING

A. Document all tests. Some or all of the following tests shall be performed in the evaluation of the in place properties of soil and rock materials.

1. ASTM D422 – Particle Size Analysis
2. ASTM D1557 – Moisture/Density Relationship
3. ASTM D2216 – Moisture Content
4. ASTM D1556 – Density of Soil in Place by Sand-Cone Method
5. ASTM D2216 – Laboratory Determination of Water Content

6. ASTM D2922 – Density of Soil in Place by Nuclear Methods
7. ASTM D3017 – Water Content of Soil in Place by Nuclear Methods

B. Further material testing may be necessary if alternative sources of material are required during construction or, if based on visual inspection during delivery to the site, it appears that a material change (color, grain size, plasticity) has occurred. Additional source testing due to change of material shall be borne by the Contractor and will not be applied to any unit price items.

C. Questions concerning the accuracy of any single test shall be addressed by retesting.

3.03 QC TESTING FREQUENCY

A. All QC testing shall be conducted in accordance with the Contractor's QC Plan. Documentation and reporting of test results shall be the responsibility of the Contractor.

B. Testing frequencies for material evaluation and construction quality evaluation are presented in the following table.

Material	Responsible Party	Situation	Test	Minimum Frequency
Gravel Borrow/Regrading Fill/Granular Material	Contractor	Source Investigation	Grain Size through 0.002 mm Moisture Density Relationship	1 per source 1 per source
	Contractor	During Placement	Grain Size through 0.002 mm Moisture Density Relationship	1 per 100 tons 1 per 100 tons
	Contractor	As-Placed	Dry Density and As-Placed Moisture	2 per lift per location or activity and no less than 1 every 500 sf
Loam Borrow	Contractor	During Placement	PH, Nitrogen, Phosphorous, Potassium, and USDA Classification	2 per Acre
Riprap/Stone	Contractor	Source Investigation	Source Material Certification Specific Gravity	1 per source 1 per source
	Contractor	During Placement	Source Material Certification Specific Gravity	1 per 500 tons 1 per 500 tons
Concrete	Contractor	As-Placed	Strength	5 specimens per pour or per 25 cy placed, whichever is greater

C. Sampling locations shall be approved by the Owner/Owner's Representative.

D. A special testing frequency shall be used at the discretion of the Owner when visual observations of construction performance indicate a potential problem. Additional testing for suspected areas shall be considered when:

1. Materials appear substantially different from those specified
2. Directed by the Owner/Owner's Representative

E. During construction, the frequency of testing may also be increased in the following situations:

1. Adverse weather conditions
2. Breakdown of equipment
3. At the start and finish of grading
4. Material fails to meet specification
5. The work area is reduced

3.04 QA TESTING FREQUENCY

A. In general, QA testing will be performed at a frequency equal to about 10 percent of the QC testing frequency or as directed by the Owner/Owner's Representative.

3.05 DEFICIENCIES

A. If a defect is discovered, the Contractor shall immediately determine the extent and nature of the defect.

1. If the defect is indicated by unsatisfactory test results, the Contractor shall determine the extent of the deficient area by additional tests, observations, a review of records, or other means that the Contractor deems appropriate. Costs for additional testing shall be borne by the Contractor and not applied to any unit price items.
2. If the defect is related to adverse site conditions, such as overly wet soils or surface desiccation, the Contractor shall define the limits and nature of the defect.

B. After determining the extent and nature of a defect, the Contractor shall notify the Owner/Owner's Representative and schedule for defect repair and retesting.

C. The Contractor shall correct the deficiency to the satisfaction of the Owner/Owner's Representative. If the project specification criteria cannot be met, or if unusual weather conditions hinder work, then the Contractor shall develop and present to the Owner/Owner's Representative suggested solutions for his approval.

D. All retests by the Contractor must verify that the defect has been corrected before any additional work is performed by the Contractor in the area of the deficiency. The Contractor shall also verify that all installation requirements are met and that all required submittals are provided.

END OF SECTION

22116.00 **SECTION 01500**
04/26 **TEMPORARY CONSTRUCTION FACILITIES**

PART 1.00 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings, General Provisions of Contract, and Division-1 Specification Sections, apply to work of this section.

1.02 REQUIREMENTS INCLUDED

A. Furnish, install and maintain temporary construction facilities as may be required by the contractor for construction, as specified herein, and remove at completion of work. There are no temporary facilities required specifically by this section for completion of the Work. However, should the contractor elect to provide any temporary facilities, they shall be provided as required herein. The Contractor shall also review other requirement of the Contract Documents for applicable temporary facilities.

B. Section includes but is not limited to requirements for:

1. Field offices.
2. Miscellaneous construction facilities.
3. Temporary utility connections.

1.03 REQUIREMENTS OF REGULATORY AGENCIES

A. Comply with National Electric Code.

B. Comply with Federal, State and Local Codes, Laws, Ordinances, and Regulations and with utility company requirements.

1.04 SUBMITTALS

A. Submit drawings within ten (10) calendar days of starting work to Engineer for approval, showing layout, furnishings, and facilities of field office trailer and information concerning how Contractor proposes to furnish utilities.

1.05 JOB CONDITIONS

A. Scheduled Uses: Provide temporary construction facilities at time first needed at the site; and maintain, expand and modify facilities as needed throughout construction period.

B. Conditions of Use: Operate, maintain, control and protect support facilities in a manner which will prevent fire, hazardous exposures, health problems, unsanitary conditions, pollution, contamination, discomfort to users, flooding, freeze-up, interference with construction work, public nuisances and similar deleterious effects.

C. The Owner is not responsible for damage to any or all facilities due to severe natural occurrences, vandalism, or negligence on the part of the Contractor. The Contractor shall take all necessary precautions to protect and deter potential theft and vandalism within the construction site.

1.06 COSTS

A. Include all costs associated with furnishing, installing and removing Engineer's and Contractor's field offices, and providing all utilities, equipment, furnishings, services, maintenance, and removal.

B. Include all costs for providing continuous electric, water, sewer, heating/air conditioning, and telephone services to offices throughout construction period.

PART 2.00 - PRODUCTS

2.01 MATERIALS, GENERAL

A. Materials may be new or used, but must be adequate in capacity for the required usage, must not create unsafe conditions, and must not violate requirements of applicable codes and standards.

B. Coordinate interruptions of permanent utilities with utility companies and affected users.

C. Contractor's Office:

1. The Contractor shall provide its own field offices and such other temporary housing as it may need for storage or fabrication purposes and completely remove at the completion of the work.
2. Provide storage space for all shop drawing submittals, project samples, field laboratory test data and analyses, and other project related information.
3. Store all documents in fire-proof, lockable cabinets.
4. The Contractor and Subcontractors shall arrange for and have installed a telephone or provide phone(s) for the use of their own field offices and personnel.

2.02 MISCELLANEOUS CONSTRUCTION FACILITIES

A. Storage Sheds: General: Install individual storage sheds as required by the contractor to accommodate the work; sized, furnished and equipped properly. Sheds are defined to include both open shelters and fully enclosed spaces.

B. Sign Materials:

1. Except as otherwise indicated, provide exterior type plywood of sizes and thickness indicated. Provide exterior-grade acrylic-latex-base enamel for painting sign panels and applying required graphics.
2. Provide necessary signage in accordance with all applicable standards and regulations. Signage shall include but is not limited to:
   a) DEP Permit File sign(s)
   b) Traffic Control Signage

C. Temporary Site Access

1. Access for Carpenter Pond Dam shall be established from New Boston Road and the designated access path as shown in the Contract Documents

2. Contractor shall implement temporary roadway improvements as necessary to maintain the stability of the access roadway throughout construction.

PART 3.00 - EXECUTION

3.01 INSTALLATION OF SUPPORT FACILITIES

A. General: Use qualified tradesmen for installation of support facilities. Locate facilities where they will serve the total project construction work adequately, and result in minimum interference with performance of the work. Relocate, modify and extend facilities as required during course of the work, to properly accommodate entire work of project. Locate field offices for easy access to construction work, and positioned so that windows give best possible view of construction activities. Provide a reasonably neat and uniform appearance in support facilities, acceptable to Engineer, and to Owner.

B. Maintain and operate temporary utility systems to assure continuous service.

C. Modify and extend temporary utility systems as work progress requires.

3.02 INSTALLATION

A. Contractor's Office (if installed):

1. Install office at or near site of work. Office to be headquarters of authorized representative to receive drawings, instruction or other communication or articles.
2. Contractor to keep copies of drawings, specifications and other Contract Documents at office at site of work and make readily available for Owner or Owner’s representative’s use at all times.

B. Connect field offices to temporary utilities as required. Include backfill to connect telephone, electric, water and sewer utility lines; if applicable, insulate and heat the water and sewer lines to the extent necessary to prevent freezing. All sewer, water, electric, and telephone services shall be continuously connected and in proper working order.

3.03 MAINTENANCE

A. Field offices to be maintained in a clean condition.

B. Maintain adequate supply of paper towels, paper cups, toilet paper, soap and other supplies as required by the Engineer.

C. Janitorial Services:

1. Toilet facilities to be cleaned and disinfected weekly.
2. Provide clean parking area and walkway therefrom with snow removal as required by Engineer.
3. Replenish all supplies as required by Engineer.

3.04 REMOVAL OF TEMPORARY CONSTRUCTION FACILITIES

A. Completely remove temporary materials and equipment when their use is no longer required.

B. Upon completion of work of all trades and before final acceptance of entire project, each trade shall remove, at it's own expense, all wiring, appurtenances and accessories used in performance of its respective work.

C. Temporary sheds, utilities, barricades, signs, and other appurtenances related to prosecution of the work and not incorporated in the permanent construction shall be completely removed from the site prior to acceptance of work by Owner.

END OF SECTION

22116.00 **SECTION 01510**
04/26 **TEMPORARY UTILITIES**

PART 1.00 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings, General Provisions of Contract, and Division 1 Specification Sections, apply to work of this section.

1.02 REQUIREMENTS INCLUDED

A. Furnishing, installing, and maintaining temporary utilities to support construction including **as required by the Contractor's means and methods**, and remove at completion of work. This specification does not require that such facilities be provided; however, any facilities installed shall meet the minimum requirements specified herein.

1. Electricity and Lighting
2. Heating and Ventilation
3. Water
4. Sanitary Facilities

B. Furnishing, installing, and maintaining sanitary facilities to support construction.

1.03 TEMPORARY ELECTRICITY AND LIGHTING

A. Arrange with utility company to provide all power for heating, lighting, operation of equipment, or for any other required use.

1. Pay costs for service and for power used.

B. Install circuit and branch wiring, with area distribution boxes located so that power and lighting is available throughout construction by use of construction-type power cords.

C. Provide artificial lighting for areas of work when natural light is not adequate for work, and for areas accessible to public.

D. Furnish all extension cords, sockets, lamps, motors and accessories for work. Ground all outlets.

E. All temporary wiring, service equipment and accessories thereto installed shall be removed at expense of Contractor after serving its purpose.

1.04 TEMPORARY HEATING AND VENTILATION

A. Provide temporary heating when temperature falls below 50 deg. F and as otherwise required to:

1. Maintain working conditions acceptable to Engineer.
2. Protect all work, materials, and equipment against damage from dampness or cold.
3. Dry out structures.
4. Maintain proper conditions for installation and curing of materials.

B. Heating equipment and fuels shall be compatible for their particular purpose and shall include safety devices in accordance with industry standards.

C. Do not use combustion type heaters without proper venting nor in areas where such equipment might introduce a hazard.

D. Ensure that all enclosed areas are ventilated (using forced-draft equipment when necessary) as required to maintain proper conditions for personnel and work, and to avoid any accumulation of hazardous dust or fumes.

E. Pay costs associated with furnishing, installing, maintaining, operating, and removing of heating and ventilation equipment.

1.05 TEMPORARY WATER

A. Furnish all water required for and in connection with work to be done under this Contract.

B. Pay costs associated with furnishing, installing, maintaining, operating, and removing of water-related equipment.

1.06 TEMPORARY SANITARY FACILITIES

A. Furnish temporary sanitary facilities at site for needs of all construction workers and others performing work or furnishing services on project.

B. Ensure that sanitary facilities are:

1. Of a capacity acceptable to Engineer.
2. Maintained throughout construction period.
3. Obscured from public view to greatest extent possible and secured to prevent vandalism.

C. Furnish at least one toilet for each 10 workers if toilets of chemically treated type are used.

D. Service, clean, and maintain facilities and enclosures.

E. Enforce use of such sanitary facilities by all personnel at site.

F. Pay costs associated with furnishing, installing, maintaining, operating and removing sanitary facilities.

PART 2.00 - PRODUCTS

Not Used

PART 3.00 - EXECUTION

Not Used

END OF SECTION

PART 1.00 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings, General Provisions of contract, and Division 1 Specification Sections, apply to work of this section.

1.02 REQUIREMENTS INCLUDED

A. Controlling and protecting the Contractor's operations and work.

B. Furnishing, installing and operating temporary controls during construction for:

1. Dewatering
2. Noise
3. Dust
4. Surface Water
5. Pollution
6. Debris and Clean Up
7. Air Pollution
8. Public Safety
9. Weather

1.03 WATER SUPPLY DISTRIBUTION SYSTEM

A. There is no public water distribution system available for use by the Contractor at the site.

1.04 PRIVATE LAND

A. The Contractor shall not enter or occupy private land outside of easements, except by written permission of the property owner. Furnish Owner copies of all agreements the Contractor has with property owners to enter or occupy private lands.

1.05 CARE AND PROTECTION OF PROPERTY

A. The Contractor shall install temporary security gate and/or fencing to prevent access to the site by unauthorized personnel during periods of construction.

B. The Contractor shall be responsible for the preservation of all public and private property, and shall use every precaution necessary to prevent damage thereto. If any direct or indirect damage is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work on the part of the Contractor, such property shall be restored by the Contractor, at his expense, to a condition similar or equal to that existing before the damage was done, or he shall make good the damage in other manner acceptable to the Engineer.

C. Along the location of this work, all fences, pathways, bushes, trees, shrubbery and other physical features shall be protected and restored in a thoroughly workmanlike manner. All grass areas beyond the limits of construction which have been damaged by the Contractor shall be regraded and seeded as necessary, subject to the approval of the Engineer.

C. Trees close to the work shall be boxed or otherwise protected against injury. The Contractor shall trim all branches that are likely to be damaged because of his operations, but in no case shall any tree be cut or removed without prior notification of the Engineer. All injuries to bark, trunk, limbs, and roots of trees shall be repaired by dressing, cutting and painting according to approved methods, using only approved tools and materials, subject to the approval of the Owner.

D. The protection, removal, and replacement of existing physical features along the line of work shall be a part of the work under the Contract, and all costs in connection therewith shall be included in the unit and/or lump sum prices established under the items in the proposal.

1.06 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

A. The Contractor shall assume full responsibility for the protection of all buildings, structures, and utilities, public or private, including poles, signs, services to buildings, utilities below grade, utilities on overhead lines, gas pipes, water pipes, hydrants, sewers, drains, electric and telephone cables, and cesspools adjacent to trench excavations, whether or not they are shown on the Drawings. The Contractor shall carefully support and protect all such structures and utilities from injury of any kind. Any damage resulting from the Contractor's operations shall be repaired by the Contractor at their expense, to the damaged items original condition.

B. The Contractor shall bear full responsibility for obtaining all locations of underground structures and utilities (including existing water, gas, electric and telephone services, drain lines, and sewers). Services to buildings shall be maintained, and all costs or charges resulting from damage thereto shall be paid by the Contractor.

C. Protection and temporary removal and replacement of existing utilities and structures as described in this section shall be a part of the work under the contract and all costs in connection therewith shall be included in the unit prices established in the proposal.

1.07 WEATHER PROTECTION

B. It is the intent of these Specifications to require that the Contractor shall provide temporary enclosures and heat to permit construction work to be carried on during the months of November through March. Under no circumstances shall the Contractor suspend any work during the months of November through March because of their reluctance to provide and pay for temporary weather protection. These Specifications are not to be construed as requiring enclosures or heat for operations that are not economically feasible to protect in the judgment of the Engineer.

C. "WEATHER PROTECTION" shall mean the temporary protection of that work adversely affected by moisture, wind, and cold, by covering, enclosing and/or heating. This protection shall provide adequate working areas during the months of November through March as determined by the Engineer and consistent with the approved construction schedule to permit the continuous progress of all work necessary to maintain an orderly and efficient sequence of construction operations. The Contractor shall furnish and install all "weather protection" material and be responsible for all costs, including heating required to maintain a minimum temperature of 50 degrees F. at the working surface. This provision does not supersede any specific requirements for methods of construction, curing of materials or the applicable general conditions set forth in the Contract Articles with added regard to performance obligations of the Contractor.

D. The cost of providing and installing weather protection is the responsibility of the Contractor. Additional work or time spent installing the weather protection shall not be eligible for additional payment

E. Installation of weather protection and heating devices shall comply with all safety regulations including provisions for adequate ventilation and fire protection devices. Heating devices which may cause damage to finish surfaces shall not be used.

1.08 MAINTENANCE OF FLOW

A. The Contractor shall, at his own cost, maintain the flow of water courses during the progress of the work.

1.09 PROTECTION OF WORK

A. The Contractor shall at all times protect excavations, trenches, new construction, old construction, all job materials, apparatus and fixtures from rain, wind, snow, ice, dust, dirt, mud, groundwater, back-up or leakage of sewers, drains, or other piping, and from water of any other origin, and shall remove promptly any accumulation of the above. He shall provide and operate all pumps, piping and other equipment necessary to this end at no additional cost to Owner.

B. Thoroughly protect all completed work and all stored materials.

C. Provide boards, cloths, planks, waterproof paper, canvas or other approved protection and use as necessary to prevent any damage.

D. Provide protective measures to prevent damage to lawns, trees and shrubs to remain after project is complete.

E. Protect, at end of each day's work, such work that may be liable to damage by the elements.

F. Replace or rectify work or materials damaged by workmen, by the elements or by any other cause, to the satisfaction of the Engineer and at no additional expense to the Owner.

G. Repair streets, curbs, sidewalks, poles, grass, shrubs, trees, or other existing site features, if disturbed by building operations, in a manner satisfactory to the Owner/Engineer at no additional cost to the Owner. Structures disturbed as part of construction activity shall be restored, at a minimum, to their preconstruction condition.

H. Do not allow workers, including those of any Subcontractor or supplier, to mark finish surfaces with marking pens or other such devices which are not readily erasable.

I. Contractor shall be responsible for any and all damage to the Owner provided materials once delivered to the site. All materials shall be handled, stored, and installed in accordance with the manufacturers recommendations.

1.10 TRAFFIC CONTROLS

A. The Contractor shall be responsible for setting up and maintaining signage alerting the public and residents of entering vehicles to the Carpenter Pond access roads because of work associated with this project.

B. Provide proper detour signage if main thoroughfares are to be closed down or impacted.

C. Coordinate with the Town of Dudley Police department the need for any police details during the delivery of materials to the site in which vehicles entering or leaving the access road to the dam may impede or otherwise impact the normal traffic pattern on New Boston Road.

1.11 SECURITY

A. The Contractor shall take all precautions necessary to prevent loss or damage caused by vandalism, theft, burglary, pilferage, or unexplained disappearance of property of the Owner or Contractor, whether or not forming part of the work, located within the limits of work. The Contractor shall have full responsibility for the security of such property located in such areas and shall reimburse the Owner for any such loss, damage, or injury, except such as may be directly caused by agents or employees of the Owner.

1.12 SUBMITTALS

A. Seven (7) calendar days prior to closing any access roads, the Contractor shall submit to the Engineer a Traffic Management Plan indicating the following:

1. Roadway or parking lot scheduled for closure.
2. Signage type and locations to be installed by the Contractor to alert the public of potential traffic impacts from construction.

The plan does not need to be stamped; however, the plan shall provide a sensible path for the public to detour around the work area if required.

PART 2.00 – MATERIALS

Not Used

PART 3.00 - EXECUTION

3.01 INTERFERENCE WITH EXISTING STRUCTURES

A. Whenever it may be necessary to cross or interfere with existing culverts, drains, water pipes, water fixtures, guardrails, fences, overhead wires, or other structures needing special care, due notice shall be given to the Owner and to the various public and private agencies or individuals responsible for the utility or structure that is interfered with. Whenever required, all objects shall be strengthened to meet any additional stress that the work herein specified may impose upon it, and any damage caused shall be thoroughly repaired. The entire work shall be the responsibility of the Contractor and the work shall be performed at no additional expense to the Owner. All damaged items of work or items required to be removed and replaced due to construction shall be replaced or repaired by the Contractor to the complete satisfaction of the property Owners and/or the Engineer at no additional expense to the Owner.

3.02 REMOVAL OF WATER AND PROTECTION FROM FLOODING

A. The Contractor shall construct and maintain, at no additional expense to the Owner, all pumps, drains, well points or any other facility for the control and collection of groundwater and/or surface water and provide all pumps and piping for the removal of water from the trenches and excavations so that all trenches and excavations may be kept at all times free from water and so that all construction work may be performed in the dry.

B. Any damage resulting from the failure of the dewatering operations of the Contractor and any damage resulting from the failure of the Contractor to maintain the areas of all work in a suitable dry condition shall be repaired by the Contractor as directed by the Engineer or Owner at no additional expense to the Owner.

C. The Contractor's pumping and dewatering operations shall be carried out in accordance with MADEP regulations and in such a manner as to prevent damage to existing structures, utilities, and the contract work; and so that no loss of ground will result from these operations.

D. Precautions shall be taken to protect new and existing work from flooding during storms or from other causes. Pumping shall be continuous where directed by the Engineer to protect the work and/or to maintain satisfactory progress.

E. All pipelines or structures not stable against uplift during construction or prior to completion shall be thoroughly braced or otherwise protected.

F. Water from the trenches, excavations and drainage operations shall be pumped to a dewatering basin in such a manner as will neither cause public nuisance, nor cause injury to public health nor to public or private property nor to the work completed nor to the work in progress.

G. No extra payment will be made for the removal of water, protection from flooding, drainage work, diversion of existing water courses and such other work. Compensation therefore shall be considered as having been included in the prices stipulated for the appropriate items of work as listed in the bid.

3.03 NOISE CONTROL

A. The Contractor shall employ all reasonable measures to avoid unnecessary noise and ensure that noise is appropriate for normal ambient sound levels in the work area during working hours where required by agencies having jurisdiction, certain noise - producing work may have to be performed during specified periods only. Noise control measures during normal work hours shall include but not be limited to:

1. Operate machinery in a manner to cause least noise consistent with efficient performance of work.
2. Equip all construction machinery and vehicles with sound-muffling devices.
3. During construction adjacent to occupied buildings, erect screens or barriers to reduce noise in building to limits in accordance with applicable codes. Conduct operations in such a manner as to avoid unnecessary noise, which might interfere with activities of building occupants.

B. Work shall be limited to normal working hours (7 am – 4 pm), Monday through Friday. Authorization shall be obtained from the Owner and abutters for work occurring outside of normal working hours or during holidays.

C. When the Contractor’s work extends beyond normal working hours the Contractor shall incorporate to the complete satisfaction of the Owner and Engineer, adequate noise prevention measures to insure minimum noise impact on the surrounding areas. Noise prevention measures shall include, but not be limited to:

1. Insulated enclosures.
2. Hospital grade silencers or mufflers.
3. Equipment modification.
4. Special equipment, as necessary to meet Town noise guidelines.
5. Any other noise prevention measures.

D. Should at any time the Owner and/or Engineer determine that noise prevention measures are inadequate, the Contractor shall suspend all such work in question until acceptable measures are incorporated. Suspension of work due to inadequate noise prevention shall not be a cause for additional cost to the Owner.

E. Prior to the start of any work outside normal work hours, the Contractor shall submit a Noise Control plan to the Owner and Engineer for review. Noise Control plans shall be submitted for:

1. Night work.
2. All Pumping operations and work which extend beyond normal work day.
3. Any other work as determined by the Engineer which warrants special noise prevention measures.

E. All costs associated with noise control measures shall be considered part of the bid price for appropriate work being completed.

3.04 DUST CONTROL

A. At no additional cost to the Owner take measures to prevent unnecessary dust.

1. Keep all earth, concrete, and all other surfaces that are subject to dusting moist with water only.
2. Cover dusty materials in piles or in transit to prevent blowing.
3. Maintain a moist surface when saw-cutting or hammering concrete.

B. Protect buildings or operating facilities which may be affected adversely by dust.

C. Protect existing or new machinery, motors, instrument panels, or similar equipment with dust screens.

1. Include proper ventilation with dust screens.

3.05 SURFACE WATER CONTROL

A. Provide for drainage of storm water and such water as may be applied or discharged on site in performance of work.

B. Ensure that drainage facilities are adequate to prevent damage to work, site, and adjacent property.

1. Clean, enlarge, or supplement existing drainage channels to carry all increased runoff attributable to operation.
2. Construct dikes to:
   a. Divert increased runoff from entering adjacent property (except in natural channels).
   b. Protect the work.
   c. Direct water to drainage channels or conduits downstream of the dam.

3.06 POLLUTION CONTROL

A. Prevent pollution of drains and watercourses by sanitary wastes, sediment, debris, and other substances resulting from construction activities.

1. In order to protect waterbodies from hazardous materials releases by the construction equipment involved in this project, fueling and greasing of equipment shall take place off-site or within the limits of the proposed access roads; equipment must be in good condition and inspected for leaks; spill control and cleanup equipment shall be stored on site; and the Contractor shall be responsible for all cleanup and remediation of hazardous materials releases.
2. Do not allow sanitary wastes to enter any drain or watercourse other than sanitary sewers.
3. Do not allow sediment, debris, or other substance to enter sanitary sewers and take measures to prevent such materials from entering any drain or watercourse.
4. All earthwork, grading, moving of equipment, water control and other operations likely to create silting, shall be planned and conducted so as to avoid pollution of the water body and its tributaries. Water used for any purpose which has become contaminated with oil, bitumen, salt, or other pollutions shall be discharged so as to avoid affecting nearby waters. Under no circumstances shall pollutants be discharged directly into the water body or and its tributaries.
5. All concrete repair work requiring cleaning and removal of debris is to be contained as not to contaminate the surrounding environment.

3.07 DEBRIS AND CLEANUP

A. Keep all premises free at all times from accumulation of waste materials and rubbish.

1. Immediately after unpacking, remove and dispose of all packing materials, case lumber, excelsior, wrapping, or other rubbish from site.

B. Provide trash receptacles about site, and empty containers daily.

C. Neatly stack construction materials, such as concrete forms and scaffolding, when not in use.

D. Promptly remove splattered concrete, asphalt, oil, paint, corrosive liquids, and cleaning solution from surfaces to prevent marring or other damage to satisfaction of Engineer.

E. Ensure that wastes are not buried or burned on site or disposed into storm drains, sanitary sewers, steams, or waterways.

1. Remove all wastes from site and dispose in a manner complying with local ordinances and antipollution laws.
2. Store volatile wastes in covered metal containers and remove daily.

F. Cleanup as determined by Engineer will be a condition for recommendation of progress payment application.

1. Contractor shall have full responsibility for cleaning up during and immediately upon completion of work. Remove all rubbish, waste, tools, equipment, and appurtenances caused by and used in execution of work, leaving site clean, free of debris and in condition acceptable to Engineer.

2. Equipment or material shall not be left within any work area after acceptance of Contract without written permission of Engineer. Do not abandon any material at or near site regardless of its value.

3.08 PUBLIC SAFETY

A. At all times until final acceptance of Work by Owner, the Contractor shall protect Work and shall take all precautions of preventing injuries to persons or damage to property on or about site.

B. Contractor shall comply with all applicable laws, ordinances, rules, and regulations regarding safety of persons or property or with regard to protecting them from damage, injury, or loss and shall not load or permit any part of work to be placed so as to endanger safety of work.

C. If Contractor constructs temporary bridges or provides temporary crossing of streams, Contractor's responsibility for accidents shall include roadway and sidewalk approaches as well as structure of such crossings.

D. Conduct work such that abutters shall have reasonable access to their property. Contractor shall be responsible for providing such reasonable safe means of access to public way as Engineer deems essential. When it is necessary to leave materials and equipment upon highway or Town or town way, place them so as to cause least possible obstruction to drainage, pedestrian, and other travel.

3.09 WEATHER PROTECTION

A. See Section 1.07 of this Specification.

3.10 REMOVAL OF TEMPORARY CONTROLS

A. Completely remove temporary materials and equipment when their use is no longer required.

B. Upon completion of work of all trades and before final acceptance of entire project, each trade shall remove, at its own expense, all wiring, appurtenances and accessories used in performance of its respective work

C. Temporary sheds, utilities, barricades, signs, and other appurtenances related to prosecution of the work and not incorporated in the permanent construction shall be completely removed from the site prior to acceptance of work by Owner.

END OF SECTION

SECTION 01600
MATERIAL AND EQUIPMENT

PART 1.00 - GENERAL

1.01 REQUIREMENTS INCLUDED

A. Material and Equipment Incorporated into the Work:

1. Conform to applicable specifications and standards.
2. Comply with size, make, type and quality specified, or as specifically reviewed by the Engineer.

B. Manufactured and Fabricated Products:

1. Design, fabricate and assemble in accordance with the best engineering and shop practices.
2. Manufacture like parts of duplicate units to standard sizes and gages, to be interchangeable.
3. Two or more items of the same kind shall be identical, by the same manufacturer.
4. Products shall be suitable for service conditions.

C. Equipment capacities, sizes and dimensions shown or specified shall be adhered to unless variations are specifically reviewed by Engineer.

D. Do not use material or equipment for any purpose other than that for which it is designed or is specified.

1.02 MANUFACTURER'S INSTRUCTIONS

A. When the Contract Documents require that installation of work shall comply with manufacturer's printed instructions, obtain and distribute copies of such instructions to parties involved in the installation, as specified in Section 01340, SUBMITTALS.

B. Maintain one set of complete instructions at the job site during installation and until completion.

C. Handle, install, connect, clean, condition and adjust products in strict accordance with such instructions and in conformity with specified requirements.

D. Should job conditions or specified requirements conflict with manufacturer's instructions, consult with Engineer for further instructions.

E. Do not proceed with work without clear instructions.

F. Perform work in accordance with manufacturer's instructions. Do not omit any preparatory step or installation procedure unless specifically modified or exempted by the Contract Documents.

1.03 TRANSPORTATION AND HANDLING

A. Arrange deliveries of products in accordance with construction schedules, coordinate to avoid conflict with work and conditions at the site and also when two or more trades, Contractors, or suppliers are involved.

B. Transport all materials and equipment on legally approved conveyances as required or recommended by the respective manufacturer or supplier.

C. Deliver products in undamaged condition, in manufacturer's original containers or packaging, with identifying labels intact and legible.

D. Receive and handle all materials and equipment, at the project site, by conveyances or methods as recommended by the respective manufacturer or supplier to prevent damage to products.

E. Immediately on delivery, inspect shipments to assure compliance with requirements of Contract Documents and reviewed submittals, and that products are properly protected and undamaged.

F. Remove from the site any material or item of equipment damaged during the transportation or handling process, and immediately replace at no additional cost to the Owner.

1.04 STORAGE AND PROTECTION

A. Store products in accordance with the manufacturer's instructions, with seals and labels intact and legible.

B. Store products subject to damage by the elements in weather tight enclosures.

C. Maintain temperature and humidity within the ranges required by manufacturer's instructions.

D. Maintain all storage areas in a clean and orderly condition at all times.

1.05 EXTERIOR STORAGE

A. Store fabricated products above the ground, on blocking or skids, prevent soiling or staining. Cover products, which are subject to deterioration with impervious sheet coverings, provide adequate ventilation to avoid condensation.

B. Store loose granular materials in a well-drained area on solid surfaces to prevent mixing with foreign matter.

C. Arrange storage in a manner to provide easy access for inspection. Make periodic inspections of stored products to assure that products are maintained under specified conditions, and free from damage or deterioration.

D. Replace any material or item of equipment damaged, due to inadequate storage protection, and immediately replace at no additional cost to the Owner.

1.06 PROTECTION AFTER INSTALLATION

A. Provide substantial coverings as necessary to protect installed products from damage from traffic and subsequent construction operations. Remove when no longer needed.

1.07 CERTIFICATES OF CONFORMANCE AND MANUFACTURE

A. In addition to other requirements specified herein, the Contractor shall furnish to the Engineer, as specified in Section 01340, SUBMITTALS, notarized certificates of conformance and

manufacture that all materials and/or equipment to be furnished under this contract meet the specification requirements. When directed, each shipment of material shall be accompanied by the manufacturer's notarized certificates of conformance and manufacture. Unless otherwise specifically specified, all testing of materials shall be provided by the Contractor at no additional expense to the Owner.

B. Each manufacturer's certificate shall be endorsed or accompanied by the Contractor's certificate that the material certified by the manufacturer will be the material incorporated in the work.

PART 2.00 - PRODUCTS

Not Used

PART 3.00 - EXECUTION

Not Used

END OF SECTION

SECTION 01700
CONTRACT CLOSEOUT

PART 1.00 - GENERAL

1.01 REQUIREMENTS INCLUDED

A. Comply with requirements stated in conditions of the contract and in specifications for administrative procedure in closing out the work.

1.02 SUBSTANTIAL COMPLETION

A. When Contractor considers the work is substantially complete, he shall submit to Owner.

1. A written notice that the work, or designated portion thereof, is substantially complete.
2. A list of items to be completed or corrected.

B. Within a reasonable time after receipt of such notice, Owner will review the work to determine the status of completion.

C. Should Owner determine that the work is not substantially complete:

1. Owner will promptly notify the Contractor in writing, giving the reasons therefore.
2. Contractor shall remedy the deficiencies in the work, and send out another written notice of substantial completion to the Owner.
3. Owner will again review the work.

D. When Owner concurs that the work is substantially complete, he will:

1. Prepare a certificate of substantial completion, accompanied by Contractor's list of items to be completed or corrected, as verified and amended by the Owner.
2. Submit the certificate to Contractor and manufacturer for their written acceptance of the responsibilities assigned to them in the certificate.

1.03 FINAL REVIEW

A. When Contractor considers the work is complete, he shall submit written certification that:

1. Contract documents have been reviewed.
2. Work has been inspected for compliance with Contract Documents.
3. Work has been completed in accordance with Contract Documents.
4. Equipment and systems have been tested in the presence of the Owner's representative and are operational.
5. Work is completed and ready for final review.

B. Owner will make final review to verify the status of completion with reasonable promptness after receipt of such certification. Final review shall include operation of the gate.

C. Should Owner consider that the work is incomplete or defective:

1. Owner will promptly notify the Contractor in writing, listing the incomplete or defective work.
2. Contractor shall take immediate steps to remedy the stated deficiencies, and send out another written certification to Owner that the Work is complete.

3. Owner will again review the Work.

D. When the Owner finds that the Work is acceptable under the Contract Documents and that all punch list items have been accomplished to his satisfaction, he shall request the Contractor to make closeout submittals.

1.04 FEES FOR ADDITIONAL REVIEWS

A. Should Owner perform additional reviews due to failure of the Work to comply with the claims of status of completion made by the Contractor:

1. Owner will be compensated for such additional services.
2. Owner will deduct the amount of such compensation from the final payment to the Contractor.

1.05 CONTRACTOR'S CLOSEOUT SUBMITTALS TO OWNER

A. Operating and Maintenance Data:

1. Instruct the Owner's personnel with regard to equipment, systems and operating specialties which are installed as part of this project.
2. Submit brochures indicating operating instructions and maintenance schedules for all equipment, systems, operating devices and specialties, as specified in Section 01340, SUBMITTALS.
3. Submit detailed maintenance methods and schedules for all materials and equipment provided in this project, as specified in Section 01340, SUBMITTALS.

B. Warranties, Guarantees, and Bonds:

1. In addition to the Warranty and Guarantee Requirements of the General Conditions, provide all other guarantees, bonds, affidavits and certifications required throughout the specifications.

C. Spare parts and maintenance materials for Owner.

D. Contractor's affidavit of payment of debts and claims.

E. Contractor’s affidavit of release of liens.

F. Consent of surety to final payment.

G. Certificate of insurance for products and completed operations.

H. Project Record Drawings

1.06 FINAL ADJUSTMENT OF ACCOUNTS

A. Submit a final statement of accounting to Owner.

B. Statement shall reflect all adjustments to the contract sum:

1. The original contract sum.
2. Additions and deductions resulting from:
   a. Previous change orders.
   b. Allowances.
   c. Unit prices.
   d. Deductions for uncorrected work.
   e. Deductions for liquidated damages.
   f. Deductions for re-inspection payments.
   g. Other adjustments.
3. Total contract sum, as adjusted.
4. Previous payments.
5. Sum remaining due.

C. Owner will prepare a final change order reflecting approved adjustments to the contract sum which were not previously made by change orders.

1.07 FINAL APPLICATION FOR PAYMENT

A. Contractor shall submit the final application for payment in accordance with procedures and requirements stated in the General Conditions.

B. Final payment will not be provided until all closeout submittals have been received and approved, including but not limited to:

1. Submission and approval of invasive species monitoring reports
2. Submission and approval of as-built documentation
3. Approval of grass development in accordance with the specifications

PART 2.00 - PRODUCTS

Not Used

PART 3.00 - EXECUTION

Not Used

END OF SECTION

PART 1.00 - GENERAL

1.01 REQUIREMENTS INCLUDED

A. Maintain at the site, for the Owner, one record copy of

1. Drawings
2. Specifications
3. Addenda
4. Change orders and other modifications to the contract
5. Engineer field orders or written instructions
6. Reviewed shop drawings, product data and samples
7. Field test records

B. The Contractor will be required to furnish, at no additional expense to the Owner, the services of a surveyor and/or Engineer registered in the state where the project is located and under whose direction shall be obtained and recorded all surveys, measurements and such other data required for the determination of the as-built records of the construction of all site work.

1.02 MAINTENANCE OF DOCUMENTS AND SAMPLES

A. Store documents and samples in Contractor's field office apart from documents used for construction.

B. Provide locked file cabinet for storage of documents.

C. Provide locked cabinet space for storage of samples.

D. File documents and samples in accordance with CSI/CSC format.

E. Maintain documents in a clean, dry, legible condition and in good order. Do not use record documents for construction purposes.

F. Make documents and samples available at all times for inspection by the Engineer and Owner.

1.03 MARKING DEVICES

A. Provide felt tip marking pens for recording information in the color code designated by Owner/Owner’s Representative.

1.04 RECORDING

A. Label each document "Project Record" in neat large printed letters.

B. Record information concurrently with construction progress.

C. Do not conceal any work until required information is recorded.

D. Drawings: Principal dimensions, elevations and other data, as required, shall be recorded for all work, such as:

1. Deviations of any nature made during construction.
2. Location of underground utilities.
3. Field changes of dimension and detail.
4. Changes made by field order or by change order.
5. Details not on original contract drawings.

E. The marked-up prints shall be inspected weekly by the Owner/Owner's Representative and shall be corrected immediately if found either inaccurate or incomplete.

F. Specifications and Addenda: Legibly mark each section to record:

1. Manufacturer, trade name, catalog number, and supplier of each product and item of equipment actually installed.
2. Changes made by field order or by change order.

1.05 FINAL MEASUREMENTS

A. The Contractor shall provide qualified personnel and equipment for taking final measurements for quantities and record documents.

B. Final measurements shall include topographic survey of sufficient detail to provide 1-foot contours within the limits of work and the alignment of the channel and water body resulting from the dam removal.

1.06 RECORD DRAWINGS

A. At the completion of the project, the record prints shall be submitted to the Owner for final review and comment. Records drawings shall be prepared by a registered professional surveyor licensed in the Commonwealth of Massachusetts and reference NAVD88 elevations and NAD83 State Plane coordinates. In the event of elevation discrepancies, record drawings shall provide a conversion from plan datum to NAVD88. Record drawings shall, at a minimum, include the following:

1. Full existing conditions survey of in the area of the existing dam embankment including the limits of fill at the primary spillway, upstream and downstream walls which remain, breach geometry, layout of coir logs, containment berm and containment area final grades, riffle grades and locations, constructed sections of the downstream channel from the breach to the downstream limits of work, and armoring of the railroad culvert.

2. Existing conditions survey of the former impoundment area including exposed pond bottom and near river alignment. Aerial/drone survey will be an accepted means of surveying the impoundment area.

3. Longitudinal survey of the longitudinal profile and stream cross-sections from downstream of the former dam through the upstream end of the former impoundment. The survey reference point shall comprise a permanent marker or recoverable survey point with known coordinates, such as a fixed point shown on the as-built plan, an existing bench mark, or a new benchmark. That marker should be identified or referenced on the plans and on the as-built plans.

B. The Contractor shall correct, amplify and do all other work as may be required by the Engineer to complete the drawings in a manner satisfactory to the Engineer and at no additional cost to the Owner.

C. Upon approval, the Contractor shall provide a full size final record drawing set in PDF and DWG format to the Engineer.

1.07 SUBMITTAL

A. At contract close-out, deliver record documents to the Owner.

B. Accompany submittal with transmittal letter in duplicate, containing:

1. Date
2. Project title and number
3. Contractor's name and address
4. Title and number of each record document
5. Signature of Contractor or his authorized representative

PART 2.00 - PRODUCTS - Not Used

PART 3.00 - EXECUTION - Not Used

PART 4.00 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

A. GENERAL REQUIREMENTS shall be measured per lump sum, as specified with specification section- Measurement and Payment

4.02 PAYMENT

A. GENERAL REQUIREMENTS shall be paid for under Contract Item 2, as specified with specification section- Measurement and Payment.

4.03 PAYMENT ITEMS

Item No.	Payment Item	Unit
2	General Requirements	Lump Sum

END OF SECTION

Town of Dudley

Carpenter Pond Dam Removal

DIVISION 2 – SITE WORK

22116.00 **SECTION 02005**
04/26 **MOBILIZATION/DEMOBILIZATION**

PART 1.00 - GENERAL

1.01 WORK INCLUDED

A. This section covers the work necessary to move in personnel and equipment, set up Contractor's temporary offices, buildings, facilities, utilities, prepare the site for construction, establish access ways, and demobilize.

B. Work associated with temporary offices, buildings, facilities, and utilities shall be provided only as required by the Contractor's means and methods. The contract does not require the provision of temporary offices, building, facilities, or utilities.

1.02 GENERAL

A. The limits of the site and areas designated for Contractor staging are shown on the Drawings.

B. The extent of the limits of work are shown on the drawings. Any activities by the Contractor beyond the limits of work shall be the responsibility of the contractor to coordinate as necessary with the property owner.

C. In the event additional space is required for the Contractor's operations, the Contractor shall make its own arrangements and pay for such additional space.

PART 2.00 PRODUCTS

2.01 TEMPORARY FACILITIES

A. The Contractor shall obtain necessary permits, coordinate, and provide all temporary facilities as required for performing the work, including any facilities specified for the Owner's or the Engineer's use.

B. The Contractor shall design, furnish, and install all temporary foundations, utility connections, and access points as necessary to meet the contractor's means and methods for completing the work. All temporary structures and utility connections shall be installed in accordance with environmental and municipal permits and be removed in their entirety and restored to their pre-construction conditions at the completion of the work.

2.02 TEMPORARY UTILITIES

A. The Contractor shall coordinate for and obtain the necessary permits for provision of or connection to these services.

2.03 SECURITY FENCE

A. Construct temporary security fence as required for the protection of the Contractor's materials, tools, and equipment. Maintain fence during construction.

PART 3.00 EXECUTION

3.01 LAYOUT

A. Set up construction facilities in a neat and orderly manner within the Contractor's staging area and at a location acceptable to the Owner. Accomplish all required work in accordance with applicable portions of these Specifications. Confine operations within the general work limits shown.

3.02 DEMOBILIZATION

A. At the completion of the work and immediately prior to final inspection, clean the entire project area removing all debris, soil, and rubbish.

1. Should the Contractor not remove rubbish, debris, or not clean the facilities and site as specified above, the Owner reserves the right to have final cleaning done by others at the sole expense of the Contractor.

B. The Contractor shall:

1. Employ experienced workers or professional cleaners for final cleaning.

2. Conduct final inspection of concealed spaces in preparation for Contract completion.

3. Remove from the property temporary structures and materials, equipment, and appurtenances not required as part of, or appurtenant to, the completed work.

4. Leave watercourse, gutters, and ditches open and in condition satisfactory to Owner and/or Engineer.

C. At the completion of the work, the Contractor shall:

1. Restore all fencing, driveways, signs, roadway shoulders, walkways, trees, curbing, catch basins, and manhole covers that have been removed, disturbed or damaged.

2. Restore all roadways, parking areas, and disturbed areas to preconstruction condition. Construction access mats may remain in place along the access roadway.

3. Clean all roadways and parking areas of accumulated sediment.

4. Reset the existing gate near the construction entrance.

END OF SECTION

22116.00 **SECTION 02050**
04/26 **DEMOLITION AND REMOVAL**

PART 1.00 - GENERAL

1.01 WORK INCLUDED

A. This section covers the work associated with but not limited to:

1. The removal of the earthen and stone masonry dam and appurtenances to the line and grades shown on the Contract Documents

B. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.

1.02 SUBMITTALS

A. The Contractor shall submit to the Owner and Engineer a schedule of removal and disposal.

B. Contractor shall submit a plan showing location of materials to be stockpiled and stored for resetting.

C. Contractor shall submit disposal site certification and haul roads for all disposal.

D. Permits for transport and disposal of debris.

E. Permits and notices authorizing demolition.

F. Certificates of utility services severances.

1.03 PERMITS AND CODES

A. All work shall comply with all codes, rules, regulations, laws and ordinances for the local municipality, the Commonwealth of Massachusetts, and all other authorities having jurisdiction. All work necessary to make site demolition comply with such requirements shall be provided without additional cost to the Owner.

B. The Contractor shall procure and pay for all permits and licenses required for work under this Section.

C. The Contractor shall not close or obstruct any streets or passageways, unless and until the Contractor shall have first secured all necessary municipal, state, or other permits thereof. No material whatsoever shall be placed or stored nor shall parking be permitted in streets or passageways. The Contractor shall conduct operations to interfere as little as possible with the use ordinarily made of both on-site and off-site roads, driveways, sidewalks, and other facilities near enough to the work to be affected thereby.

1.05 PROJECT CONDITIONS

A. Traffic: Minimize interference with adjoining driveways, parking lots, streets, walks, and other adjacent occupied or used facilities during site operations.

1. Do not close or obstruct streets, walks, or other adjacent occupied or used facilities without permission from the Engineer or Owner and authorities having jurisdiction.

2. Provide alternate routes and signage around closed or obstructed traffic ways.

B. Utility Locator Service: Notify a utility locator service for area where the project is located before commencing any site work.

C. The Contractor is responsible for all construction phase permits including but not limited to: NPDES Construction General Permit, Construction Phase Storm Water Pollution Prevention Plan, and all other applicable permits, registrations, notifications, and applications.

PART 2.00 - PRODUCTS

2.01 GENERAL

A. The Contractor shall provide all materials and equipment in suitable and adequate quantity as required to accomplish the work shown and specified.

B. The Contractor shall not use any explosives for demolition.

PART 3.00 - EXECUTION

3.01 WORKMANSHIP

A. Prior to demolition or removing any materials from the site coordinate with owner to confirm all items the owner would like to salvage have been marked or removed from the site.

B. Take all possible precautions to avoid damaging those materials which are to be salvaged or reused on the site.

C. Demolition work shall be carried out in a careful and orderly manner. Provide adequate protection to persons and property on the site.

D. Do not commence work until trees and other items to be saved have been protected as directed by the Engineer and as shown on the site plan in the field. Protection shall remain and be maintained for the duration of the work.

E. Do not burn any material or debris on the site.

F. Take all possible precautions to avoid damaging those materials which are to be salvaged or reused on the site.

3.02 EXISTING DAM STRUCTURE

A. Remove and dispose concrete and steel portions of the existing dam structure to the limits indicated on the Drawings. Contractor shall be responsible for offsite disposal in accordance with all Federal, State, and local codes, regulations, permits, and ordinances.

B. Unless otherwise indicated, demolition is to extend a minimum of 1-foot below the adjacent surrounding proposed grade.

C. Within the limits of the new stream channel, the existing dam structure shall be removed vertically

in its entirety unless otherwise approved by the Engineer.

D. Remove and stockpile stone masonry for reuse as indicated on the Drawings and indicated by the Owner or Owner's Representatives. Excess stone masonry shall be disposed of offsite unless otherwise requested by the Owner/Engineer; Contractor shall load stones into truck provided by the Owner.

3.03 TITLE, SALVAGE, AND REUSE

A. Property belonging to public bodies or public service companies shall not become the property of the Contractor, unless written authorization is given by the Engineer.

B. The Owner has first privilege to the suitable excess earthwork material excavated from the site and not reused on the site. Material shall be stockpiled and the Owner notified in writing. If the Owner declines the material, the Contractor shall remove and properly dispose of the material at no additional cost to the Owner.

C. All other salvage and materials resulting from the Demolition work shall become the property of the Contractor unless otherwise directed by the Engineer or specified herein or on the Contract Drawings to be stockpiled and shall be removed from the site.

3.04 REMOVAL

A. Remove and legally dispose of, at no cost to the Owner, all materials and debris scheduled for disposal resulting from the Demolition work except those specified herein to be stockpiled. Leave the site in safe and clean condition.

3.05 RESTORATION OF SITE ITEMS

A. Wherever streets, lawns or other items outside the Contract Limit Lines have been disturbed in fulfilling the work required under this Contract, the Contractor shall furnish and install all material at no cost to the Owner to bring finish surfaces level with the existing adjacent conditions. All work shall be installed to match the existing conditions. Notify the proper authorities prior to restoring surfaces outside the Limit of Work to assure conformance to existing requirements.

3.06 GENERAL

A. Protect and maintain benchmarks and survey control points from disturbance during construction.

B. Conduct demolition operations in a manner that will prevent damage to adjacent structures, utilities, pavements and other facilities to remain.

C. Cease operations immediately if any damage, settlement or other adverse effect on adjacent structures occurs. Immediately notify the Engineer and regulatory authorities. Do not resume operations until conditions are corrected, damage repaired, and approval received from the Engineer.

D. Protect existing site improvements to remain from damage during construction.

1. Restore damaged improvements to their original condition, as acceptable to Engineer.

3.07 DISPOSAL

A. No burning of combustible materials will be permitted. Remove all demolition materials from the work site and dispose of in accordance with all federal, state, and local codes, regulations, and ordinances.

B. Town will provided trucking and disposal of earth and stone materials for stockpiling at the Dudley Highway Department facility, Indian Road, Dudley, MA

C. In the event disposal by the Contractor is requested, the Contractor shall dispose of material in accordance with all federal, state, and local codes, regulations, and ordinances.

END OF SECTION

PART 1.00 - GENERAL

1.01 WORK INCLUDED

A. This section covers the work necessary to clear and grub the work area and other areas as specified; to the limits indicated on the drawings; and strip the topsoil from all areas to be filled or graded as shown on the Drawings or designated in the Specifications.

B. This work shall also include the preservation from injury or defacement of all vegetation, and existing objects designated to remain, as shown, specified herein, or beyond the limits of work indicated.

C. The Contractor shall stake the limits of clearing, grubbing, and stripping. The Engineer shall review the location, limits, and methods to be used prior to commencing the work under this section.

PART 2.00 - PRODUCTS

2.01 GENERAL

A. The Contractor shall provide all materials and equipment in suitable and adequate quantity as required to accomplish the work shown, specified herein, and as required to complete the project.

PART 3.00 - EXECUTION

3.01 CLEARING

A. Definition: Clearing shall consist of cutting, removing, and disposing of trees, snags, stumps, shrubs, brush, limbs, and other vegetative growth, and shall be performed in such a manner as to remove all evidence of their presence from the surface and shall be inclusive of sticks and branches greater than 1 inch in diameter or thickness. Clearing shall also include the removal and disposal of trash piles, rubbish, and fencing; and the preservation of trees, shrubs, and vegetative growth, which are designated to remain.

B. Cutting Timber: In the cutting of timber growth, cuts shall be made such that all trees are felled into the area to be cleared. Exercise care when clearing near the clearing limits so as not to damage existing trees, vegetation, structures, or utilities which are outside of the clearing limits. Flush cut all stumps not designated for grubbing by cutting to within 6 inches of the ground surface.

3.02 PRESERVATION OF TREES, SHRUBS, AND OTHER VEGETATION

A. Protect trees, shrubbery, and other vegetation not designated for removal from damage resulting from the Work. Cut and remove tree branches only where such cutting is necessary to allow for construction operation as approved by the Engineer and/or Owner. Remove branches other than those required to complete the Work to provide a balanced appearance of any tree, as approved prior to removal. All pruning performed shall be in accordance with the latest version of the International Society of Arboriculture standards.

3.03 GRUBBING

A. Definition: Grubbing shall consist of the removal and disposal of wood or root matter below the ground surface remaining after clearing and shall include stumps, trunks, roots, or root systems greater than 1/2 inch in diameter or thickness.

B. Areas requiring clearing and grubbing are shown on the Drawings and specified herein.

3.04 DISPOSAL OF CLEARING AND GRUBBING DEBRIS

A. Material shall be promptly removed from the site and disposed of in accordance with all local laws, codes, and ordinances. The Contractor shall bear full responsibility for lawful and safe disposal of all cleared and grubbed material.

3.05 STRIPPING

A. Definition: Stripping shall include the removal of all organic sod, loam borrow, grass and grass roots, remaining after clearing and grubbing.

B. Disposal of Stripping: Loam borrow from stripping operations which meets the requirements specified in Section 02200, EARTHWORK and Section 02900 LANDSCAPING, shall be stockpiled for later use. All other material will be disposed of offsite at the Contractor's expense.

END OF SECTION

PART 1.00 - GENERAL

1.01 WORK INCLUDED

A. This section covers the work necessary for:

1. Excavation to subgrade, preparation of the subgrade, and backfilling for new channel including but not limited to armor stones, stone slab steps, anchor stones, etc.
2. Compaction requirements for backfilling.
3. Material requirements for soils and geotextiles.
4. All ancillary activities requiring excavation and backfilling.

B. All excavation is unclassified.

1.02 DEFINITIONS

A. Boulder: A stone particle with a minimum dimension of 36 inches.

B. Clean fill: Imported granular material free of trash, refuse, rubbish or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, plastic, cardboard, pipe, tires, ashes, refrigerators, motor vehicles or parts or fragments of any of the foregoing.

C. Completed Course: A course or layer that is ready for the next layer or next phase of the work.

C. Excavation: Removal of material encountered above elevations and to lines and dimensions indicated on the drawings.

1. Additional Excavation: Excavation below subgrade elevations or beyond the indicated lines and dimensions as directed by the Engineer or Owner.
2. Bulk Excavation: Excavation more than 6 feet in width and more than 10 feet in length.
3. Trench Excavation: Excavation 6 feet in width or less for the installation of utilities and footings.
4. Unauthorized Excavation: Excavation below subgrade elevations or beyond indicated lines and dimensions without direction by the Engineer. Unauthorized excavation, as well as remedial work directed by the Engineer, shall be without additional compensation.
5. Unclassified Excavation: The nature of materials to be encountered has not been identified or described herein.

D. Fill: Soil materials used to raise existing grades.

E. Frost Zone: The area within 4 feet of finished grade.

F. Influence Area: The area within planes sloped downward and outward at an angle of 60 degrees from the horizontal from (a) 1 foot outside the outermost edge at the base of foundations or slabs; or (b) 1 foot outside the outermost edge at the surface of roadways or shoulder: or (c) 0.5 foot outside the exterior edge at the spring line of pipes and culverts.

G. Imported Material: Material obtained by the Contractor from sources off the site.

H. “In-the-dry”: In-situ soil moisture content of no more than two percentage points above the optimum moisture content for that soil.

I. Optimum Moisture Content: Determined by the ASTM standard specified to determine the maximum dry

density for relative compaction.

J. Prepared Ground Surface: The ground surface after clearing, grubbing, stripping, excavation, and scarification and/or compaction.

K. Relative Compaction: The ratio, in percent, of the as-compacted field dry density to the laboratory maximum dry density as determined by ASTM D1557 (i.e. the Modified Proctor Test). Corrections for oversize material may be applied to either the as-compacted field dry density or the maximum dry density, as determined by the Engineer.

L. Relative Density: As defined by ASTM D4253 or D4254.

M. Rock: Material in beds, ledges, unstratified masses, conglomerate deposits that cannot be removed, in the opinion of the Engineer, without systematic drilling, ram hammering, blasting, or ripping. Rock also includes boulders of rock material that exceed 2 cu. yd. for bulk excavation or 1 cu. yd. for trench excavation.

N. Soils Representative: The Geotechnical Engineer or a delegate of the Geotechnical Engineer that observes and records the construction of the subgrade, backfill, slabs, footings, utilities, pavements, and related items within the Contract Documents.

O. Structures: Buildings, footings, foundations, retaining walls, slabs, tanks, curbs, mechanical and electrical appurtenances, or other man-made stationary features constructed above or below the ground surface.

P. Subbase Course: Course placed between the subgrade and base course for asphalt pavement, or course placed between the subgrade and a cement concrete pavement or a cement concrete or asphalt walk.

Q. Subgrade: Surface or elevation remaining after completing excavation, or top surface of a fill or backfill immediately below subbase, drainage fill, or topsoil materials.

R. Suitable Soil: Soil that has been approved by the Engineer for use in a designated area.

S. Unclassified Excavation: Excavation to subgrade elevations regardless of the character of surface and subsurface conditions encountered. Unclassified excavated materials may include rock, boulders, soil materials, and obstructions.

T. Unsuitable Soils: Existing soils that, in the opinion of the Engineer and Owner's Representative, are unsuitable to remain in their existing location that are deposited outside the excavation limits such as mulch, peat, organic silt, topsoil, sod, ash, deleterious material, roots greater than ¼-inch in diameter, and/or particles greater than four inches in diameter, that are not satisfactory for use as determined by the Engineer or Owner.

1. Anticipated unsuitable soils: Unsuitable soils identified in the drawings, specifications, test pit logs, or boring logs provided.
2. Unanticipated unsuitable soils: Unsuitable soils not identified in either the geotechnical report, test pits, or boring logs provided as part of the project manual.

U. Utilities: On-site underground pipes, conduits, ducts, and cables or overhead wires, as well as underground services within buildings.

V. Well-Graded: A mixture of particle sizes that has no specific concentration or lack thereof of one or more sizes. Well-graded does not define any numerical value that must be placed on the coefficient of

uniformity, coefficient of curvature, or other specific grain size distribution parameters. Well-graded is used to define a material type that, when compacted, produces a strong and relatively incompressible soil mass free from detrimental voids.

1.03 SITE INFORMATION

A. Test borings and other explorations may be made by the Contractor at no cost to the Owner. Damage to the site as a result of additional test borings shall be repaired at the Contractor's sole expense.

1. Test borings shall be backfilled with grout for their entire length.

2. Backfilling of test pits or any other excavation performed within the influence area of the dam shall be backfilled in 1-foot-thick lifts compacted to 98% of the maximum dry density of the placed material.

3. Backfilling of test borings shall be completed in the presence of the Owner's Representative. The Contractor shall be responsible for monetary compensation to the Owner's Representative for observation of the backfill of test borings.

1.04 EXISTING UTILITIES

A. Call Dig Safe **1-888-DIG-SAFE (1-888-344-7233)** 72 hours before commencing with any excavation, in order that all pertinent utility companies become informed of such work.

B. When active utilities existing on the site are encountered they shall be carefully protected from damage. When an active utility line is exposed during construction, its location and elevation shall be documented and both the Engineer and the Owner notified in writing.

C. Active utility lines damaged in the course of construction operations shall be repaired or replaced as determined by the Engineer, without additional cost to the Owner.

1.05 USE OF EXPLOSIVES

A. Use of explosives is prohibited.

1.06 SUBMITTALS

A. Provide the following submittals:

1. Contractor shall submit for review a plan detailing the nature and scope of any additional subsurface investigations.

2. Certification, test results, source, and samples for all imported earth materials as outlined in Section 01400. Submit bag samples (40lbs minimum) of each type of fill material to be used for backfilling to the Engineer at least 10 working days in advance of its required use. Representative samples of excavated fill material which will be used for backfill shall also be submitted for testing.

3. Support of excavation submittals
   i. Details identifying the design, layout, and method of construction of any required support of excavation system, stamped by a Professional Engineered licensed by the Commonwealth of Massachusetts.
   ii. Design calculations identifying each support of excavation system's ability to withstand all

loads during all stages of the excavation and backfilling process.

iii. Documentation certifying that each excavation support system that is constructed in the field remains, throughout its use, to be in compliance with the design of that specific system.

4. Catalog and manufacturer's data sheets for compaction equipment.

5. Copies of permits obtained for excavation that are required by state and local governing authorities.

6. Manufacturer's certificate of compliance attesting that geotextiles meet the requirements of these specifications. Provide mill certificates stating the length and width of fabric contained on each roll.

1.07 IMPORTED MATERIAL ACCEPTANCE

A. All imported earth materials specified in this section are subject to the following requirements:

1. All tests necessary for the Contractor to locate acceptable sources of imported material shall be made by the Contractor. Certification that the material conforms to the Specification requirements along with copies of the test results from a qualified commercial testing laboratory shall be submitted to the Engineer for approval at least 21 calendar days before the material is required for use. All material samples shall be a minimum of 40 pounds and furnished by the Contractor at the Contractor's sole expense. Samples shall be representative and be clearly marked to show the source of the material and the intended use on the project. Sampling of the material source shall be done by the Contractor in accordance with ASTM D75. Tentative acceptance of the material shall be based on an inspection of the source by the Engineer and/or the certified test results submitted by the Contractor to the Engineer at the Engineer's discretion. No imported materials shall be delivered to the site until the proposed source and materials tests have been tentatively accepted in writing by the Engineer. Final acceptance will be based on Quality Control and Quality Assurance tests made on samples of material taken from the completed and compacted course.

2. Gradation tests by the Contractor shall be made on samples taken at the place of production prior to shipment. Samples of the finished product for gradation testing shall be taken as specified in Section 01400, QUALITY CONTROL, or more often as directed by the Engineer if variation in gradation is occurring, or if the material appears to depart from the Specifications. Test results shall be forwarded to the Engineer within 48 hours of testing.

3. If tests conducted by the Contractor or the Engineer indicate that the material does not meet Specification requirements, material placement will be terminated until corrective measures are taken. Material that does not conform to the Specification requirements and is placed in the work shall be removed and replaced at the Contractor's sole expense. Retesting of material that does not meet specification requirements shall be performed at the Contractor's sole expense.

4. Imported fills shall be clean fill material.

1.08 SHORING, BRACING, AND SLOPING

A. The Contractor shall design, furnish, install, and maintain shoring, bracing, and sloping necessary to support the sides of excavations, maintain a stable excavation bottom, control groundwater, and to keep and to prevent any movement which may damage adjacent utilities or structures, damage or delay the work, or endanger life and health. Furnish, install, and maintain shoring, bracing, and sloping as required by OSHA and other applicable governmental regulations and agencies.

1.09 EXCAVATION SAFETY

A. The Contractor shall be solely responsible for making all excavations in a safe manner. Provide appropriate measures to attain a stable base, retain excavation sideslopes and prevent earth slides to ensure that persons working in or near the excavation are protected.

1.10 CODES, ORDINANCES, AND STATUS

A. The Contractor shall familiarize itself with, and comply with, all applicable codes, ordinances, statues, and bear sole responsibility for the penalties imposed for noncompliance.

1.11 TOLERANCES

A. All material limits shall be constructed within a vertical tolerance of 0.1 foot and a horizontal tolerance of 1 foot except where dimensions or grades are shown or specified as minimum. All grading shall be performed to maintain slopes and drainage as shown. No reverse slopes will be permitted.

PART 2.00 - PRODUCTS

2.01 MATERIALS

A. Fill materials shall be clean fill and shall consist of hard, durable, sand and gravel and shall be free from ice and snow, roots, sod, rubbish, and other deleterious or organic matter.

B. Dense Grade Pathway shall be imported material conforming to Item M2.01.7 of the MASSDOT Standard Specifications and shall be utilized modified such that 100% passes the 1" sieve for UA considerations. Pathway thickness shall be a minimum of 6 inches.

C. Gravel Borrow/Sand Gravel fill material shall be imported material conforming to Item M1.03.0 of the MassDOT Standard Specifications. Gravel Borrow/Sand Gravel fill shall be utilized as fill for the regrading of the work area and shall conform to M1.03.0, Type B.

D. Drainage Stone shall be imported material having a maximum percentage loss of 12 percent as determined by the sodium sulfate test, AASHTO T104, and comply to the following gradation:

Drainage Stone	
Sieve Size	Percent Passing
1-1/2 inch	100
1-1/4 inch	85-100
¾ inch	10-40
½ inch	0-8
No. 200	<1

E. Common Borrow shall be excavated onsite material free of roots, sod, rubbish or other deleterious or organic matter. Owner/Owner's Representative reserves the right to require additional testing of Common Borrow prior to determination of suitability for reuse.

F. Water for compaction shall be furnished by the Contractor at no additional cost. Water for compaction from sources other than potable sources shall be as approved by the Engineer.

1. Prior to pumping water from the reservoir the Contractor shall receive written permission from the

Owner stating maximum allowable pumping rates and dates where usage of impounded waters are acceptable.

2. Pumping of reservoir waters shall follow the requirements set forth in Section 02400.

G. Geotextile fabric shall be nonwoven, needle punched pervious sheets of polyester, polyethylene, nylon, or polypropylene filaments formed into a uniform pattern. The geotextiles shall have the following minimum properties when measured in accordance with the referenced standards.

Test	**Method**	**Type I**
Grab Tensile Strength (lbs)	ASTM D4632	≥ 160
Elongation at Required Strength (%)	ASTM D4642	50
Trapezoidal Tear Strength (lbs)	ASTM D4533	≥ 60
CBR Puncture Strength (lbs)	ASTM D6241	≥ 400
UV Resistance (after 500hrs)	ASTM D4355	70%
Apparent Opening Size (US Standard Sieve)	ASTM D4751	70
Permittivity (sec-1)	ASTM D4491	1.5
Flow Rate (2) (gal/min/sf)	ASTM D4491	110

PART 3.00 EXECUTION

3.01 GENERAL

A. All Loam Borrow and unsuitable or excess materials shall be stripped from areas of new construction or regrading. Materials suitable for reuse shall be stored in approved locations that will not interfere with construction operations. Loam Borrow shall be stripped and stored before any underlying excavating is begun. Stripped Loam Borrow to be reused shall be free from clay, large stones and debris. All excess and unsuitable materials shall be legally disposed of off-site by the Contractor.

B. Earth excavation is unclassified and shall include the excavation, removal and satisfactory disposal or reuse of all materials of whatever nature encountered from within the limits indicated or specified (other than rock ledge) or as directed in writing. It shall include, but not be limited to, earth materials such as peats, organic or inorganic silts, clay, sand and gravel, cobbles and boulders less than 3 cubic yards in volume, soft or disintegrated rock which, in the opinion of the Engineer, can be removed without hammering or drilling, pavement, and all obstructions not specifically included in another section.

C. All excavations shall be backfilled as specified. All compacted fill shall be placed in layers. Each layer shall be systematically compacted by approved compaction equipment to the density specified herein.

D. Compaction equipment in open areas shall consist of a vibratory plate compactors with a minimum static weight of 750 lbs. and a minimum centrifugal force of 10,000 lbs.

E. Compaction equipment in confined area (in trenches and adjacent to walls) shall be accomplished by hand-operated or remote operated vibratory compaction.

F. Material that is allowed to become saturated may be difficult to traverse, place, and compact. Care shall be taken to maintain the appropriate moisture content and prevent ground water, surface water, or precipitation from saturating stockpiled or placed material.

1. Elastic-type deformation (pumping or weaving) may indicate there is excess moisture in the soil without adequate drainage time as the load is applied. Notify the Engineer of this condition.

2. The contractor, at no cost to the Owner, may decide to stay off the area until the excess pore water pressure is dissipated naturally, or the material can be removed and replaced with dryer approved material.

G. The cleaned rock surface shall be inspected by the Engineer prior to the Contractor placing backfill or concrete against the rock. Backfill placed against the surface of rock without prior inspection by the Engineer shall be subject to removal and replacement at the discretion of the Engineer at no additional cost to the Owner.

3.02 WORK IN FREEZING WEATHER

A. Protect excavation bottoms and sides against freezing when atmospheric temperature is less than 35 degrees Fahrenheit.

B. In freezing weather, a layer of fill shall not be left in an uncompacted state at the close of a day's operation. Prior to terminating operations for the day, the final layer of fill, after compaction, shall be rolled with a smooth-wheeled roller to eliminate ridges of soil left by tractors, trucks and compaction equipment. Once compacted material should be protected from freezing. Material that freezes after compaction is subject to rejection, removal, and replacement at the discretion of the Owner/Engineer at no additional cost.

C. The Contractor shall not place a layer of fill on top of snow, ice, or soil that was permitted to freeze.

1. Removal of these unsatisfactory materials will be required as determined by the Owner/Engineer.

2. Fill to be incorporated into the work shall not be permitted to freeze. "Breaking up" frozen soil will not be considered suitable for making frozen soils suitable for reuse.

3.03 REMOVAL OF WATER

A. Refer to Section 02400, DEWATERING CONTROL AND DIVERSION OF WATER.

B. The existing materials found within most dam structures typically have significant fines content, which can trap groundwater within the existing soil even after a pond has been drawn down. This trapped water often leaches into an open excavation, which if not controlled, could adversely affect subgrade preparation and backfilling operations. The Contractor should anticipate and provide means for controlling this issue during all earthwork operations.

3.04 STOCKPILE OPERATION

A. Keep stockpiles and areas around them graded to drain and take all necessary precautions to minimize erosion including but not limited to the installation of baled hay. Maintain access roads as necessary at the Contractor's expense. Excavation at the stockpiles shall be limited to that depth which will permit the completed area to slope to drain to the surrounding area after completion of all work.

1. The Contractor shall be responsible for protecting stockpiles of suitable material.

2. Protect the stockpile so that the stockpiled material remains in a condition suitable for use in the project.

3. Cover or otherwise protect the stockpiles to prevent saturation of the material from precipitation and to protect the material from the development of frost.

4. Material lost through erosion or deemed unacceptable for reuse due to improper stockpiling shall be replaced by the Contractor at no additional cost to the Owner

B. Remove all stockpiles at the completion of the project. Grade the surrounding area at completion and finish the area as specified in Section 02900, LANDSCAPING.

3.05 BACKFILL

A. The Contractor shall inform the Engineer in writing a minimum of 48 hours prior to starting any backfill operation. The information shall include the location to be filled, the amount of fill to be placed, and the material to be placed.

B. Prior to placing any backfill, remove all trash, debris, and/or any other unsuitable material from areas where backfill is to be placed. Do not place frozen backfill. Do not place backfill on frozen ground or in areas where standing water is present.

C. Do not operate earth-moving or other heavy equipment within a distance that will cause damage to new or existing structures. Compact embankment fill backfill as shown within the contract drawings with hand-operated vibratory compactors or other acceptable equipment in 12-inch maximum loose lifts. Each and every lift in the influence area and within 10 feet of the dam shall be compacted to not less than 98 percent relative compaction. Compaction shall be performed in a manner, which will not damage new or existing structures and utilities.

3.06 GRAVEL BORROW FOR GRADING

A. Grade work areas as shown on the Drawings, using onsite Common Borrow or imported Gravel Borrow. Place material in 12-inch maximum loose lifts and compact each lift to not less than 92 percent relative compaction. Make proper allowances for surface treatments.

3.07 MOISTURE CONTROL

A. During the compacting operations, the moisture content of the material shall be within the range necessary to obtain the specified compaction, as determined by laboratory testing.

B. Maintain moisture content throughout the lift. Insofar as practicable, add water to the material at the site of excavation. Supplement, if required, by sprinkling the material.

C. Do not compact material that contains excessive moisture. Aerate material by blading, discing, harrowing, or as approved, to hasten the drying process.

D. Stockpiled soils which are left uncovered on the site may become saturated due to rainfall or other precipitation events. The Contractor shall protect stockpiled material from becoming too wet to achieve adequate compaction. Any soil which becomes too wet shall be dried or replaced by the Contractor at no additional cost to the Owner.

3.08 COMPACTION

A. Place material in 12-inch maximum loose lifts and compact each lift to not less than 98 percent of the maximum dry density as determined by the Modified Proctor Test. Make proper allowances for Bedding for Riprap, Riprap, Loam Borrow, Low Permeability Fill, and Engineered Fill.

B. The Contractor shall make all necessary excavations and preparations for testing by the Owner. Excavations for density tests shall be backfilled with material similar to that excavated, and compacted to the specified density by the Contractor. Failure of the backfill material to achieve the specified density will be just cause for rejection of any or all portions of the excavation section tested. The Contractor will not be granted an extension of time or additional compensation for testing or repair of backfill ordered by the Engineer.

3.09 PROOF COMPACTION

A. Areas requiring excavation shall be excavated to subgrade and then proof rolled, this is inclusive of slopes requiring additional fill after stripping of loam and topsoil. Areas requiring filling shall be proof rolled in their existing condition prior to any filling.

B. Proof rolling on horizontal surfaces shall be accomplished by using a vibratory plate compactor as stated in Part 3.01.D of this Section. At least six passes of the total area shall be made, three in each direction. Procedure for proof rolling of sloped surfaces shall be discussed with the Engineer prior to execution.

C. If any unstable areas or areas indicating problem soils are discovered, these areas shall be removed and replaced with compacted granular fill.

D. Proof rolling operations shall be completed in the presence of the Engineer.

END OF SECTION

PART 1.00 - GENERAL

1.01 WORK INCLUDED

A. Work covered under this Section shall include all work for erosion and sediment control.

B. All work shall conform to the requirements stated herein and to the requirements of the regulatory agencies having jurisdiction over the areas of work.

1.02 SUBMITTALS

A. Provide the following submittals:

1. Manufacturer's certificate of compliance for geotextiles.
2. Supplier's certification for straw bales
3. Manufacturer's material information for turbidity barriers
4. Manufacturer's material information for silt fence

1.03 COMPLIANCE

A. All work shall be done in compliance with the provisions of all local, state and federal regulatory agencies. Failure to comply with these provisions shall constitute grounds for the Owner ordering work to cease until such provisions are met.

B. If required, the Contractor shall meet with the Conservation Commission and other regulatory agencies for clarification regarding requirements of the execution of, and compliance with, environmental protection programs. The Contractor shall familiarize itself with the nature of the work to be performed. The Contractor shall be responsible for scheduling its submittals and/or meetings, if required, with the Conservation Commission

PART 2.00 - PRODUCTS

2.01 STRAW BALES

A. Bales of straw having a minimum size of 1 foot by 1.5 feet by 2 feet and conform to the applicable portions of Section 767 of the MASSDOT Standards. Bales shall be made of straw with forty pounds minimum weight and one hundred- and twenty-pounds maximum weight. They should be either wire or nylon bound.

2.02 SILTATION FENCE

A. Filter fabric siltation fencing shall be a woven filter fabric having a permittivity of not less than 0.05 sec^{-1}, a water flow rate of a minimum 12 gallons per minute per square foot, and a grab tensile strength of a minimum of 100 lbs. The material shall have a high sediment filtration capacity, high slurry flow and minimum clogging characteristics.

B. Silt fences or sedimentation barriers shall consist of wood posts with industrial support netting and sediment control filter fabric attached.

C. Wood post shall be standard 2”x2”x4.5’ long hardwood stakes commonly used to support filter fabric. Silt fence shall be furnished standard with filter fabric attached to hardwood posts and spaced at a maximum distance of 8 feet.

D. Provide suitable heavy nylon cord for securing abutting silt fence posts.

E. The filter fabric material shall be needle punched non-woven polypropylene geotextile conforming to the following criteria:

Fabric Properties	Minimum Acceptance Value	Test Method
Grab Tensile Strength (1bs)	124	ASTM D4632
Elongation of Failure (%)	15	ASTM D4632
Mullen Burst Strength (PSI)	300	ASTM D3786
Puncture Strength (1bs)	100	ASTM D4833
Flow Rate (gal/min/sf)	10	ASTM D4491
Apparent Opening Size (sieve)	30	ASTM D4751
Ultraviolet Radiation (% strength retained)	70	ASTM D4355
Unit Weight	5	ASTM D3776
Thickness	80	ASTM D1777
Trapezoidal Tear Strength	50	ASTM D4533
Permittivity	.01	ASTM D4491

F. Acceptable filter fabric materials include “Mirafi Envirofence”, “Propex Silt Stop” by Amoco Fabrics Co or equal approved by the Designer.

G. Control fabric shall be at least 3 feet wide.

2.03 TURBIDITY CURTAIN/BARRIER

A. Turbidity curtain shall consist of a Type I curtain in accordance with ACOE standards.

B. Curtain shall be permanently attached to the bottom of the floatation unit and weighed down with 1/4” galvanized chain.

C. Curtain shall include expanded polyethylene flotation units sized adequately to resist conditions expected at the site.

D. The curtain material shall consist of slit film woven polypropylene having 200 lb. tensile strength.

2.04 EROSION CONTROL MATS

A. Erosion control mats shall consist of temporary degradable rolled erosion control product composed of processed natural or polymer fibers mechanically, structurally or chemically bound together to form a continuous matrix to provide erosion control and facilitate vegetation establishment

2.05 FILTER SOCKS/SILT SOCKS

A. Filter Socks are biodegradable sediment-trapping devices. Manufacturers include SiltSoxx, Corr Logs, Straw Wattles, or equal.

2.06 WOODEN STAKES

A. Stakes: Oak wood, minimum 1-inch by 1-inch, by minimum 36 inches long.

2.07 WATER

A. Water used for dust control and equipment washes shall be clean and free of salt, oil, and other injurious materials. Water for these purposes is not available on site. The Contractor shall provide all necessary water.

2.08 CONSTRUCTION ENTRANCE/EXIT MATS

A. Portable Mats: Portable mats shall be prefabricated mats specifically designed to reduce off-site transport of site materials.

B. Stone Pad: Stones pads shall consists of suitable aggregate with separation medium to allow for complete removal post construction.

a. Geotextile: A non-woven geotextile fabric that meets the requirements of Section 804.11 of the *Standard Specifications for Highway Construction* "Geotextile Fabric for Slope Protection". Fabric shall be Mirafi 500x or approved equal.
b. Aggregate: Aggregate shall consist of drainage stone.

PART 3.00 - EXECUTION

A. If necessary, the Contractor shall furnish, install, maintain, and remove dewatering basins. Dewatering basins shall be as detailed on the Contract Drawings or as approved by the Owner and Engineer. Maintain dewatering basins throughout their use as required to provide adequate treatment of dewatering waste waters.

B. The Contractor shall maintain siltation fencing in good condition, removing accumulated sediment periodically as directed by the Engineer. Remove siltation fencing in its entirety upon completion of the Work.

C. The Contractor is advised that stream flows and water levels of resource areas may vary substantially due to climatic and seasonal conditions and Contractor shall be responsible for controlling and handling ground and or surface water regardless of the volume of water and regardless of whether this flow is due to flood waters from storms.

D. The Contractor shall take precautions to minimize and control erosion and turbidity within the contract area. These precautions shall be subject to approval by the Engineer and shall include, but not necessarily be limited to, the following:

1. Straw bale erosion barriers and sedimentation control fencing shall be staked in place down gradient from all exposed material storage areas to reduce the amount of suspended solids in runoff water. The Contractor shall promptly remove any sedimentation buildup over 6 inches in depth that accumulates behind the erosion barriers. Barriers shall be checked after every storm and at regular weekly intervals.

2. The Contractor shall furnish, install, and maintain the turbidity barrier with anchorage to fixed structures to prevent loss of sediment. At the completion of the project, the barrier shall be removed such that the release of accumulated sediment is prevented.

E. Construction Entrance Mats: The Contractor shall provide construction entrance mats to prevent the transport of excess soils and other materials onto public ways. The entrance mat shall consist of temporary facilities to remove sediment from the tires of vehicles leaving the construction site.

F. Removal and clean up: All temporary erosion control facilities and accumulated sediments shall be removed and legally disposed in a neat and workmanlike manner when all disturbed areas have been satisfactorily stabilized.

G. Provide approved jute mesh or erosion control mats installed in accordance with manufacturer's recommendations on slopes steeper than 3H:1V or as otherwise requested by the Owner's representative.

H. The contractor shall be responsible for water quality monitoring at locations upstream and downstream of the dam removal site prior to, during, and after in-water work per the 401 Water Quality Certificate conditions. Monitoring shall include turbidity measurements with an instrument capable of recording Nephelometric Turbidity Units (NTU). NTU measurements shall be recorded and logged within 24 hours of precipitation events of any size, or at minimum twice per week if no precipitation occurs. A log of recorded NTU measurements shall be maintained and kept on site for the duration of construction. A copy of the log will be provided to MassDEP to demonstrate compliance with the Water Quality Certificate.

END OF SECTION

PART 1.00 - GENERAL

1.01 SCOPE OF WORK:

A. Work covered by this specification includes; material, labor, plant and equipment to construct the the breach left and right bank protection as shown on the drawings and as called for herein. The work includes; excavation, grading and furnishing, handling, and placing rip rap stone.

B. Work includes the reuse and replacement of boulders stockpiled for excavation to accommodate work.

1.02 QUALITY ASSURANCE:

A. The work shall be performed by a qualified contractor having experience in constructing stone slope protection of similar type.

B. Provide stone with the physical properties required by ASTM Standard C33 for quarry stone for producing coarse aggregate for concrete. Conform to ASTM C88 and C131 for the testing for soundness and resistance to abrasion. Conform to the requirements of the abrasion test for stone and provide the requirements of the soundness test for all stone. Use representative chips, one inch in size taken from the stone as furnished.

C. Employ and pay for an independent testing laboratory in the business of testing soils and soil aggregate. The laboratory shall have a minimum of 10 years experience, be accredited by the American Association of State Highway and Transportation Officials (AASHTO) and have completed 3 jobs of equivalent size and complexity.

1.03 REFERENCES:

A. American Society of Testing and Materials Publications:

1. C33: Concrete Aggregates
2. C88: Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate.
3. C127: Specific Gravity and Absorption of Coarse Aggregate.
4. C131: Resistance of Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine.

1.04 SUBMITTALS:

A. Submit the following in accordance with Section 01340:

1. Independent laboratory test results for unit weight and for gradation specified in subparts 2.01 through 2.04 and conforming to all requirements in subpart 1.03. Submit before delivery and within one week after subsequent tests.
2. Submit independent testing laboratory’s qualifications as specified in paragraph 1.3 C. Include with all references the names, current addresses, and telephone numbers of person in charge of representing the Owner or Owners at the time of previous work.

PART 2 - MATERIALS

2.01 QUALITY OF IMPORTED STONE

A. All imported stone shall consist of sound, hard, dense, durable rock which has been separated from bedrock in place by quarrying. Unit weight of stone shall not be less than 165 pounds per cubic foot, dry in air. The stone shall be free from open or incipient cracks, seams and fissures, and from porous structure, solution cavities, planes of weakness, and from component minerals and cementing or bonding materials that may contribute to spalling or breakdown during handling and placing and from wave action and chemical action from air and water. No stone shall be used in which the least principal dimension is less than one third of the greatest dimension. Slabs, boulders and round stones will be rejected. Stone shall, in general, be of irregular and angular shape; however, not more than 25% may be roughly rectangular, provided such stone is placed with its long axis perpendicular to the length of the structure.

B. Gradation of imported stone shall meet the requirements as specified in the following sections. The contractor shall coordinate with his supplier as necessary to provide material in accordance with these specifications.

C. Stone used for dumped riprap shall be hard, durable, angular in shape, resistant to weathering and shall meet the gradation requirement specified. Neither breadth nor thickness of a single stone should be less than one-third its length. Rounded stone or boulders will not be accepted unless authorized by special provisions.

D. Stone shall be free from overburden, spoil, shale, and organic material

E. Each load of riprap shall be reasonably well graded from the smallest to the maximum size specified. Stones smaller than the specified 10% size and spalls will not be permitted in an amount exceeding 10% by weight of each load.

F. Control of gradation will be by visual inspection. The Contractor shall provide at the locations specified a mass of rock of at least five tons meeting the gradation for the class specified. The sample at the construction site may be a part of the finished riprap covering. At the quarry, an additional sample shall be provided. These samples shall be used as a frequent reference for judging the gradation of the riprap supplied. Any difference of opinion between the Engineer and the Contractor shall be resolved by dumping and checking the gradation of two random truckloads of stone. Mechanical equipment, a sorting site and labor needed to assist in checking gradation shall be provided by the Contractor at no additional cost to the Owner.

2.02 ANCHOR STONES

1. Contractor shall reuse onsite stone approved for reuse prior to importing additional stone.

2. Anchor Stones shall be utilized along the toe of the left and right slopes of the new channel. Anchor Stones shall be imported or salvaged on-site material conforming to M2.02.2 of the MASSDOT Standard Specifications and shall be approximately 36 inches in diameter.

2. Anchor Appearance: The anchor stone shall be clean and have a uniform appearance. The visual appearance of the proposed stone must be approved by the Engineer.

2.03 ARMOR STONE

1. Contractor shall reuse onsite stone approved for reuse prior to importing additional stone.

2. Armor Stone shall be utilized below the stone slab steps under El. 470.0. Armor Stone shall be imported or salvaged on-site material conforming to M2.02.2 of the MASSDOT Standard Specifications with the following gradations:

Armor Stone Size (in.)	Maximum % of Total Weight Smaller Than Given Size
18	100
12	50
8	0

2. Armor Stone Appearance: The armor stone shall be clean and have a uniform appearance. The visual appearance of the proposed stone must be approved by the Engineer.

2.04 BEDDING STONE

1. Contractor shall reuse onsite stone approved for reuse prior to importing additional stone.

2. Bedding stone for placement underneath the armor stone and the stone slab steps. Bedding Stone shall be imported or salvaged on-site material conforming to M2.02.2, of the MASSDOT Standard Specifications with the following gradations:

Bedding Stone Size (in.)	Maximum % of Total Weight Smaller than Given Size
8	100
5	50
3	15

2.05 GEOTEXTILE FABRIC

A. Refer to Section 02200; EARTHWORK, for material specifications.

2.06 REJECTED STONE

A. Any stone not meeting the requirements of these specifications will be rejected and shall be removed from the site and replaced with suitable stone at the sole expense of the Contractor.

2.07 COMPOSTED MULCH FOR INFILLING RIPRAP

1. Composted mulch shall be an aged organic substance, consisting of a mixture of bark, wood shavings, wood chips, wood scraps and mineral grit that is an approved by-product of the lumber, paper, or landscaping industries. No manure, bio-solids, kiln dried wood, or construction debris shall be allowed.

2. Organic matter content shall be between 20-100% (dry weight basis) as determined by ASTM D2974 (method A) Standard Test Methods for Moisture, Ash and Organic Matter of Peat and Other Organic Soils.

3. Moisture content shall be <15% by dry weight (<60% by wet weight) as measured by ASTM D2216 Standard Test Method for Laboratory Determination of Water Content of Soil and Rock and ASTM D2974 (cited above).

4. Particle size as measured by sieving shall be as follows.

Sieve Size	%Passing
2 in	100%
¾ in	70-100%
#4	30-75%
#20	20-40%

5. Soluble salts shall be <5.0 mmhos/cm (dS/m), the pH shall be between 5.5 and 8.0, and the seed mix shall be as specified under the Seeding item.

PART 3 - EXECUTION

3.01 GENERAL

A. Prior to commencing work, the Contractor shall establish limits of disturbance and place construction control markers clearly visible and understandable to workers in the field. The contractor shall exercise due care so as not to disturb adjacent structures and shall leave the site in clean and orderly condition upon completion of the work.

B. Placement of Riprap shall be from the base of the repair area upward. Height of freefall of riprap shall be determined by the Engineer, but in no case shall this height exceed one foot.

C. Riprap installation includes removal of existing material to subgrade, stockpiling suitable riprap stone and disposing of unsuitable material generated from the removal, preparing the subgrade, installing anchor stones, Type I geotextile, bedding stone, and armor stone

3.02 LAYING GEOTEXTILE FOR RIPRAP PLACEMENT

A. The area shall be graded smooth and all stones, roots, sticks, or other foreign material which would interfere with the fabric being completely in contact with the soil shall be removed prior to placing the fabric. The fabric shall be placed loosely and the machine direction of the fabric laid perpendicular to the alignment of the dam and/or berm. Pinning or stapling may be required to hold the geotextile in place. Separate pieces of fabric shall be joined by overlapping or sewing. The fabric in the overlapped joints shall be placed with a minimum overlap of 24 inches. After placement, the fabric shall be exposed no longer than 48 hours prior to covering.

B. Damaged areas shall be covered with a patch of fabric using a three-foot overlap in all directions.

3.03 STONE PLACEMENT

A. Stone shall be carefully selected as to size and shape; and placed to obtain firm contact with the maximum number of adjacent stones in order to obtain the best possible interlocking.

B. Stone shall be placed in areas as indicated on the Drawings.

3.04 INFILLING CONSTRUCTION METHODS

A. Placement of riprap infill shall be as shown on the plans and as directed by the Engineer. Infill material may be placed within voids hydraulically, utilizing washing and rodding techniques. Material shall be placed at 12-inch depth (0.35 cy/sy).

B. Voids shall be filled after the following layers are furnished:

1. After installation of bedding stone
2. After installation of armor stone

C. The in-filled riprap shall be consolidated by large vibratory equipment or backhoe bucket to create a tight, dense interlocking mass before subsequent layers are placed. Repeat washing and rodding as necessary to create a smooth plane finished surface.

D. Where riprap is filled with composted mulch, seed shall be broadcast over mulch in a two-step process with the mulch placed first, followed by seeding. Alternatively, compost and seed may be applied in one operation using equipment designed for this application. Equipment must be approved by Engineer.

E. Methods of installation shall be reviewed and approved by the Engineer prior to placement of material.

END OF SECTION

22116.00 **SECTION 02400**
04/26 **DEWATERING, CONTROL, AND DIVERSION OF WATER**

PART 1.00 - GENERAL

1.01 WORK INCLUDED

A. Work covered under this section consists of the Dewatering, Control, and Diversion of Water as required to perform the work.

1.02 WATER LEVELS

A. The impoundment (Carpenter Pond) is currently operated near El. 474.0 feet (NAVD88). Water levels vary dependent upon rainfall and inflow.

B. The elevation of the tail water is variable (El. 467.0 +/-).

C. The proposed work includes staged demolition of the primary spillway weir to lower the level of the reservoir to the extent possible. Removal shall be in accordance with the procedures outlined on the Drawings.

D. Under normal conditions, the Contractor shall maintain flow through the project site.

E. The Contractor shall be responsible for protecting the Work from increased water levels from upstream flows and increases in the tail water elevation.

1.03 SUBMITTALS

A. Control of Water Plan:

1. A detailed plan with applicable drawings/sketches, material lists, installation/removal work plans that identifies and details each of the Contractor's control of water systems to be implemented for this project.
2. Calculations and any required backup information that identities that the proposed plan will meet the following intent:
    a. Schedules showing timelines to complete work under dry conditions.

B. Drawings:

1. At least ten (10) calendar days prior to the start of dewatering, submit for review by the Engineer.
    a. Drawings
    b. Sections
    c. Details and other pertinent information
    d. Construction Flood Contingency Plan: Plan detailing the Contractor's means and methods for stabilizing the work area and emergency notification procedures if the work area becomes subject to flooding as a result of a storm event.
2. The data shown shall include:
    a. An overall schedule for dewatering, control, and diversion of water.
    b. A description of the anticipated sequence of construction.
    c. Complete details of methods, equipment, and materials proposed to be used.
    d. Layout locations, sizes, and computations for sediment settlement for dewatering basins

to treat silt laden water prior to discharge

e. Any other pertinent data required for review by the Engineer.

f. The Contractor shall coordinate this submittal with submittal requirements specified in Section 02270, EROSION AND SEDIMENT CONTROL and Section 01560 TEMPORARY CONTROLS.

C. Design Computations:

1. The Contractor shall also submit complete computations for the design of the dewatering system and cofferdams.
2. All computations shall be made by a registered Professional Engineer licensed to practice in the State of Massachusetts. Computations shall bear the stamp of the Engineer.
3. The control of water and dewatering system shall be designed for the 10-year storm. Estimated inflow rate from the engineer's model is 88.81 cfs. Contractor is responsible to confirm the inflow rates for the control of water design.

PART 2.00 - PRODUCTS

A. The Contractor shall provide all materials and equipment including, but not limited to, sandbags, barriers, pipe, fittings, valves, pumps, tools, fuel and other appurtenances in suitable and adequate quantities as required to control water.

PART 3.00 - EXECUTION

3.01 SURFACE DRAINAGE

A. The Contractor shall intercept and divert surface drainage away from the work sites by the use of dikes, curb walls, ditches, sumps or other means. The Contractor shall design surface drainage systems so that they do not cause erosion on or off the site. Surface runoff shall be controlled to prevent entry of water into excavations. The Contractor shall remove drainage systems when no longer needed.

3.02 CONTROL OF THE IMPOUNDMENT LEVEL

A. Control of the level of the impoundment is regulated to maintain impoundment level between the operable elevations stated in Section 1.02.

3.03 PROPERTY LOSSES FROM REMOVAL OR DISTURBANCE OF GROUNDWATER

A. Any structure, including but not limited to buildings, bridges, streets, and utilities that become unstable or vulnerable to settlement due to removal or disturbance of groundwater will be supported immediately by the Contractor. Support shall include but not be limited to bracing, underpinning, or compaction grouting.

B. All loss or damage arising from removal or disturbance of groundwater, including but not limited to claims for subsidence and the loss of structure support, that may occur in the progression of the Work shall be sustained and borne by the Contractor. If the Contractor needs to correct the damage resulting from his operations, the Owner may, 30 days after notifying the Contractor in writing, proceed to

repair, rebuild or otherwise restore such damaged property as may be deemed necessary, and the cost thereof shall be deducted from compensation which may be or become due to the Contractor under this Contract.

3.04 COFFERDAMS

A. Cofferdams shall not be used or installed within any wetland area on site.

B. General: It is expressly understood and agreed that whenever cofferdams and bracing are used, it shall not relieve the Contractor of the sole responsibility for any damages or injury due to the installation or failure of the cofferdams and bracing.

C. Installation: Where cofferdams and bracing are used they shall be installed ahead of other work activities.

1. Install to maintain sufficient restraint of the adjacent soil and to prevent movement, excessive inflow of water, and intrusion of soils into or instability of the bottom of the cofferdams.
2. If excessive leakage occurs behind the cofferdams, they shall be repaired and stabilized immediately to the satisfaction of the Engineer.

D. The use of vibration inducing equipment to install cofferdam elements is strictly prohibited.

E. Bulk Bags

1. Clean fill with less than 10% fines shall be used.
2. Installed behind turbidity barriers.
3. Sealed to limit soil loss due to flowing water.
4. Fully removed upon completion.

F. Removal:

1. Cofferdams and bracing shall be removed in such a manner so as to avoid any damage to the permanent structure or to other members of the cofferdam and bracing. Impact loading on the permanent structure or on members of cofferdam and bracing structure will not be allowed.
2. All cofferdam and bracing shall be removed at completion unless otherwise shown on the Drawings.

END OF SECTION

22116.00 **SECTION 02900**
04/26 **LANDSCAPING**

PART 1.00 GENERAL

1.01 WORK INCLUDED

A. This section covers the work necessary for finish grading and grass establishment, complete, including furnishing and delivery of material, fertilizing, seeding, and maintenance of grass. Seed Mixes specified in the Planting Plan shall be used for seeding areas disturbed by construction.

1.02 SUBMITTALS

A. Provide certifications of performance for mulch products and analysis of proposed seed products that have been tested by a recognized laboratory for seed testing. Do not use seed that has become wet or moldy.

B. Provide moisture content test results for imported loam and normalize for 8% moisture content.

PART 2.00 PRODUCTS

2.01 LOAM BORROW

A. Loam Borrow may be available from stockpiles on the site from the Contractor's stripping. Prior to using stockpiled loam, contractor shall screen material to ensure it complies with required specifications. Reuse of onsite loam is subject to approval of the Owner’s representative.

B. Loam Borrow shall consist of fertile, friable, natural topsoil typical of the locality, without admixture of subsoil, refuse or other foreign materials, and shall be obtained from a well-drained arable site. It shall be such a mixture of sand, silt and clay particles as to exhibit sandy and clayey properties in and about equal proportions. It shall be reasonably free of stumps, roots, heavy or stiff clay, stones larger than 1 inch in diameter, lumps, coarse sand, noxious weeds, sticks, brush or other litter. ·

C. Prior to stripping, the loam shall have demonstrated by the occurrence upon it of healthy crops, grass or other vegetative growth that is reasonably well drained and that it does not contain toxic amounts of either acid or alkaline elements.

D. The loam shall contain not less than 4% nor more than 20% organic matter as determined by the loss on ignition of oven-dried samples. Test samples shall be oven-dried to a constant weight at a temperature of 230°F ±9°.

2.02 ORGANIC SOIL

A. Organic soil for use in the Wetland Seeding Areas shall be a 1:1 mix of Loam Borrow and Processed Planting Material.

a. Processed planting material shall conform to M1.06.0 of the Massachusetts Standard Specifications for Highways and Bridges.
b. Processed planting material should be sourced from local sites, be free of non-native plant material, using material from on-site whenever possible.
c. Organic soil must have 12 percent or more by weight organic carbon.

2.03 pH CONTROL

A. The following amendments shall be included in soils where required by the soils analysis tests:

1. Soil sulfur.
2. Commercially packaged gypsum.
3. Ground dolomitic limestone.

2.04 LIME

A. Ground dolomitic limestone not less than 85 percent total carbonates and magnesium, ground so that 50 percent passes the 100-mesh sieve and 90 percent the 20-mesh sieve. Coarser material will be acceptable provided the specified rates of application are increased proportionately on the basis of quantities passing the 100-mesh sieve.

2.05 FERTILIZER

A. Commercial Fertilizer: A complete plant food containing 16 percent nitrogen, 6 percent available phosphoric acid, and 6 percent potash, conforming to applicable state fertilizer laws, availability of plant nutrients conforming to standards of the Association of Official Agricultural Chemist (AOAC), uniform in composition, dry free-flowing, and delivered in original, unopened containers bearing manufacturer's guaranteed analysis.

B. Superphosphate: Ammonium phosphate (16-20-0) containing 1.4 percent sulfur; granular, dry, free-flowing delivered in original bags.

2.06 TEXTURAL SOIL AMENDMENTS

A. Peat: A natural residue formed by decomposition of reeds, sedges, or mosses from fresh-water site, free from lumps, roots, and stones, absorbing at least four times its dry weight of water, organic matter not less than 90 percent on a dry weight basis. The maximum moisture content at time of delivery shall be 6% percent by weight.

B. Sand: Clean, coarse, well-graded material meeting all of the requirements of ASTM C33 for fine aggregate.

2.07 MULCH

A. Straw Mulch: Threshed straw of oats, wheat, or rye, free from seed of obnoxious weeds or clean salt hay.

2.08 NETTING

A. Jute Netting: Heavy, twisted jute netting, weighing 1 pound per square yard. Openings between strands of approximately 1-inch square.

2.09 SEED

A. General: Certified, blue tag, clean delivered in original, unopened packages and bearing an analysis of the contents, guaranteed 95 percent pure and to have a minimum germination rate of 85 percent within 1 year of test.

B. General Seed Mix: Slope Mix shall be used for any areas with a slope in excess of 5H:1V. Grassplots Mix shall be utilized in all other areas.

Grass seed shall be of the previous year's crop and in no case shall the weed seed content exceed 1 % by weight. The grass seed shall conform to the requirements in Drawing 4.2 Restoration Planting Plan.

All seed shall comply with State and Federal seed laws. The seed mixture specified for slopes and shoulders consists of a tough hardy type for use on slopes graded at the rate of 4:1, and steeper slopes, and on shoulders adjacent to the roadway pavement or as otherwise directed. The mixture for grass plots is of a finer type which will produce finer turf. A manufacturer's Certificate of Compliance to the specifications shall be submitted by the manufacturers with each shipment of each type of seed. These certificates shall include the guaranteed percentages of purity, weed content and germination of the seed, and also the net weight and date of shipment. No seed may be sown until the Contractor has submitted the certificates.

C. Temporary Protective Seed: Annual rye grass applied at rate of 120 pounds/acre.

D. Inoculate: Pure culture of nitrogen-fixing bacteria prepared specifically for the legume species. A mixing medium as recommended by the manufacturer shall be used to bond the inoculate to the seed.

2.10 CHEMICAL SOILS TESTS

A. Submit samples of Subgrade Soil to the County or State Soil Testing Service for chemical analysis of soil after completion of rough grading to determine lime and/or super phosphate requirements.

B. Submit Loam Borrow for chemical analysis after incorporation of soil conditioners to determine lime and fertilizer requirements of County or State Soil Testing Service using samples taken from the top 4 inches of soil at 10 locations following standard soil sampling procedures. One copy of the fertilizer and liming recommendation report shall be submitted to the Engineer.

2.11 MECHANICAL SOILS TEST

A. Have mechanical analysis of topsoil performed by a soil analyst or Engineer to determine conformance to specified physical properties in accordance with AASHTO T 88-72, Mechanical Analysis of Soils.

PART 3.00 EXECUTION

3.01 SEEDING SCHEDULE

A. Within 20 calendar days of the date specified for commencement of seeding work, submit to the Engineer a proposed time schedule indicating dates for beginning and completion of the following operations:

1. Delivery of materials.
2. Preparation of seedbed.
3. Planting grass.
4. Maintenance.

3.02 CONSTRUCTION METHODS

A. Preparation of Subgrade: After rough grading is completed and before Loam Borrow is spread, apply lime

and/or super phosphate as determined by chemical analysis, and thoroughly scarify ground to a minimum depth of 8 inches with a toothed ripping machine by running in two directions at right angles over the entire surface to be planted.

B. Spreading of Loam Borrow: Spread Loam Borrow and textural soil amendments over the prepared rough grade to provide a finished topsoil thickness as specified on plans. Use a rubber-tired tractor with grader blade or equivalent not weighing more than 3½ tons. Loam Borrow shall be spread to the required thickness at impacted bordering vegetated wetland (BVW) areas.

C. Disturbed areas within the embankment crest, slopes, staging area, roadways, and construction areas shall be top dressed as required to replace stripped material and grade to original elevations.

D. Liming and Fertilizing:

1. Apply lime and/or super phosphates uniformly at the rate determined from soil test.
2. Apply commercial fertilizer at the rate of 40 lbs per 1,000 sf distributing uniformly with a mechanical spreader, or at rate determined from soil test.

E. Finish Grading:

1. Thoroughly mix the applied materials to a depth of 8 inches by running a rototiller over the entire area in two directions at right angles.
2. Rake the topsoil area to a uniform grade so that all areas drain, as indicated on the final grading plan.
3. Lightly compact with a cultipacker before planting grass. Care shall be taken not to over compact or seal the surface of the topsoil.
4. Remove all trash and stones exceeding 2 inches in diameter from area to a depth of 2 inches prior to preparation and planting grass.

F. Reseeding Disturbed Areas:

1. All areas within the staging area and temporary roadways that have become completed due to stockpiled material or the movement of traffic across the site shall be scarified to a depth of 8 inches.
2. Finish grading shall be performed as described above.

G. Mulching and Protection:

1. Mulch all areas by spreading a uniform light cover of straw mulch over the seeded area at a rate of 2½ tons per acre not later than 2 days after seeding has been performed and tackify at a rate of 5 gallons per 1,000 sf.
2. Mulch all areas with a slope steeper than 20 percent, or in areas requested by the Owner's representative, as described and place jute netting or erosion control mats in strips paralleling the slope to completely cover newly seeded areas. Pin mulch to ground with 6-inch long wire staples at 5-foot intervals immediately after seeding.

3.03 CONTRACTOR MAINTENANCE

A. Maintenance Period: Begin maintenance immediately after each portion of grass is planted and continue for a minimum of 8 weeks after all lawn planting is completed or until final acceptance.

B. Maintenance Operations: Water to keep surface soil moist. Repair washed out areas by filling with Loam Borrow, liming, fertilizing, and seeding. Replace mulch on banks when washed or blown away. Mow

frequently enough to keep grass from exceeding 6 inches. Weed by hand only after first planting season when grass is established.

3.04 GUARANTEE

A. If, at the end of the 8-week lawn maintenance period, a satisfactory stand of grass has not been produced (as determined by the Owner or Engineer), the Contractor shall renovate and reseed the grass or unsatisfactory portions thereof immediately, or, if after October 15, during the next planting season. If a satisfactory stand of grass develops by July 1 of the following year, it will be accepted. If it is not accepted, a complete replanting will be required during the planting season meeting all of the requirements specified under CONSTRUCTION METHODS.

B. A satisfactory stand is defined as grass or section of grass of 10,000 square feet or larger that has:

1. No bare spots larger than 3 square feet.
2. Not more than 10 percent of total area with bare spots larger than 1 square foot.
3. Not more than 15 percent of total area with bare spots larger than 6 inches square.

3.05 INSPECTION FOR ACCEPTANCE

A. Eight weeks after the start of maintenance on the last section of completed grass and on written notice from the Contractor, the Engineer will, within 15 days of such written notice, make an inspection to determine if a satisfactory stand has been produced. If a satisfactory stand has not been established, another inspection will be made after written notice from the Contractor that the grass is ready for inspection following the next growing season. Final approval is subject to acceptance by the local Conservation Commission.

END OF SECTION

22116.00 **SECTION 02905**
04/26 **COIR LOGS**

PART 1.00 GENERAL

1.01 WORK INCLUDED

A. The Contractor shall furnish and install embankment stabilizing coir log, which shall include coir log installation with wooden stakes and coir twine, in accordance with the plans, specifications, and directions of the Engineer.
B. The Contractor shall furnish and install live stakings and poles in accordance with the plans, specifications, and directions of the Engineer.

1.02 SUBMITTALS

A. Provide coir log samples and catalog cut sheets including performance and technical data for approval in accordance with Section 01340 Submittals.

PART 2.00 PRODUCTS

2.01 COIR LOG

A. A coir log is a man-made, biodegradable, durable coconut fiber "log".
A. The coir log shall be a minimum of 10 feet in lengths.
B. Diameter of coir log shall be 12-inches.
C. Coir log shall weigh 9 lbs/ft.
D. Expected coir log longevity shall be 3 years.
E. Outer net around the coir log shall be made of Bristol Fiber coir twine woven squares with openings 2-in x 2-in. Twine shall have 75lb tensile strength.
F. Coir Logs shall be "Coir Net Coir Logs", as manufactured by North American Green, or equivalent.

2.02 WOOD STAKES

A. Wood stakes used to secure the coir logs shall be a minimum of 1.25-inch x 1.25-inch x 3 feet long.

2.02 LIVE STAKINGS/POLES

A. The following plant species may be used as live stakings and poles:
    a. Balsam poplar (populous balsamifera)
    b. Eastern cottonwood (populous deltoids)
    c. Peachleaf willow (salix amygdaloides)
    d. Pussy willow (salix discolor)
    e. Sandbar willow (salix interior)
    f. Silky willow (salix sericea)
    g. Common elderberry (sambucus nigra ssp.canadensis)

PART 3.00 EXECUTION

3.01 COIR LOGS

A. Place coir logs along the toe of the bank. Final alignment of coir logs shall be reviewed by the Engineer

upon draining of the impoundment.

B. Submerge the coir log at a constant depth of 1/2 to 2/3 of the coir log's height and to achieve the grades and lines indicated on the drawings. The proper submersion of the coir log is important for the survival of the live stakings.
C. Tie the ends of adjacent coir logs together with Bristol Fiber coir twine. Make a number of passes with the twine in the end netting of the adjacent coir logs; this effectively laces the logs together.
D. Where a coir log does not abut another coir log, bend the end in towards the shore and embed it into the bank to prevent water collection behind the log and subsequent pull out of the logs. Trench in both ends of either a single or a continuous line of coir logs where shown on the plans and as directed by the Engineer.

3.02 WOOD STAKES

A. Install the stakes 12-inches on center on the channel side of the log
B. Install stakes 5-feet on center on the upland side of the log.
C. Drive stakes into place leaving approximately 4-inches of stake above the top of the coir logs. Notch the stakes at the top of the coir logs.
D. Crisscross coir twine across the top of the coir log and secure to alternating stakes at notches. Pound the stakes down so that the top of the stake is level with the top of the coir log.

3.02 LIVE STAKINGS/POLES

A. Plant staking species at a density of 2 plants per linear foot of coir log.
B. Contractor shall develop a planting plan for approval by the Engineer. A minimum of 5 species shall be used.
C. Plantings shall be varied along the length of the log to provide a dense and heterogeneous mixture of species.
D. Contractor shall monitor plantings for survival. Any plantings that do not survive the first year shall be replaced at no additional cost to the Owner.

END OF SECTION

SECTION 02920
SEEDING FOR NON-LAWN AREAS

PART 1.00 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division-1 Specification sections, apply to work of this section.

1.02 DESCRIPTION OF WORK

A. Provide all materials, equipment, and labor necessary to complete the work as indicated on the drawings or as specified herein.

B. The principal work of this section includes, but may not be limited to the following:

1. Application of seed.
2. Acceptance of seeding.

C. In general, seeded areas shall, at a minimum, include roadsides, yards and setbacks, meadows, marginal wetlands, and all other areas of site within project limit lines that have been disturbed or are barren unless otherwise noted on the plans. Overseeding of established lawn areas, if required on plans, shall also extend to project limit lines, unless otherwise noted.

1.03 RESTRICTIONS

A. Prior to seeding, contractor shall clearly and plainly mark limits as indicated on plans.

B. No work shall be performed prior to field determination and approval from owners' representative.

1.04 QUALITY ASSURANCE

A. Use a contractor who is fully experienced and qualified in such work.

B. Each seed bag or container shall display a label which identifies the contents as a true representation of the seed mix and percentages required by specification. No seed shall be applied to a site until the Owner or Owner's Representative has determined the mixture meets all requirements.

C. Do not make substitutions without written approval. If specified seed mixes are not available, obtain approval for substitution from the Owner or Owner's Representative.

1.05 SUBMITTALS

A. Certifications and/or labels of proposed seed mixtures stating common and scientific names of grasses, percentages by weight, and percentages of purity and germination.

B. Product information of all proposed weed control chemicals.

1.06 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Protect all products from weather or other damaging or deteriorating conditions.

B. Seed mixes which have been damaged or have deteriorated in transit or storage are not acceptable.

C. Seeding Schedule: Prepare a proposed seeding schedule. Schedule dates for each type of landscape work

during normal seasons for such work.

Seeding: March 15 - June 30
August 15 - October 15

D. Correlate with specified maintenance periods to provide maintenance to date of acceptance. Once the schedule is accepted, revise dates only as approved in writing after documentation of reasons for delays.

1.07 WARRANTY

A. Warranty seeding until final acceptance of grass stand.

1.08 MAINTENANCE

A. Maintenance of seeding to be performed by the installer includes:

1. Watering;
2. Regrading and replanting eroded areas; and
3. Seeding or patching sparse or bare areas.

B. Maintain seeded areas immediately after placement until grass is accepted.

PART 2.00 - PRODUCTS

2.01 SEED

A. General: Pure, live, fresh seed from commercial sources, meeting and labeled in accordance with State and Federal laws, rules, and regulations. All seed to have minimum germination rate of 85% unless otherwise noted.

B Restoration Seed Mix: Seed mix shall be the “New England Wetland Plants Conservation Wildlife Mix” as provided by New England Wetland Plants or approved equal. Application rate shall be 25 lbs/acre.

C. Wetland Seed Mix shall be “New England Wetland Plants Wetmix” as provided by New England Wetland Plants or approved equivalent. Application rate shall be 18 lbs/acre.

D. Erosion Control Mix shall be “New England Wetland Plants Erosion Control/Restoration Mix for Dry Sites” as provided by New England Wetland Plants or approved equivalent. Application rate shall be 35 lbs/acre.

2.02 WATER

A. Potable water as required to establish and maintain a healthy stand of grass, see section 3.04 A.

PART 3.00 - EXECUTION

3.01 GENERAL

A. Seeded areas shall, at a minimum, include roadsides, yards and setbacks, meadows, marginal wetlands, and all other areas of site within project limit lines that have been disturbed or are barren unless otherwise noted on the plans.

3.02 APPLICATION OF SEED

A. The approved seed mixture shall be applied at a rate specified by each particular type of seeding, by means of seeder device capable of penetrating ground to depth of one inch (1"). Seeder machine shall be equipped with disc-type penetrating action and seeder tubes which plant seeds. Seeder machine shall be approved for use by Owner or Owner's Representative prior to seeding.

B. Distribute seed over area in two separate passes, each one perpendicular to the other (north-south, east-west orientation). Each pass shall be in a linear progression, and shall conform to the field direction that permits the longest straight line application procedure.

C. Hydro seeding will be permitted only with permission of Owner or Owner's Representative. All requests shall be in writing with detailed and itemized procedure to be followed.

D. Broadcast seeding will be permitted only with permission of Owner or Owner's Representative. All requests shall be in writing with detailed and itemized procedure to be followed.

3.03 CARE OF SEEDED AREAS

A. Watering: Contractor shall water all seeded areas within 72 hours of seeding operation. One additional watering may be required and will be at discretion of owner.

3.04 ACCEPTANCE OF SEEDING

A. PROVISIONAL ACCEPTANCE
Provisional acceptance period shall be defined as the elapsed time between application of seed and the establishment of a good, healthy, uniform growth of grass.

1. Provisional acceptance will not occur until the seeded areas are well established; exhibiting a vigorous growing condition, devoid of bare spots greater than one (1) square foot.
2. It will be the contractor's responsibility to maintain seeding areas in an approved condition until provisional acceptance.
3. The Contractor shall keep all seeded areas watered and in good condition, reseeding if and when necessary during the provisional acceptance period.
4. Watering of seeded areas:
   a) During this period, water grass as necessary to maintain an adequate supply of moisture within the root zone. An adequate supply of moisture is the equivalent of one inch (1") of absorbed water per week that is delivered at weekly intervals in the form of natural rain or is augmented as required by periodic watering.
5. It shall be the contractor's responsibility to obtain necessary documentation to show that provisional acceptance has been granted. This shall be done upon written request submitted by the contractor the landscape architect to inspect grass work on site. Provisional acceptance will not be granted until the contractor has obtained, in writing, a statement from the landscape architect indicating that grass is satisfactory under the terms of the provisional acceptance.

B. FINAL ACCEPTANCE

Final acceptance period shall be defined as the elapsed time between provisional acceptance and final closeout of the project.

1. All seeded areas shall be guaranteed by the Contractor for not less than one growing season from the time of provisional acceptance. Growing season shall be defined as follows:
   a) If provisional acceptance is received during April, May, June or July, next growing season shall end on October 15.
   b) If provisional acceptance is received during September, October, November or December, next growing season shall end on June 1.

2. At the end of the guarantee period, inspection will be made by the Owner upon written request submitted by the Contractor at least ten (10) days before the anticipated date. Grass areas not demonstrating satisfactory stands as outlined above, (except if damaged by vandalism) as determined by the L.A., shall be renovated, re-seeded, and maintained, meeting all requirements as specified herein.
3. After all necessary corrective work has been completed, the Owner's Representative shall certify in writing the final acceptance of the grass area.
4. Decision of Owner as to the necessity to replace grass areas, or repair any defects on workmanship, or cause of any destruction or loss, impairment, or failure to flourish, shall be conclusive and binding upon Contractor. Replacements shall be the same as specified. All replacements shall be planned as specified herein at Contractor's expense.
5. "Vandalism", as noted above, is intended to mean any acts, whether intentional or accidental, by other persons, which clearly result in damage, and which may reasonably be considered to be beyond the Contractor's reasonable control, as determined by the Owner's Representative.

END OF SECTION

PART 1.00 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 01 Specification sections, apply to work of this section.

B. Related Sections: The following Sections contain requirements that relate to this Section:
   1. SECTION 02200 - EARTHWORK

1.02 WORK INCLUDED

A. Provide all materials, equipment and labor necessary to complete the work as indicated on the drawings or as specified herein.

B. The principal work of this section includes, but may not be limited to, the following:

1. Layout and Excavation of Plant Holes
2. Planting and Backfilling
3. Watering.
4. Mulching.
5. Fertilizing.
6. Staking, Guying, and Deer Protection Fencing.
7. Antidessicant Application.
8. Tags and Labels.
9. Maintenance.
10. Plant Replacement Guarantee.

1.03 REFERENCES

A. ANSI Z260.1 - Nursery Stock, latest edition (American Association of Nurserymen, Inc.).

1.04 QUALITY ASSURANCE

A. Contractor shall specialize in work outlined with a minimum of five (5) years experience on similar projects.

B. An arborist, licensed by the state in which the work is to be performed, is required for all pruning work.

C. At least three (3) shrub of each variety and all trees shall be tagged with a waterproof tag bearing legible designation of botanical and common names, and all other standard products shall be delivered sealed and unbroken.

D. Do not make substitutions without written approval. If specified landscape material is not available, obtain approval for substitution from the Owner or Owner’s Representative.

E. Where formal planting arrangements are shown, select stock with uniform height and spread, and label with numbers to assure symmetry in planting.

F. The Owner and/or the Owner's Representative reserves the right to inspect all plant materials for compliance with specifications, and to reject unsatisfactory or defective work at any time during progress of work.

1.05 SUBMITTALS

A. Certified analysis and source of off-site loam, used to backfill to be provided. Certification shall list soil additives to topsoil, rates and type.

B. Certifications and/or labels of proposed plant materials or substitutions, listing common and scientific names of each.

1.06 PRODUCT DELIVERY, STORAGE AND HANDLING

A. Protect all products from weather or other damaging or deteriorating conditions.

B. Plants which have been damaged or have deteriorated in transit or storage are not acceptable.

C. Keep plants moist, fresh, and protected against exposure to sun, wind, and freezing temperatures whether in the receiving yard, in transit, while being handled, or at the job site awaiting planting.

D. Deliver trees, shrubs, and groundcover after preparations for planting have been completed and plant immediately.

E. Planting Dates: Prepare a proposed planting schedule. Schedule dates for each type of landscape work during normal seasons for such work. Once accepted, revise dates only as approved in writing, after documentation of reasons for delays.

Planting Deciduous material:	Spring	March 1 to June 15
	Fall	September to December 1
Evergreen material:	Spring	March 15 to May 30
	Fall	August 15 to November 15

F. Those species known to be fall digging hazards shall be dug during the spring season only. Fall planting of these species shall be permitted only with certification, from the nursery, of the time of digging and at the discretion of the Owner or Owner's representative.

G. Correlate planting schedule with specified maintenance periods to provide maintenance to date of acceptance.

H. Coordination with Lawns: Plant trees, shrubs, and groundcover after final grades are established and prior to planting of lawns, unless otherwise acceptable to Owner or Owner's Representative. If planting of trees and shrubs occurs after lawn work, protect lawn areas and promptly repair damage to lawns resulting from planting operations.

1.07 SPECIAL CONDITIONS

A. Should discrepancies exist between plant quantities or plant sizes as shown in the Planting Schedule and on the Planting Plan, quantities and sizes shown on the Planting Plan shall govern. Contractor shall then install all plants as shown on the plan at no additional cost to the owner.

1.08 WARRANTY

A. Provide a warranty for tree, shrub, and groundcover plantings for a minimum of two years including four continuous growing season. Commence warranty on date identified in the Certificate of Final Completion.

B. Warranty: Include coverage of plants from death or unhealthy conditions.

C. Replacements: Plants of same size and species as specified, planted as soon as possible in the next growing season, with a new warranty and an extended maintenance service commencing on date of replacement.

1.09 MAINTENANCE

A. Maintenance of tree, shrub, and groundcover planting to be performed by Installer Include:
1. Watering, weeding, cultivating and mulching.
2. Tightening, guy webbing and repairing of stakes.
3. Replacing of dead material.
4. Resetting plants to proper grades, or to upright position.

PART 2.00 - PRODUCTS

2.01 LOAM COMPOST MIX

A. For Loam Compost Mix, refer to Section 02900, “Part 2 – Products”.

2.02 ANTIDESSICANT

A. Emulsion which permits transpiration while retarding excessive loss of moisture from plants. Deliver in manufacturer's fully identified containers and mix according to manufacturer's direction. Use "Wiltproof" or equal approved.

2.03 TREE AND SHRUB FERTILIZER

A. Fertilizer shall be Organic-based and be OMRI (Organic Materials Review Institute) Certified

B. Complete fertilizer in granular form, from commercial sources bearing manufacturer’s analysis; 2-3-3 ratio of N-P-K.
1. Total Nitrogen (N) – 2.0%
a. 0.8% - Water Soluble Nitrogen
b. 1.2% - Water Insoluble Nitrogen
2. Available Phosphate (P_2O_5) – 3.0%
3. Soluble Phosphate (K_2O) – 3.0%

C. Application Rate: Apply 2-3 pounds per 100 square feet.

2.04 STAKE, GUYING AND FENCING MATERIALS

A. Guy web: Shall be a low abrasion woven fiber webbing with a break strength of 900 pounds or better. The width of the webbing shall be no less than 5/8 inch nor greater than ¾ inch. The length shall be sufficient enough to be attached to the tree trunk and stake.

B. Stakes: Shall be a hardwood source, free of knots, insects, and fungi. Stakes shall be of uniform size and

shape and shall be a minimum of two inches (2") square. Stakes shall be pointed with a taper of no less than four inches (4").

C. Deer Protection/Fencing: Shall be 14-gauge galvanized steel welded wire with 2-inch x 4-inch mesh pattern. Fencing shall be a uniform height of four feet.

D. The above ground stake height shall be eight inches (8") above the point of attachment. The type of stakes shall be uniform throughout the job.

2.05 MULCH

A. Pine Bark Mulch shall be derived from evergreen tree bark aged to a minimum of six months and no more than eighteen months. The bark shall be shredded so that the resulting pieces are no more than ¼ inch thick and no longer than three inches (3"). The mulch shall be free of stringy material and shall not contain an excess of fine particles. The mulch shall be brown in color, free of leaves, twigs, sod, weeds, shavings and other foreign materials which are injurious to health plant growth.

2.06 WATER

A. Clean, fresh potable water free from injurious chemicals and other toxic substances harmful to plant life. No brackish water will be permitted.

2.07 PLANT MATERIALS

A. Plant materials shall conform in size, grade, and quality to the "American Association of Nurserymen Standards for Nursery Stock." As approved by the United States of America standards institute, in effect at the time of bidding.

B. Plants of other kinds than those named in the Plant Schedule on the Drawings shall not be accepted without written approval of Owner or Owner's Representative.

C. Unless otherwise approved by Owner or Owner's Representative, all plants shall be nursery-grown in accordance with good horticultural practices and shall have been grown under climatic conditions similar to those in the locality of the project for at least two (2) years. They shall have been transplanted or root pruned at least nine (9) months previous to moving to the site.

D. All plant material shall comply with the state and federal law with respect to inspection for plant disease and insect infestation.

E. Replacement plants larger in size than existing may be used if approved by Owner or Owner's Representative, provided use of larger plants does not increase Contract price.

F. If use of larger plants is approved, increase ball of earth of spread of roots in proportion to size of plant.

PART 3.0 - EXECUTION

3.01 PLANTING

A. Layout: **Determine location of underground utilities and layout plants so as to avoid possible damage to such structures.** Plant pits and bed locations as shown graphically and/or verbally on plans,

shall be staked on ground by contractor and approved by the Owner's Representative prior to excavation. Should discrepancies exist between plant quantities in Planting Schedule and Planting Plan, quantities shown on the Planting Plan shall govern. Adjustments in locations and outline shall be made as directed in field. Labor, equipment, and new smooth stakes are to be furnished by the Contractor for this purpose.

B. Excavation: Planting beds and pits shall conform to the approved staked locations and outlines. Holes dug for plantings shall in all cases be large enough to include the complete root system of the plant (tree, shrub, and groundcover) to be received and also sufficient amounts of approved backfill mix around the periphery of the rootball. All sod, weeds, roots, cobbles, and stones and other objectionable materials excavated from the plant holes which is unsuitable for backfill shall be removed from the site immediately and legally disposed of.

C. Plant Hole Size: The minimum plant hole size, unless otherwise specified, shown on the plans or directed by the Owner's Representative shall be as follows:

Trees and Shrubs - The planting hole shall be three (3) times the diameter of the rootball in width and no deeper than two inches (2") less than the distance from the bottom of the rootball to the root collar (i.e. a 12" distance between the bottom of the rootball and the root caller will require a 10" deep hole). Any excavation in excess of that required shall be replaced and compacted to eighty-five percent (85%) of maximum density.

Groundcover - The planting hole shall be twice the diameter of the rootball in width and equal to the depth from the bottom of the rootball to the level at which it was grown in the nursery. Any excavation in excess of that required shall be replaced and compacted to eighty-five percent (85%) of maximum density.

Any rocks or underground obstructions shall be removed to a depth necessary for planting as specified, unless alternate locations for the planting are approved by the Owner's Representative. If removal of obstructions result in a deeper hole than specified for planting, backfill material shall be added and compacted to eighty-five percent (85%) of maximum density to the correct depth.

D. Backfill Mix: Add loam to suitable soil excavated from the planting hole to create mix for planting pits. Backfill Mix shall be at least fifty percent (50%) loam.

3.02 SETTING PLANTS

A. Plants shall be handled in such a manner that the soil of the rootball will not be loosened from the roots. Carefully place plant into the prepared hole. Set plants plumb and fill in around the rootball to one half (1/2) the depth of the hole with backfill mix. Thoroughly tamp the backfill mix to eighty-five percent (85%) of maximum density.

B. Fill remaining area of planting hole with water. Once the water has completely drained loosen burlap and peel down at least the top one-third (1/3). If wire baskets are used, cut and bend down top one third (1/3) of basket. Roots that have been wrapped around the ball within the burlap shall be made to lay in as natural a manner as possible. Cut broken or frayed roots cleanly.

C. Fill remaining area of hole with backfill mix and thoroughly tamp to eighty-five percent (85%) of maximum density. Form a saucer around the edge of through backfill hole by constructing a berm. The finish height of the compacted berm shall be three inches (3"). No excess soil shall be allowed to remain within the plant saucer. Fill saucer with water.

3.03 PRUNING OF NEW PLANT MATERIAL

A. After planting prune only dead, broken or deformed branches and in such manner as to preserve natural character of plant.

B. Perform all pruning with sharp tools, with cuts flush and clean. Do not apply paint or asphalt emulsion tree wound compound on cut area.

C. Trees which have had their leaders cut, or so damaged that cutting is necessary, will not be accepted. There shall be no abrasion of bark, nor fresh cuts of limbs over 1/2".

3.04 WATERING

A. The plants shall be watered immediately following planting.

B. Soak the plants thoroughly again within a twenty-four (24) hour period after the initial planting.

C. Additional watering shall be made at least once every three weeks, unless otherwise directed, until final acceptance of the plant material.

3.05 FERTILIZING

A. During backfill operations, place fertilizer in upper foot of back fill around perimeters as recommended by manufacturer.

3.06 MULCHING PLANTS

A. Application of mulch should only occur after planting operations have been completed and initial watering has taken place. Mulch shall be applied no latter than forty-eight (48) hours after planting.

B. Prior to the placement of mulch, the contractor shall apply a pre-emergent weed control within the entire area to be mulched. Pre-emergent weed control shall be applied by a licensed commercial applicator at a rate in accordance with the manufacturer’s installation.

C. Mulch shall be applied a minimum of three (3) inches in depth for all individual trees and planting beds, as indicated graphically or verbally on the drawings.

D. Where mulch abuts seeded lawn areas or other finish grade materials, edge of planting bed shall be cut smooth and cleanly. Mulch shall be placed carefully so as not to spill into adjacent areas. Any excess or spilled mulch shall be promptly removed from the project area.

3.07 GUYING, STAKING, AND DEER PROTECTION FENCING

A. Immediately after planting, stake trees as indicated on detail drawing or as directed by Owner or Owner’s Representative.

B. Place stakes outside of the planting pit exercising care not to damage the soil berm.

C. Guy all trees with a caliper of two inch (2”) or greater and all evergreen trees greater than four feet (4’). Guy webbing shall be attached at a point no higher than one half (1/2) the height of the tree or lower than one-third (1/3) the height of the tree.

D. Guy trees to each stake near top of stake and intertwine webbing at tree trunk. The guy webbing shall lay flat against the trunk. Draw guy webbing tight enough to remove slack but shall not cause deflation or strain to the plant.

E. Install welded wire protection fence around all tree plantings. Secure fencing to stakes with steel galvanized wire. A separation of at least two feet shall be maintained from the tree trunk and fencing.

3.08 TRUNK WRAPPING

A. Remove all trunk wrap and trunk protection devices prior to staking and guying operations unless otherwise directed by the Owner's Representative.

3.09 ANTIDESSICANT SPRAYING

A. Spray antidessicant as directed by the manufacturer's recommendation and as approved by the Owner's Representative.

3.10 TAGS AND LABELS

A. Leave all tree tag and label seals unbroken and visible on plant material until final inspection. Remove all seals immediately after final inspection.

3.11 MAINTENANCE

A. Contractor is responsible for protection and maintenance of all work prior to final acceptance. No plants will be accepted unless they show a healthy growth and satisfactory condition.

B. Maintenance work for all plantings shall be as listed in section 1.9.

3.12 PLANTING ON BANKS

A. Apply jute mesh loosely but smoothly to fit the contour of the finished grade, parallel to and in same direction as the flow of water. The up-slope end of each separate strip or piece of jute mesh shall be buried in a six (6) inch minimum vertical anchor slot or junction slot with the soil tamped firmly against the mesh. Where more than one width of material is required, edges shall overlap a minimum of twelve (12) inches, and the up-slope section of mesh will be on top. Down-hill ends of the jute mesh shall be folded under approximately four (4) inches and stapled in place. Staples will be inserted through the mesh along edges, overlaps, and in the center of all jute mesh strips at intervals not greater than three (3) feet. All anchor slots, junction slots, check slots, and terminal folds shall have five (5) staples spaced not more than nine (9) inches on center across widths.

B. On seeded banks, jute shall be applied immediately after seeding. On shrub banks, apply jute after finish grading. Cut openings in mesh for each plant and mulch as specified.

3.13 PLANT REPLACEMENT GUARANTEE

A. Guarantee that, upon completion and final acceptance tree, shrub and groundcover planting conforms to requirements of contract documents and that all plants except transplant materials are healthy and will remain so for a period of one (1) year. Such period shall commence with date of final acceptance.

B. At any times within period of guarantee, Contractor shall replace any plantings which for any reason, other than vandalism, has died or is in a dying condition, or which has failed to flourish in such a manner or to

such a degree that its usefulness or appearance has been impaired.

C. The Owner will not maintain plantings until after guarantee period. Contractor shall not have any claim that materials have failed to flourish as a result of Owner's maintenance operations, or lack of maintenance, and shall abide by terms stated herein for guarantee and replacement of plant materials.

D. Decision of Owner as to necessity to replace any plant materials or repair any defects on workmanship, or cause of any destruction or loss, impairment, or failure to flourish, shall be conclusive and binding upon Contractor. Replacements shall be of same species and size as specified on Plant List. All plant replacements shall be inspected, sealed, furnished, planted and mulched as specified herein at Contractor's expense.

E. "Vandalism", is intended to mean any acts, whether intentional or accidental, by other persons occurring following final acceptance, which clearly result in breakage or other damage to individual plants or plant beds, and which may reasonable be considered to be beyond Contractor's reasonable control, as determined by the Owner's representative.

END OF SECTION

Town of Dudley

Carpenter Pond Dam Removal

APPENDIX A – PERMITS

Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection

100 Cambridge Street Suite 900 Boston, MA 02114 • 617-292-5500

Maura T. Healey
Governor

Kimberley Driscoll
Lieutenant Governor

Rebecca L. Tepper
Secretary

Bonnie Heiple
Commissioner

May 30, 2024

Jonathan Ruda
Town of Dudley
71 West Main Street
Dudley, MA 01571

DEP WQC AUTHORIZATION #
24-WW26-0020-APP
ACOE Project No. NAE-2024-00689
401 WQC Application Completion on 3/22/24

RE: Application for: COMBINED PERMIT – BRP WW 26
401 WATER QUALITY CERTIFICATION FOR MINOR DREDGING AND FOR MAJOR FILL AND EXCAVATION PROJECT

AT: Carpenter Pond Dam Removal Project, Dudley, MA
French River Basin Drainage Area

Dear Mr. Ruda:

The Department of Environmental Protection ("MassDEP") has reviewed your application for a Combined 401 Water Quality Certification for Minor Dredging and Major Fill and Excavation ("Combined Permit"), as referenced above and is basing its certification upon an evaluation of the information contained in the application which is relevant to water quality considerations. In accordance with the provisions of Section 401 of the Federal Clean Water Act (33 U.S.C. § 1251 *et seq.*), M.G.L. c. 21, §§ 26-53, and 314 CMR 9.00, MassDEP has determined there is reasonable assurance the project or activity, as conditioned herein, will be conducted in a manner which will not violate applicable water quality standards (314 CMR 4.00) and other appropriate requirements of state law.

The waters of the Carpenter Pond, which is part of the French River Basin Drainage Area, is designated in the Massachusetts Surface Water Quality Standards as B. These waters are designated as a "habitat for fish, other aquatic life, and wildlife, including for their reproduction, migration, growth and other critical functions, and for primary and secondary contact recreation." Anti-degradation provisions of these Standards require that "existing uses and the level of water quality necessary to protect the existing uses shall be maintained and protected."

This information is available in alternate format. Please contact Melixza Esenyie at 617-626-1282.
TTY# MassRelay Service 1-800-439-2370
MassDEP Website: www.mass.gov/dep

Printed on Recycled Paper

The proposed project consists of the removal of the Carpenter Pond River Dam, and associated river and wetlands restoration and recreational improvements at and adjacent to Carpenter Pond located within the Ardlock Acres Conservation Area in Dudley, MA.

Removal of the Carpenter Pond Dam will restore hydrologic connectivity and natural wetland hydrology to a perennial stream and wetland complex that is currently impounded, improve existing fisheries habitat by restoring flow and temperature regimes and providing unrestricted passage for in-stream migration, improve sediment and nutrient transport to downstream receptors, and will remove deteriorating and obsolete infrastructure eliminating the potential for a dam failure and catastrophic downstream flooding. The project will also convert the existing dam embankment to wetlands, bank, and land underwater, while portions of existing land under water will be converted to wetlands resulting in a significant increase in biomass and potential for carbon sequestration in hydric soils.

A total of approximately 840 cubic yards (cy) of dredged material is anticipated to be generated from the project; approximately 310 cy to be dredged from Carpenter Pond and the associated stream which will be transported offsite to the DPW Transfer Station for storage and future offsite reuse, and approximately 530 cy is anticipated to passively redistribute downstream as the restored stream establishes through the impoundment.

Sediment Chemistry Results: A total of four (4) samples were collected; one from a location upstream of the project area, and three from within the dam impoundment area of Carpenter Pond. The sediment sample analytical results were compared to Reportable Concentration ("RC") S-1 and Method 1 S-1/GW-1 criteria of the Massachusetts Contingency Plan ("MCP"), and compared to MassDEP COMM-97 Disposal Criteria and Freshwater Sediment Screening Values. Results of the sediment samples analyzed indicated the presence of polycyclic aromatic hydrocarbon (PAHs), metals, and Extractable Hydrocarbons (EPHs) in concentrations below the RCS-1, Method 1 S-1/GW-1, and Probable Effect Concentration (PEC) criteria.

Public Notice: The Combined Permit Application public notice was published in the Stonebridge Press newspaper on Friday, March 8, 2024. No comments were received by MassDEP during the 21-day public comment period pursuant to 314 CMR 9.05(3)(e), which ended on March 29, 2024.

Section 61 Findings: Pursuant to M.G.L. Chapter 30, Sections 61 to 62H inclusive [the Massachusetts Environmental Policy Act ("MEPA")], the project, as referenced in the Water Quality Certification Application, #24-WW26-0020-APP, submitted a Notice of Ecological Restoration Project which was published in the Environmental Monitor on April 26, 2023. In an email dated May 30, 2023, the MEPA office replied to the applicant confirming that "*under 301 CMR 11.01(2)(b)4., the Secretary has not issued a determination, within 10 days of the close of the comment period, that an ENF is required for this project. Accordingly, any Agency Action required for the Project may be taken at this time if required to obtain a Restoration Order of Conditions, provided that*

the Agency Action is deemed to be conditioned on the ultimate issuance of the Restoration Order of Conditions."

Therefore, based on information currently in the record, MassDEP grants a Combined 401 WQC for this project subject to the following conditions to maintain or attain water quality, to minimize any damage to the environment that may result from the project, and to ensure compliance with appropriate provisions of state law. MassDEP certifies that there is reasonable assurance the project or activity, as conditioned herein, will be conducted in a manner which will not violate applicable water quality standards (314 CMR 4.00) and other appropriate requirements of state law.

1. Pursuant to 314 CMR 9.01(3), the Contractor shall take all steps necessary to assure that the proposed activities will be conducted in a manner that will avoid violations of the anti-degradation provisions of the Massachusetts Surface Water Quality Standards that protect all waters, including wetlands (314 CMR 4.00). This condition is necessary to assure that any discharge from the project complies with the Massachusetts Surface Water Quality Standards, as provided in 314 CMR 9.00, to protect the public health and restore and maintain the chemical, physical, and biological integrity of the water resources of the Commonwealth.

2. Prior to the start of work, or for any portion of the work thereafter, MassDEP shall be notified of any change(s) in the proposed project or plans that may affect waters or wetlands. MassDEP will determine whether the change(s) requires a revision to this Certification. This condition, pursuant to 314 CMR 9.07(1) and 314 CMR 9.09(2), is necessary to protect the public health and restore and maintain the chemical, physical, and biological integrity of the water resources of the Commonwealth.

3. As provided by 314 CMR 9.09(1), dredging and filling in accordance with this Certification may begin following the 21-day appeal period and once all other permits have been received. This condition is necessary to protect the public health and restore and maintain the chemical, physical, and biological integrity of the water resources of the Commonwealth.

4. Pursuant to 314 CMR 9.05(1), all work shall be performed in accordance with the following documents and plans. This condition is necessary as these documents outline how the execution of the project will meet the criteria of 314 CMR 9.07 and thereby protecting water quality and preventing degradation to wetlands and waters.

    - Application for Combined Permit, Accela Application #24-WW26-0020-APP, dated March 8, 2023, with attachments.

- Plans entitled “Carpenter Pond Dam Removal, MA00220, Dudley, Massachusetts,” consisting of 10 sheets, various scales, dated February 2024, prepared by Pare Corporation.

  MassDEP shall be notified if there are modifications and or deletions of work as specified in the plans. Depending on the nature and the scope of any change, approval by the Department may be required.

- Email correspondence between Seaver Anderson of Pare Corporation and Melany Cheeseman and Rebecca Colby of the Massachusetts Division of Fisheries and Wildlife, between June 15 and July 7, 2023, providing project review comments.

- Email correspondence between Seaver Anderson of Pare Corporation and Jason Stolarski of the Massachusetts Division of Fisheries and Wildlife, on May 17, 2024, discussing time of year restrictions.

5. As provided by 314 CMR 9.05(4), the Department shall be notified, attention Kenneth Alepidis (kenneth.alepidis@mass.gov), one week prior to the start of in-water work so that Department staff may inspect the work for compliance with the terms and conditions of this Certification. This condition is necessary to ensure that construction practices are implemented in such a manner as to prevent degradation to wetlands and waters of the Commonwealth.

6. Pursuant to 314 CMR 9.05(4), the applicant and its contractor shall allow agents of the Department to enter the project sites to verify compliance with the conditions of this Certification. This condition is necessary to ensure that construction practices are implemented in such a manner as to prevent degradation to wetlands and waters of the Commonwealth.

7. Pursuant to 314 CMR 9.09(1), the term of the 401 WQC remains in effect for the same duration as the federal permit that requires it. This condition is necessary to ensure that construction practices are implemented in such a manner as to prevent degradation to wetlands and waters of the Commonwealth.

8. Future maintenance dredging is not authorized under this Combined 401 WQC. Pursuant to 314 CMR 9.04(5), the project does not qualify for the routine maintenance exemption. This condition is necessary to ensure that the chemical, physical and biological integrity of wetlands and waters of the Commonwealth are protected.

9. In accordance with 314 CMR 9.07(1) and 314 CMR9.07(3), Best Management Practices (BMPs) such a temporary cofferdams to be installed segregating the work area from the rest of the river to minimize turbidity. Water quality nearby the

construction areas such as turbidity (NTU) should be monitored before, during, and after cofferdam construction to ensure that water quality standards are met. Turbidity monitoring data should be kept on site and available for MassDEP review upon request. This condition is necessary to ensure that construction practices are implemented in such a manner as to prevent degradation to wetlands and waters. It is also necessary to minimize turbidity and sediment caused by construction activities, protecting water quality.

10. In accordance with 314 CMR 9.07(1), during dredging and filling operations, measures shall be made to avoid the potential spread of aquatic invasive species to other waterbodies. Appropriate invasive species decontamination protocols shall be reviewed and applied, as required. All vehicles, equipment and tools that have direct contact with invasive species shall be cleaned before leaving the project areas. Under no circumstances shall sediment with invasive species seeds or rhizomes be reused or transported. This condition is necessary to prevent the spread or introduction of invasive species which would affect water quality and biological resources. It is necessary to sustain aquatic resource functions, as well as characteristics and health of the waters.

11. If invasive species along part of the project areas are found, they shall be removed and shall be replaced with native herbaceous and shrub vegetation. During replanting, precautions will be taken to minimize the introduction of invasive species, including requiring the use of certified clean, weed-free soils, and equipment to reduce the risk of introducing non-native invasive species at site. This condition is necessary to prevent the spread or introduction of invasive species which would affect water quality and biological resources. It is necessary to sustain aquatic resource functions, as well as characteristics and health of the waters.

12. In accordance with 314 CMR 9.06(6)(a)8., the Applicant shall utilize stabilized construction entrances, vehicle wash down pads, perimeter erosion controls, and re-vegetation of disturbed areas with native plantings and seed mixes in accordance with project plans to minimize potential water quality impact resulting from construction activities. This condition is necessary to ensure that construction practices are implemented in such a manner as to prevent degradation to wetlands and waters. It is also necessary to ensure that impacts to wetlands and waters are appropriately mitigated.

13. Best Management Practices shall be employed by the Contractor to protect resource areas located adjacent to the proposed staging/temporary dredged material stockpiling and dewatering areas. Sediment stockpiles shall be constructed in accordance with the MassDEP approved project plans, stabilized, bottom-lined and securely covered with wind tear resistance tarpaulin, polyethylene sheeting or similar impermeable material at all times, and properly labeled. Stockpile covers shall be securely weighed down. Stockpiles shall also be secured to restrict access by the public and shall be set back at least 10-feet from temporary construction access

roads or other areas and activities which could disturb the stockpiles and associated erosion controls. Inspection of the sediment containment and dewatering location and associated erosion controls shall be conducted daily and more frequently immediately before, during and after all precipitation and storm events. Any observed deficiency shall be corrected or repaired in a timely manner.

14. Pursuant to 314 CMR 9.09(1), in case of a precipitation or storm event, the site shall be secured beforehand in such a way as to protect resource areas and waters on site and downstream of the site, including covering of stockpiles of dredged material; inspection of erosion and sedimentation controls and correction as needed; and removal of any debris, equipment, materials, etc. that could potentially enter the waters on-site. Sediment stockpile areas shall be inspected immediately prior to, during and immediately after all precipitation and storm events. Any observed deficiency shall be corrected or repaired in a timely manner to prevent discharge from the stockpiled material. If stormwater runoff and erosion is observed from stockpiled dredged material, additional erosion and/or damage prevention controls measures shall be implemented. This condition is necessary to minimize stormwater runoff and erosion from impacting wetland resources.

15. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body, except as described in the documents and plans cited in Condition # 4. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify MassDEP, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by MassDEP pursuant to this 401 WQC. Pursuant to 314 CMR 9.06(6)(a)8., this condition is necessary to avoid and minimize adverse construction impacts to wetlands and waters of the Commonwealth.

16. Flow to the downstream channel shall be maintained throughout construction of the project via cofferdam construction, diversion pipe, and phased approach as described in and in accordance with the documents and plans cited in Condition # 4. As provided by 314 CMR 9.09(1), this condition is necessary to protect the public health and restore and maintain the chemical, physical, and biological integrity of the water resources of the Commonwealth. Pursuant to 314 CMR 9.07(1)(c), this condition is necessary to ensure that construction will be conducted in a manner that will not reduce or alter the habitat functions of the affected wetlands and waters of the Commonwealth.

17. The wetland restoration areas shall be constructed and monitored as described in and in accordance with the documents and plans cited in Condition # 4. Pursuant to

314 CMR 9.06(2)(a), this condition is necessary to ensure that wetlands of the Commonwealth are restored.

18. In accordance with 314 CMR 9.07(5), a Material Shipping Record (MSR) shall be used to track the dredged material to the proposed intermediate facility. A fully executed copy of the MSR shall be provided to MassDEP within 30 days of final shipment to the reused location or facility. Pursuant to 314 CMR 9.07(5), this condition is necessary to maintain a record of the dredged material for reference and to ensure accountability in its transportation. This assists in the protection of health, safety, public welfare, and the environment from any potential hazards during transportation. This condition is necessary to maintain a record of the dredged material for to ensure that dredge material disposal will not adversely affect any wetlands or waters.

19. In accordance with 314 CMR 9.07(5), Best Management Practices (BMPs) shall be implemented during transportation of the dredged material to the licensed receiving facility. At a minimum, when transported upon public roadways, all dredged material shall have no free liquid as determined by the Paint Filter Test or other suitably analogous methodology acceptable to MassDEP, and a tarpaulin or other means shall be used to cover the dredged material during transport. This condition is necessary to protect surrounding area water quality during transportation. These practices help to avoid fugitive dust and siltation into wetland resources and waters.

20. Pursuant to 314 CMR 9.06, disposal of any volume of dredged material at any location in tidal waters, other than as approved herein, is not authorized by this 401 Water Quality Certification, and would require a request for amendment that would be subject to approval by MassDEP and the Massachusetts Coastal Zone Management office. This condition is necessary to prevent any pollution of tidal water resources by discharge of dredged material.

21. All equipment/machinery shall be stored outside above the High Water Mark (“HWM”) and any wetland resource areas when not in use. Pursuant to 314 CMR 9.06(6)(a)8. this condition is necessary to avoid and minimize adverse construction impacts to wetlands and waters of the Commonwealth.

22. Pursuant to 314 CMR 9.06(6)(a)8., storing, servicing, or cleaning of equipment, including but not limited to fueling, changing, adding, or applying lubricants or hydraulic fluids, or washing/rinsing of trucks or equipment, shall be performed outside wetland resource areas. This condition ensures that no hazardous materials from equipment are inadvertently discharged into the water resource area in which construction is occurring, which would otherwise degrade water quality.

23. Pursuant to 314 CMR 9.06(6)(a)8. during the project period, there shall be no discharge or spillage of fuel, oil, or other pollutants, including sediments, onto any part of the site. The applicant shall take all reasonable precautions to prevent the

release of pollutants by ignorance, accident, or vandalism. This condition is necessary to ensure that construction practices are implemented in such a manner as to prevent degradation to wetlands and waters.

24. In accordance with 314 CMR 9.09(1) and 314 CMR 9.06(6)(a)8., no later than four weeks after issuance of this water quality certification, the applicant shall submit a notification procedure outlining the reporting process to MassDEP for incidents relating to dredging activities that impact surrounding resource areas and habitats including, but not limited to, observed dead or distressed fish or other aquatic organisms, observed oily sheen on the surface of the water, a sediment spill, a turbidity plume beyond the deployed BMPs, and a barge or equipment accident/spill. If at any time during implementation of the project such an incident occurs, the applicant shall immediately notify MassDEP and all site related activities impacting the water shall cease until the source of the problem is identified and adequate mitigating measures are deployed to the satisfaction of MassDEP. This condition is necessary to protect water quality because it ensures that the project proponent is using proper monitoring and construction practices that will maintain the integrity of the site hydrology and maintain the aquatic resource functions and values.

25. Upon completion of the project, remnants of project debris such as cofferdams, diversion pipe, straw bale, filter sock, silt fence, coir logs, coir matting, sediment control barrier components, etc. shall be removed and disposed of appropriately at an offsite facility. This condition is necessary to prevent degradation to wetlands and waters.

26. Pursuant to 314 CMR 9.07(1) within 30 days of completion of the dredging at Carpenter Pond Dam Removal Project in Dudley, the applicant shall provide a set of construction photographs depicting pre-, during, and post-dredging and filling activities to the Wetlands Program in the Boston Office, Attn: Kenneth Alepidis. The photographs shall be marked or labeled with the WQC transmittal number and wetlands file number of the project. This condition is necessary to ensure that water quality requirements are met. It is necessary to ensure the project proponent uses planning and construction practices that maintain the integrity of the site hydrology and maintain the aquatic resource functions and values.

Failure to comply with this Combined 401 WQC is grounds for enforcement, including civil and criminal penalties, under M.G.L. c. 21, § 42, 314 CMR 9.00, M.G.L. c. 21A, § 16, 310 CMR 5.00, or other possible actions/penalties as authorized by the General Laws of the Commonwealth.

This Combined 401 WQC does not relieve the applicant of the obligation to comply with other appropriate state or federal statutes or regulations. Any changes made to the project as described in the previously submitted Combined Permit Application or supplemental documents will require further notification to and, if an amendment is required, approval by MassDEP.

NOTICE OF APPEAL RIGHTS

Certain persons shall have a right to request an adjudicatory hearing concerning 401 WQCs by MassDEP when an application is required:

a. the applicant or property owner;
b. any person aggrieved by the decision who has submitted written comments during the public comment period;
c. any ten persons of the Commonwealth pursuant to M.G.L. c. 30A where a group member has submitted written comments during the public comment period; or
d. any governmental body or private organization with a mandate to protect the environment, which has submitted written comments during the public comment period.

Any person aggrieved, any ten (10) persons of the Commonwealth, or a governmental body or private organization with a mandate to protect the environment may appeal without having submitted written comments during the public comment period only when the claim is based on new substantive issues arising from material changes to the scope or impact of the activity and not apparent at the time of public notice. To request an adjudicatory hearing pursuant to M.G.L. c. 30A, § 10, a Notice of Claim must be made in writing, provided that the request is made by certified mail or hand delivery to MassDEP, with the appropriate filing fee specified within 310 CMR 4.10 along with a DEP Fee Transmittal Form within twenty-one 21 days from the date of issuance of this Certificate.

Case Administrator
Massachusetts Department of Environmental Protection
Office of Appeals and Dispute Resolution
100 Cambridge Street, Suite 900
Boston, MA 02114

A copy of the request shall at the same time be sent by certified mail or hand delivery to the issuing office of the Wetlands Program at:

Department of Environmental Protection
100 Cambridge Street, Suite 900
Boston, MA 02114

A Notice of Claim for Adjudicatory Hearing shall comply with MassDEP's Rules for Adjudicatory Proceedings, 310 CMR 1.01(6), and shall contain the following information pursuant to 314 CMR 9.10(3):

a. the Combined Permit Authorization Number;
b. the complete name of the applicant and address of the project;

c. the complete name, address, and fax and telephone numbers of the party filing the request, and, if represented by counsel or other representative, the name, fax and telephone numbers, and address of the attorney;
d. if claiming to be a party aggrieved, the specific facts that demonstrate that the party satisfies the definition of "aggrieved person" found at 314 CMR 9.02;
e. a clear and concise statement that an adjudicatory hearing is being requested;
f. a clear and concise statement of (1) the facts which are grounds for the proceedings, (2) the objections to this Certificate, including specifically the manner in which it is alleged to be inconsistent with the MassDEP's Water Quality Regulations, 314 CMR 9.00, and (3) the relief sought through the adjudicatory hearing, including specifically the changes desired in the final written 401 WQC; and
g. a statement that a copy of the request has been sent by certified mail or hand delivery to the applicant, the owner (if different from the applicant), the conservation commission of the city or town where the activity will occur, the Department of Conservation and Recreation (when the certificate concerns projects in Areas of Critical Environmental Concern), the public or private water supplier where the project is located (when the certificate concerns projects in Outstanding Resource Waters), and any other entity with responsibility for the resource where the project is located.

The hearing request along with a DEP Fee Transmittal Form and a valid check or money order payable to the Commonwealth of Massachusetts in the amount of one hundred dollars ($100) must be mailed to:

Commonwealth of Massachusetts
Department of Environmental Protection
Commonwealth Master Lockbox
PO Box 4062
Boston, MA 02211

The request will be dismissed if the filing fee is not paid, unless the appellant is exempt or granted a waiver. The filing fee is not required if the appellant is a city or town (or municipal agency), county, or district of the Commonwealth of Massachusetts, or a municipal housing authority. MassDEP may waive the adjudicatory hearing filing fee pursuant to 310 CMR 4.06(2) for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file an affidavit setting forth the facts believed to support the claim of undue financial hardship together with the hearing request as provided above.

Failure to comply with this certification is grounds for enforcement, including civil and criminal penalties, under MGL c.21 §42, 314 CMR 9.00, MGL c. 21A §16, 310 CMR 5.00, or other possible actions/penalties as authorized by the General Laws of the Commonwealth.

Should you have any questions relative to this Combined 401 WQC, please contact Kenneth Alepidis at kenneth.alepidis@mass.gov.

Sincerely,



Lisa Rhodes
Wetlands Program Chief

ecc:

Ora Finn, Dudley Conservation Commission, Town of Dudley, 71 West Main St., 3rd Floor, Dudley, MA 01571
Seaver Anderson, Pare Corporation, 8 Blackstone Valley Place, Lincoln, RI 02865
Judith Schmitz, MassDEP Central Regional Office, 8 New Bond Street, Worcester, MA 01606
Paul Maniccia, Department of the Army, New England District, Corps of Engineers, 696 Virginia Road, Concord, MA 01742-2751
Melany Cheeseman, Natural Heritage & Endangered Species Program, Massachusetts Division of Fisheries & Wildlife, 1 Rabbit Hill Road, Westborough, MA 01581
Rebecca Colby, Massachusetts Division of Fisheries and Wildlife, 211 Temple St., West Boylston, MA 01583
Edward Reiner and Rachel Croy, US EPA, 5 Post Office Square, Suite 100, Boston, MA 02109
Sean Duffey, Office of Coastal Zone 251 Causeway Street, Suite 800, Boston, MA 02114

attachments: Communication for Non-English Speaking Parties document
Plans of Record



Communication for Non-English-Speaking Parties

This document is important and should be translated immediately.

If you need this document translated, please contact MassDEP's Director of Environmental Justice at the telephone number listed below.

Español Spanish

Este documento es importante y debe ser traducido inmediatamente. Si necesita traducir este documento, póngase en contacto con el Director de Justicia Ambiental de MassDEP (*MassDEP's Director of Environmental Justice*) en el número de teléfono que figura más abajo.

Português Portuguese

Este documento é importante e deve ser traduzido imediatamente. Se você precisar traduzir este documento, entre em contato com o Diretor de Justiça Ambiental do MassDEP no número de telefone listado abaixo.

繁體中文 Chinese Traditional

本文檔很重要，需要即刻進行翻譯。
如需對本文檔進行翻譯，請透過如下列示電話號碼與 MassDEP 的環境司法總監聯絡。

简体中文 Chinese Simplified

这份文件非常重要，需要立即翻译。
如果您需要翻译这份文件，请通过下方电话与 MassDEP 环境司法主任联系。

Ayisyen Kreyòl Haitian Creole

Dokiman sa a enpòtan epi yo ta dwe tradui l imedyatman. Si w bezwen tradui dokiman sa a, tanpri kontakte Direktè. Jistis Anviwònmantal MassDEP a nan nimewo telefòn ki endike anba a.

Việt Vietnamese

Tài liệu này và quan trọng và phải được dịch ngay. Nếu quý vị cần bản dịch của tài liệu này, vui lòng liên hệ với Giám Đốc Phòng Công Lý Môi Trường của MassDEP theo số điện thoại được liệt kê bên dưới.

ប្រទេសកម្ពុជា Khmer/Cambodian

ឯកសារនេះមានសារៈសំខាន់
ហើយគប្បីតួរត្រូវបានបកប្រែភ្លាមៗ។
ប្រសិនបើអ្នកត្រូវការអោយឯកសារនេះបកប្រែ
សូមទាក់ទងនាយកដ្ឋានយុត្តិធម៌បរិស្ថានរបស់
MassDEPតាមរយៈលេខទូរស័ព្ទដែលបានរាយខាងក្រោម។

Kriolu Kabuverdianu Cape Verdean

Es dokumentu sta important i tenki ser tradusidu immediatamenti. Se nho ta presisa ke es dokumentu sta tradisidu, por favor kontata O Diretor di Justisia di Environman di DEP ku es numero di telifoni menxionadu di baixo.

Contact Deneen Simpson 857-406-0738
Massachusetts Department of Environmental Protection
100 Cambridge Street 9th Floor Boston, MA 02114
TTY# MassRelay Service 1-800-439-2370 • https://www.mass.gov/environmental-justice
(Version revised 8.2.2023) 310 CMR 1.03(5)(a)

Русский Russian

Это чрезвычайно важный документ, и он должен быть немедленно переведен. Если вам нужен перевод этого документа, обратитесь к директору Департамента экологического правосудия MassDEP (MassDEP's Director of Environmental Justice) по телефону, указанному ниже.

العربية Arabic

هذه الوثيقة مهمة وتجب ترجمتها على الفور.

إذا كنت بحاجة إلى ترجمة هذه الوثيقة، فيرجى الاتصال بمدير العدالة البيئية في MassDEP على رقم الهاتف المذكور أدناه.

한국어 Korean

이 문서는 중대하므로 즉시 번역되어야 합니다.
본 문서 번역이 필요하신 경우, 매사추세츠 환경보호부의 "환경정의" 담당자 분께 문의하십시오. 전화번호는 아래와 같습니다.

հայերեն Armenian

Այս փաստաթուղթը կարևոր է, և պետք է անհապաղ թարգմանել այն:
Եթե Ձեզ անհրաժեշտ է թարգմանել այս փաստաթուղթը, դիմեք Մասաչուսեթսի շրջակա միջավայրի պահպանության նախարարության (MassDEP) Բնապահպանական հարցերով արդարադատության ղեկավարին (Director of Environmental Justice)՝ ստորև նշված հեռախոսահամարով

فارسی Farsi Persian

این نوشتار بسیار مهمی است و باید فوراً ترجمه شود.
اگر نیاز به ترجمه این نوشتار دارید لطفاً با مدیر عدالت محیط زیستی MassDEP در شماره تلفن ذکر شده زیر تماس بگیرید.

Français French

Ce document est important et doit être traduit immédiatement. Si vous avez besoin d'une traduction de ce document, veuillez contacter le directeur de la justice environnementale du MassDEP au numéro de téléphone indiqué ci-dessous.

Deutsch German

Dieses Dokument ist wichtig und muss sofort übersetzt werden. Wenn Sie eine Übersetzung dieses Dokuments benötigen, wenden Sie sich bitte an MassDEP's Director of Environmental Justice *(Direktor für Umweltgerechtigkeit in Massachusetts)* unter der unten angegebenen Telefonnummer.

Ελληνική Greek

Το έγγραφο αυτό είναι πολύ σημαντικό και πρέπει να μεταφραστεί αμέσως. Αν χρειάζεστε μετάφραση του εγγράφου αυτού, παρακαλώ επικοινωνήστε με τον Διευθυντή του Τμήματος Περιβαλλοντικής Δικαιοσύνης της Μασαχουσέτης στον αριθμό τηλεφώνου που αναγράφεται παρακάτω

Italiano Italian

Questo documento è importante e deve essere tradotto immediatamente. Se hai bisogno di tradurre questo documento, contatta il Direttore della Giustizia Ambientale di MassDEP al numero di telefono sotto indicato.

Język Polski Polish

Ten dokument jest ważny i powinien zostać niezwłocznie przetłumaczony. Jeśli potrzebne jest tłumaczenie tego dokumentu, należy skontaktować się z dyrektorem ds. sprawiedliwości środowiskowej MassDEP pod numerem telefonu podanym poniżej.

हिन्दी Hindi

यह दस्तावेज महत्वपूर्ण है और इसका अनुवाद तुरंत किया जाना चाहिए। यदि आपको इस दस्तावेज का अनुवाद कराने की जरूरत है, तो कृपया नीचे दिए गए टेलीफोन नंबर पर MassDEP के पर्यावरणीय न्याय निदेशक से संपर्क करें।

Contact Deneen Simpson 857-406-0738
Massachusetts Department of Environmental Protection
100 Cambridge Street 9th Floor Boston, MA 02114
TTY# MassRelay Service 1-800-439-2370 • https://www.mass.gov/environmental-justice
(Version revised 8.2.2023) 310 CMR 1.03(5)(a)

PERMIT SUBMISSION
NOT FOR CONSTRUCTION

Prepared for The:

TOWN OF DUDLEY, MASSACHUSETTS

CARPENTER POND DAM REMOVAL

MA00220

DUDLEY, MASSACHUSETTS

FEBRUARY 2024

Drawing Index

0.0 COVER SHEET

1.0 NOTES AND LEGEND

2.0 OVERALL SITE PLAN

2.1 EXISTING SITE PLAN

3.0 PROPOSED SITE PLAN

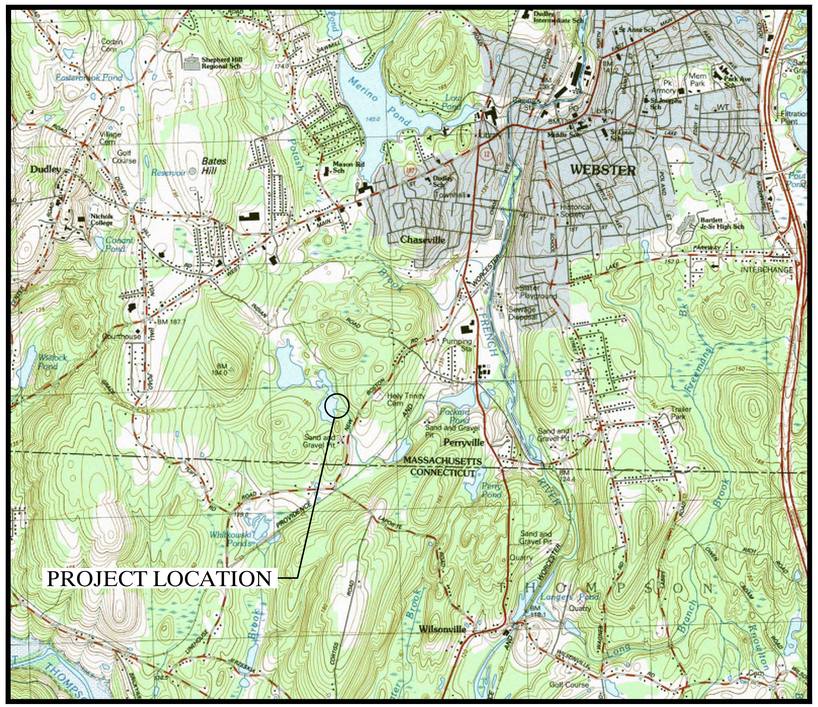
3.1 SITE ACCESS PLAN

4.0 IMPOUNDMENT RESTORATION PLAN

4.1 WETLAND IMPACT PLAN

4.2 RESTORATION PLANTING PLAN

5.0 MISCELLANEOUS DETAILS



LOCUS PLAN
SCALE: 1" = 2000'



AERIAL PLAN
SCALE: 1" = 400'

Town of Dudley Massachusetts

THIS PROJECT IS FUNDED BY
THE EXECUTIVE OFFICE OF ENERGY
AND ENVIRONMENTAL AFFAIRS

Prepared by:

PARE CORPORATION
Foxboro, Massachusetts

PARE
PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
8 BLACKSTONE VALLEY PLACE
LINCOLN, RI 02865
401-334-4100
10 LINCOLN ROAD, SUITE 210
FOXBORO, MA 02035
508-543-1755
14 BOBALA ROAD, SUITE 2B
HOLYOKE, MA 01040
413.507.3448

H:\JOBS\27_2024\27116.00_Dudley-CarpenterPond_Dam_Removal_Work\Dwg\0.0_Cover Sheet.dwg

GENERAL NOTES:

1. FOR THE PURPOSE OF THIS PROJECT

   OWNER – TOWN OF DUDLEY
   71 WEST MAIN STREET
   DUDLEY, MASSACHUSETTS 01571

   ENGINEER – PARE CORPORATION
   10 LINCOLN ROAD, SUITE 210
   FOXBORO, MA 02035

   CONTACT – ALLEN R. ORSI, P.E.

2. ACCORDANCE WITH THE LATEST EDITION OF MASSACHUSETTS STATE BUILDING CODE, THE SPECIFICATIONS INCLUDED IN THIS CONTRACT, AND APPLICABLE MASSACHUSETTS RULES AND REGULATIONS. THESE PLANS ARE INCOMPLETE UNLESS ACCOMPANIED BY THE SPECIFICATIONS INCLUDED IN THE CONTRACT DOCUMENTS. WHERE REFERENCE IS MADE TO ANY STANDARD SPECIFICATION IT SHALL MEAN THE MOST RECENT SPECIFICATION, CODE, STANDARD, OR INTERIM SPECIFICATIONS OF THE ORGANIZATION REFERRED TO AND SHALL BE CONSIDERED A PART OF THESE CONTRACT DOCUMENTS TO THE EXTENT INDICATED. IN CASE OF CONFLICT, THE MORE RIGID REQUIREMENTS AND CODES SHALL GOVERN. THESE CODES INCLUDE, BUT ARE NOT LIMITED TO: AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM), AND THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO).

3. THE PLANS WERE DEVELOPED BASED UPON AVAILABLE LIDAR TOPOGRAPHIC IMAGERY AND "EXISTING CONDITIONS PLAN" PREPARED BY WSP USA, INC. OF WORCESTER, MA DATED JULY 29, 2022. ANY DISCREPANCIES ON THESE PLANS WITH REGARD TO DIMENSION OR CONDITION SHALL BR BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH AFFECTED PORTION OF WORK. THE BRUSH AND TREE GROWTH HAS CONTINUED SINCE THE DATE OF THE SURVEY AND SHOULD BE REVIEWED BY THE CONTRACTOR.

4. WETLAND RESOURCE AREAS WERE DELINEATED BY PARE CORPORATION ON JULY 21, 2022. THE FOLLOWING WETLAND FLAGS WERE LOCATED BY WSP USA, INC: P1 TO P21, R1 TO R5, R100 TO R104, A28 TO A35, AND A43 TO A53. THE REMAINING WETLAND FLAGS WERE LOCATED USING A HANDHELD GPS UNIT WITH SUB-METER ACCURACY.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS. PLANS SHALL NOT BE SCALED FOR DIMENSIONS.

6. CONSTRUCTION SHALL BE MADE FROM APPROVED SHOP DRAWINGS ONLY.

7. NOTES, TYPICAL DETAILS, AND SCHEDULES APPLY TO ALL WORK UNLESS OTHERWISE NOTED. FOR CONDITIONS NOT SPECIFICALLY SHOWN, PROVIDE DETAILS OF SIMILAR NATURE. VERIFY APPLICABILITY BY SUBMITTING SHOP DRAWINGS FOR REVIEW.

8. INFORMATION REGARDING THE LOCATION OF SURROUNDING STRUCTURES, UTILITIES, AND THE AS-BUILT CONFIGURATION AND CONDITION OF THE EXISTING DAM AND SPILLWAY IS FURNISHED SOLELY FOR THE CONVENIENCE OF THE CONTRACTOR AND SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL CONDUCT ITS OWN INDEPENDENT EXAMINATION OF SITE CONDITIONS FOR THE PURPOSE OF BIDDING, FABRICATION, AND CONSTRUCTION ASSOCIATED WITH THE PROJECT. ANY RELIANCE UPON INFORMATION MADE AVAILABLE BY THE OWNER OR THE ENGINEER SHALL BE AT THE CONTRACTOR'S RISK.

9. THE VERTICAL DATUM FOR THE PROJECT IS NAVD 1988. HORIZONTAL DATUM IS MASSACHUSETTS STATE PLANE NAD 1983. CONTRACTOR SHALL ESTABLISH HORIZONTAL AND VERTICAL CONTROL AS REQUIRED TO ENABLE COMPLETION OF WORK.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL PROJECT DEMOLITION AND EXCESS MATERIAL IN ACCORDANCE WITH MASSACHUSETTS, LOCAL, AND FEDERAL LAWS.

11. THE CONTRACTOR SHALL PROTECT ALL ADJACENT STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ALL DAMAGE TO ADJACENT STRUCTURES AND UTILITIES AT NO ADDITIONAL COST TO THE OWNER.

12. THE CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS OF ALL PERMITS FOR THE WORK. THE CONTRACTOR SHALL COORDINATE SCHEDULE WITH THE OWNER AND ANTICIPATED PERMIT ISSUE DATES.

13. THE CONTRACTOR SHALL FOLLOW ALL OSHA AND OTHER APPLICABLE FEDERAL, STATE, AND LOCAL STANDARDS FOR ALL PROJECT COMPONENTS AND ACTIVITIES. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL SITE SAFETY PROCEDURES AND PRACTICES REGARDLESS OF THE PRESENCE OF THE OWNER OR ENGINEER.

14. ALL CONSTRUCTION ACTIVITIES SHALL BE CONFINED TO THE LIMITS OF WORK AND TEMPORARY EASEMENTS DEFINED HEREIN.

15. WHERE REFERENCE IS MADE TO ANY STANDARD SPECIFICATION, IT SHALL MEAN THE MOST RECENT SPECIFICATION, CODE, STANDARD, OR INTERIM SPECIFICATIONS OF THE ORGANIZATION REFERRED TO AND SHALL BE CONSIDERED A PART OF THESE CONTRACT DOCUMENTS TO THE EXTENT INDICATED. IN CASE OF CONFLICT, THE MORE RIGID REQUIREMENTS AND CODES SHALL GOVERN. THESE CODES INCLUDE, BUT ARE NOT LIMITED TO: AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM).

16. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A CONSTRUCTION SCHEDULE TO THE OWNER WITHIN 3 DAYS OF THE PRE-CONSTRUCTION CONFERENCE. THE CONTRACTOR SHALL UPDATE THEIR SCHEDULE AS NEEDED AND AS REQUESTED BY THE OWNER THROUGHOUT THE COURSE OF WORK.

17. THE CONTRACTOR SHALL STAGE ALL EQUIPMENT IN THE DESIGNATED STAGING AREAS. ALL GREASING AND REFUELING ACTIVITIES SHALL OCCUR IN THE STAGING AREA.

18. THE CONTRACTOR SHALL MAINTAIN A SECURE SITE AND PROVIDE APPROPRIATE SAFETY MEASURES TO PREVENT ACCIDENTS. THE SAFETY MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO SIGNAGE, BARRICADES, FENCES, FLASHING WARNING LIGHTS, AND POLICING IF NECESSARY.

19. UPON COMPLETION OF THE PROJECT, CONTRACTOR SHALL PROVIDE TWO AS-BUILT PLAN SETS TO THE OWNER DEPICTING ANY FIELD CHANGES OF DIMENSION OR DETAIL, LOCATION OF UNDERGROUND STRUCTURES AND/OR UTILITIES, CONSTRUCTION DEVIATIONS, CHANGES DUE TO FIELD OR CHANGE ORDER, AND DETAILS NOT ON THE ORIGINAL DRAWINGS.

20. NO WORK OR DISCHARGES, OTHER THAN THAT SHOWN, SHALL BE PERFORMED WITHIN WETLANDS WITHOUT FIRST RECEIVING PROPER PERMITS FROM THE REGULATORY AGENCIES HAVING JURISDICTION OVER ALL OR PORTIONS OF THE WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING, RESTORING AND REPAIRING ALL DAMAGE AS A RESULT OF UNAUTHORIZED WORK OR DISCHARGES TO THE WETLAND AREA AT NO ADDITIONAL COST TO THE OWNER.

21. UPON COMPLETION OF THE WORK, ALL DISTURBED AREAS SHALL BE DRESSED AND SEEDED WITH SLOPE OR PLOT MIX AND MAINTAINED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. CONTRACTOR SHALL BE REQUIRED TO WATER SEEDED SLOPES ON A DAILY BASIS UNTIL A SATISFACTORY STAND OF GRASS HAS DEVELOPED.

22. THE CONTRACTOR SHALL ATTEND WEEKLY PROGRESS MEETINGS IN ACCORDANCE TO SPECIFICATION SECTION 01200: PROJECT MEETINGS.

23. THE CONTRACTOR SHALL STOCKPILE ALL SUITABLE MATERIAL ENCOUNTERED DURING EXCAVATION AND DEMOLITION ACTIVITY FOR REUSE. THE CONTRACTOR SHALL PROVIDE TARPS, COVERS, AND OTHER MEASURES TO PROTECT STOCKPILES FROM BECOMING SATURATED, FROZEN, OR OTHERWISE UNSUITABLE FOR REUSE.

24. CONTRACTOR SHALL THOROUGHLY WASH AND CLEAN EQUIPMENT PRIOR TO DELIVERY TO THE SITE TO AVOID TRANSPORT AND INTRODUCTION OF INVASIVE SPECIES.

EMERGENCY RESPONSE NOTES:

1. CONTRACTOR SHALL MAINTAIN ON SITE AND READILY AVAILABLE, MATERIALS OF SUFFICIENT TYPE AND QUANTITY TO CONTAIN AN ACCIDENTAL EQUIPMENT-BASED RELEASE OF FUEL OR OIL. AT A MINIMUM SUCH MATERIALS SHALL INCLUDE OIL BOOM OF SUFFICIENT LENGTH TO SPAN THE EXISTING OR PROPOSED CHANNEL AND A 55 GALLON CONSTRUCTION SITE SPILL KIT SUITABLE FOR CONTAINING SPILLS ON LAND OR IN WATER.

2. FOLLOWING ANY ACCIDENTAL RELEASE OF OIL OR HAZARDOUS MATERIALS THE CONTRACTOR SHALL, AS SOON AS PRACTICABLE, NOTIFY THE FALL RIVER FIRE DEPARTMENTS BY CALLING 911. CONTRACTOR SHALL ALSO NOTIFY THE OWNER AND ENGINEER.

3. RELEASES OF REPORTABLE QUANTITIES SHALL BE REPORTED IN ACCORDANCE WITH THE PROVISIONS OF THE MASSACHUSETTS CONTINGENCY PLAN.

EROSION AND SEDIMENT CONTROL NOTES:

1. CONTRACTOR SHALL INSTALL STRAW BALES AND SILT FENCE AS INDICATED IN THE CONTRACT DOCUMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SEDIMENT CONTROL DEVICES.

2. CONTRACTOR SHALL LIMIT STOCKPILING OF MATERIALS TO THE INDICATED STAGING AREAS. ALL STOCKPILED MATERIAL SHALL BE SURROUNDED BY STRAW BALES AND SILT FENCE.

3. THE LOCATION OF SEDIMENT CONTROL BARRIERS SHOWN IS CONSIDERED TO BE THE MINIMUM ACCEPTABLE AND SHALL BE MODIFIED, SUPPLEMENTED, OR EXPANDED BY THE CONTRACTOR AS FIELD CONDITIONS WARRANT.

4. SEDIMENT CONTROL BARRIERS SHALL CONSIST OF SILT FENCE, STRAW BALES, SILT FENCE BACKED BY STRAW BALES, AND/OR STRAW WATTLES AS FIELD CONDITIONS WARRANT. PROJECT ENGINEER SHALL APPROVE THE BARRIER TYPE.

5. THE CONDITION OF THE SEDIMENT CONTROL BARRIERS SHALL BE MONITORED ON AN ON-GOING BASIS, AT A MINIMUM OF ONCE PER WEEK AND AFTER ANY RAINFALL EVENT IN EXCESS OF 0.25' IN 24 HOURS. ANY FAILURE OF THE BARRIER SHALL BE CORRECTED WITHIN 24 HOURS OF DISCOVERY.

6. SEDIMENT SHALL BE REMOVED AND DISPOSED BEFORE IT EXCEEDS 1/2 THE ORIGINAL EXPOSED HEIGHT OF THE BARRIER.

7. STONE ANTI-TRACKING PADS SHALL BE UTILIZED AS NECESSARY TO PREVENT VEHICLE TRACKING OF SEDIMENTS ONTO PUBLIC ROADWAYS.

8. THE CONTRACTOR SHALL BE PREPARED TO DEPLOY ADAPTIVE MEASURES AS NECESSARY TO LIMIT EXCESSIVE SHORT-TERM MOBILIZATION OF SEDIMENT SHOULD SUCH OCCUR DURING DAM REMOVAL OR BREACH CREATION. AS DETERMINED NECESSARY BY THE CONTRACTOR OR AS RECOMMENDED BY THE PROJECT ENGINEER, IN-STREAM ADAPTIVE SEDIMENT CONTROL MEASURES MAY INCLUDE THE IMPLEMENTATION OF A SEDIMENT BASIN IN THE STREAM CHANNEL DOWNSTREAM OF THE DAM WITH CLEANUP PERFORMED AS NEEDED. ANY SUCH BASIN SHALL BE CONSTRUCTED USING ABOVE-GROUND BARRIERS (E.G., SUPERSACKS) TO CREATE A BERM RATHER THAN EXCAVATION IN THE RIVER CHANNEL.

9. UPON COMPLETION OF THE PROJECT AND PERMANENT STABILIZATION OF THE GROUND SURFACE, ALL SEDIMENT CONTROL BARRIERS SHALL BE REMOVED AND DISPOSED OF IN AN APPROPRIATE FASHION.

10. THIS WORK IS SUBJECT TO A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT AS REQUIRED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA) CONSTRUCTION GENERAL PERMIT (CGP). THE CONTRACTOR SHALL BE RESPONSIBLE FOR FILING A NOTICE OF INTENT WITH THE EPA, PREPARING A STORMWATER POLLUTION PREVENTION PLAN (SWPPP), CONDUCTING THE REQUIRED SITE INSPECTIONS, MAINTAINING THE SWPPP PER THE CGP AND FILING A NOTICE OF TERMINATION WITH THE EPA AFTER SITE STABILIZATION REQUIREMENTS HAVE BEEN MET.

11. SOIL EROSION AND SEDIMENTATION CONTROLS SHALL BE PROVIDED IN ACCORDANCE WITH THE STATE OF MASSACHUSETTS, AND THE NOTES AND DETAILS SHOWN IN THIS PLAN SET.

LOAM AND SEED NOTES:

1. CONTRACTOR SHALL APPLY FERTILIZER AND LOAM TO PREPARED TOPSOIL SURFACE AT THE RATES INDICATED IN THE PROJECT SPECIFICATIONS AND AS OTHERWISE RECOMMENDED BY THE SOIL CHEMICAL ANALYSIS.

2. CONTRACTOR SHALL SEED ALL LOAMED AREAS AND OTHER AREAS DISTURBED BY THE WORK AS INDICATED IN THE PROJECT SPECIFICATIONS.

3. CONTRACTOR SHALL MULCH ENTIRE SEEDED AREA WITH STRAW MULCH.

4. CONTRACTOR SHALL INSTALL JUTE MESH OVER THE ENTIRE SEEDED AREA IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR OVERLAPPING, ANCHORING, AND DIRECTION OF PLACEMENT.

5. NATIVE NEW ENGLAND CONSERVATION/WILDLIFE MIX SHALL BE UTILIZED FOR SEEDING RELOCATED EMBANKMENT MATERIAL IN ADJACENT FIELD.

6. UPON COMPLETION OF THE WORK ALL DISTURBED AREAS SHALL BE DRESSED AND COVERED WITH A MINIMUM OF 6-INCH OF LOAM IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, UNLESS NOTED OTHERWISE.

7. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SEEDED AREA THROUGH ONE GROWING SEASON, MAINTENANCE INCLUDES MOWING, WATERING, AND RE-SEEDING AS REQUIRED TO DEVELOP A SATISFACTORY STAND OF HEALTHY GRASS AS DEFINED IN THE PROJECT SPECIFICATIONS (SECTION 02900: LANDSCAPING).

DIVERSION NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITION IN THE FIELD PRIOR TO ANY DEMOLITION OR CONSTRUCTION. ANY DISCREPANCIES RELATING TO THE DRAWINGS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OFFSITE DISPOSAL OF ALL PROJECT DEMOLITION MATERIAL, TRASH, AND DEBRIS IN ACCORDANCE WITH THE LOCAL STATE LAWS.

3. THE CONTRACTOR SHALL MAINTAIN STREAM FLOW THROUGHOUT CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING ANY SOIL OR OTHER MATERIAL FROM ENTERING THE DISCHARGE CHANNEL OR IMPOUNDMENT.

4. THE CONTRACTOR SHALL NOT PERFORM ANY DRAW DOWN OF THE IMPOUNDMENT UNLESS THEY HAVE RECEIVED WRITTEN PERMISSION FROM THE OWNER OR MUST EXECUTE EMERGENCY PROCEDURES OUTLINED IN THE CONSTRUCTION FLOOD CONTINGENCY PLAN.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LOSS AND DAMAGE DUE TO A FAILURE OF ANY COFFERDAMS OR DIVERSION STRUCTURES CONSTRUCTED DURING THE WORK.

6. THE CONTRACTOR SHALL REGULATE DISCHARGES AND PHASE CONSTRUCTION SO THAT CONSTRUCTION MATERIAL DOES NOT PASS THROUGH FLOWING WATER.

7. ANY NECESSARY COFFERDAMS AND DIVERSIONS SHALL BE DESIGNED BY THE CONTRACTOR AND BEAR THE STAMP OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MASSACHUSETTS. APPROVAL BY THE OWNER AND ENGINEER IS REQUIRED PRIOR TO INSTALLATION. ALL DIVERSIONS SHALL BE INSTALLED AND REMOVED IN THEIR ENTIRETY AT NO ADDITIONAL COST TO THE OWNER.

8. THE CONTRACTOR SHALL MAINTAIN A STOCKPILE OF MATERIAL ONSITE TO BE UTILIZED TO STABILIZE THE EXCAVATION IN THE EVENT OF HIGH WATER OR OTHER CONDITIONS WHICH MAY COMPROMISE THE COFFERDAM STABILITY. THE STOCKPILE SHALL BE MAINTAINED IN ACCORDANCE WITH A FLOOD EMERGENCY RESPONSE PLAN TO BE DEVELOPED BY THE CONTRACTOR AND SUBJECT TO APPROVAL BY THE ENGINEER AND OWNER.

9. WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY UTILIZE WATER WITHDRAWALS FROM THE LOWER RESERVOIR FOR THE PURPOSES OF LOAM AND SEED OPERATIONS AND MAINTENANCE, DUST CONTROL, EARTHWORK OPERATION, AND CONCRETE AND MORTAR MIXING. SUCH WATER SHALL NOT BE USED FOR THE FOLLOWING BUT NOT LIMITED TO: EQUIPMENT WASH DOWN, MAINTENANCE (E.G. CONCRETE WASHOUT, EXTERIOR CLEANING, OR TRACK WASH DOWN), OR WASHING STONE OR STRIPPED MATERIALS.

CONSTRUCTION SEQUENCE:

THE FOLLOWING SEQUENCE IS INTENDED TO BE GENERAL IN NATURE AND SHALL NOT BE CONSIDERED DIRECTION BY THE ENGINEER OR THE OWNER. ALTHOUGH IT IS LIKELY THAT SOME OF THE WORK ITEMS WILL OVERLAP, CONSTRUCTION SEQUENCES FOR THE VARIOUS PROJECT COMPONENTS ARE DESCRIBED SEPARATELY AND MAY NOT NECESSARILY PROCEED IN CONSECUTIVE ORDER. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.

1. MOBILIZE TO THE SITE; ESTABLISH ACCESS WAYS AND STAGING AREAS.
2. INSTALL EROSION AND SEDIMENT CONTROL DEVICES.
3. INSTALL CONTROL OF WATER DEVICES INCLUDING DIVERSIONS; COMMENCE IMPOUNDMENT DRAWDOWN
   A. INSTALL DIVERSION PIPE
   B. INSTALL TEMPORARY UPSTREAM AND TAILWATER COFFERDAMS
4. <u>COMPLETE REMOVAL OF THE DAM:</u>
   A. REMOVE TREES AND BRUSH AS NEEDED WITHIN THE PROPOSED BREACH AS SHOWN IN PLAN
   B. DEMOLISH THE STONE MASONRY SPILLWAY SECTION; IMPLEMENT DRAWDOWN
      a. SEQUENTIALLY DEMOLISH SPILLWAY TO IMPLEMENT DRAWDOWN IN ACCORDANCE WITH ALLOWABLE DRAW DOWN RATE; STOCKPILE STONE FOR REUSE
      b. EXCAVATE UPSTREAM SOILS AS REQUIRED TO IMPLEMENT DRAWDOWN DURING SPILLWAY DEMOLITION
   C. EXCAVATE TO PROPOSED GRADES AND LINES TO CREATE THE PROPOSED CHANNEL
      a. REMOVE BOULDERS; STOCKPILE FOR REUSE
      b. REMOVE CONCRETE (IF ANY) AND UNSUITABLE MATERAIL; DISPOSE OF OFFSITE
      c. STORE EXCESS SOILS IN IDENTIFIED STORAGE AREAS
         (ALT: REMOVE AND DISPOSE EXCESS SOILS OFFSITE)
   D. INSTALL BANK PROTECTION RIVER RIGHT; PLACE STOCKPILED BOULDERS WHERE INDICATED; ESTABLISH VEGETATION WITHIN CHANNEL AS INDICATED ON PLAN.
   E. REMOVE COFFERDAMS; DIVERT FLOW TO CONSTRUCTED CHANNEL AND REMOVE DIVERSION PIPE
   F. COMPLETE EXCAVATION OF THE EMBANKMENT TO THE LIMITS SHOWN
5. <u>SITE FINISHING AND DEMOBILIZATION:</u>
   A. INSTALL OTHER SURFACE FINISHED AS SPECIFIED (I.E. PLANTINGS, SHRUB, COIR LOGS, LOAM, SEED, ETC.)
   B. UNLESS OTHERWISE NOTED, INSTALL LOAM AND ESTABLISH GRASS IN ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES.
   C. RESTORE SITE ACCESS WAYS INCLUDING GRADING IMPROVEMENTS, EROSION CONTROL, AND STABILIZATION.
   D. DEMOBILIZE.

INVASIVE SPECIES MONITORING NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING A MONITORING PROGRAM AS PART OF THE BASE SCOPE OF WORK. SHOULD INVASIVE SPECIES TREATMENT BE REQUIRED, THE SCOPE OF WORK SHALL BE IDENTIFIED BY THE CONTRACTOR AND COMPLETED THROUGH CHANGE ORDER OR AS OTHERWISE DEEMED APPROPRIATE.
2. MONITORING FOR INVASIVE PLANT SPECIES WILL COMMENCE AS SOON AS POND DRAW DOWN IS COMPLETE. THIS MAY BE IN ADVANCE OF THE PHYSICAL REMOVAL OF THE DAM.
3. MONITORING SHALL BE OVERSEEN BY A QUALIFIED WETLANDS SPECIALIST WITH EXPERIENCE IDENTIFYING AND MANAGING INVASIVE PLANT SPECIES IN THE NORTHEASTERN UNITED STATES. DOCUMENTATION OF SUCH QUALIFICATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
4. THE INVASIVE SPECIES MONITORING WILL BE IMPLEMENTED WITHIN THE LIMITS OF DISTURBANCE FOR THE DAM REMOVAL, AND TO THE APPROXIMATE BOUNDARY OF THE FORMER IMPOUNDMENT.
5. POTENTIAL INVASIVE PLANT SPECIES OF CONCERN AT THE SITE INCLUDE PURPLE LOOSESTRIFE (LYTHRUM SALICARIA), COMMON REED (PHRAGMITES AUSTRALIS), REED CANARY GRASS (PHALARIS ARUNINACEA), GLOSSY BUCKTHORN (RHAMNUS FRANGULA), YELLOW IRIS (IRIS PSEUDOCORUS), MULTIFLORA ROSE (ROSA MULTIFLORA), AND JAPANESE BARBERRY (BERBERIS THUNBERGII).
6. POST-CONSTRUCTION MONITORING & CONTROL:
   A. FOLLOWING IMPOUNDMENT RESTORATION, MONITOR AND CONTROL ONCE PER MONTH FOR THE REMAINDER OF THE FIRST GROWING SEASON. (TO BE COMPLETED BY CONTRACTOR)
   B. FOR TWO GROWING SEASONS FOLLOWING IMPOUNDMENT RESTORATION, MONITORING AND CONTROL SHALL BE CONDUCTED MONTHLY FROM JUNE THROUGH SEPTEMBER.
   C. SHOULD INVASIVE COLONIZATION BE ENCOUNTERED, CONTROL MEASURES SHALL BE IMPLEMENTED IMMEDIATELY. CONTROL MEASURES SHALL BE SPECIFIC TO THE SPECIES ENCOUNTERED AND SHALL BE DETERMINED BY THE QUALIFIED WETLANDS SPECIALIST RESPONSIBLE FOR MONITORING.
   D. CONTROL MEASURES MAY INCLUDE PHYSICAL AND/OR CHEMICAL TREATMENT OF THE COLONIZATION.
   E. PHYSICAL TREATMENT MAY INCLUDE CUTTING OR PULLING INDIVIDUAL PLANTS, OR REMOVING ROOT SYSTEMS.
   F. CHEMICAL CONTROL MAY BE ACCOMPLISHED BY USING A SHORT-LIFE HERBICIDE SUITABLE FOR USE IN AN AQUATIC ENVIRONMENT.
   G. COMBINATION TREATMENT MAY INCLUDE 'CUT AND PAINT' METHODS.
   H. DOCUMENTATION OF MONITORING AND CONTROL ACTIVITIES SHALL BE SUBMITTED MONTHLY TO THE PROJECT OWNER.

LEGEND

EXISTING		PROPOSED
	STATE HIGHWAY LINE	
	EASEMENT BOUNDARY	
52	1' CONTOUR	52
55	5' CONTOUR	55
	EDGE OF PAVEMENT	
	CURBING	
	EDGE OF GRAVEL	
	EDGE OF WATER	
	STONE MASONRY WALL	
	FENCE	
	GUARD RAIL	
	TREELINE	
	UTILITY POLE	
	OVERHEAD WIRE	
	STRAW BALES	
	SILT FENCE	
	COFFER DAM	
	TURBIDITY BARRIER	
	LIMIT OF DISTURBANCE	

ABBREVIATIONS

ABAN	ABANDON
CD1	COFFER DAM ORIENTATION NO. 1
CD2	COFFER DAM ORIENTATION NO. 2
CD1&2	COFFER DAM PRESENT DURING ORIENTATION NOS. 1 AND 2
LOD	LIMIT OF DISTURBANCE
R&D	REMOVE & DISPOSE
SILT	SILT FENCE
STRAW	STRAW BALES
TB	TURBIDITY BARRIER
D/S	= DOWNSTREAM
U/S	= UP STREAM
EMB	= EMBANKMENT
ENG	= ENGINEERED
CP	= CONTROL POINT
BO	= BLOW OFF

PERMIT SUBMISSION
NOT FOR CONSTRUCTION

© 2022 ALL INFORMATION THESE DOCUMENTS BY PARE CORPORATION

PARE

THIS PROJECT IS FUNDED BY THE EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Carpenter Pond Dam Removal

MA00220

Dudley, Massachusetts

Town of Dudley, Massachusetts

COMMONWEALTH OF MASSACHUSETTS
ALLEN R. ORSI
No. 46904
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

PROJECT NO.:	22116.00
DATE:	FEBRUARY 2024
SCALE:	AS NOTED
DESIGNED BY:	ARO
CHECKED BY:	ARO
DRAWN BY:	LMC
APPROVED BY:	ARO

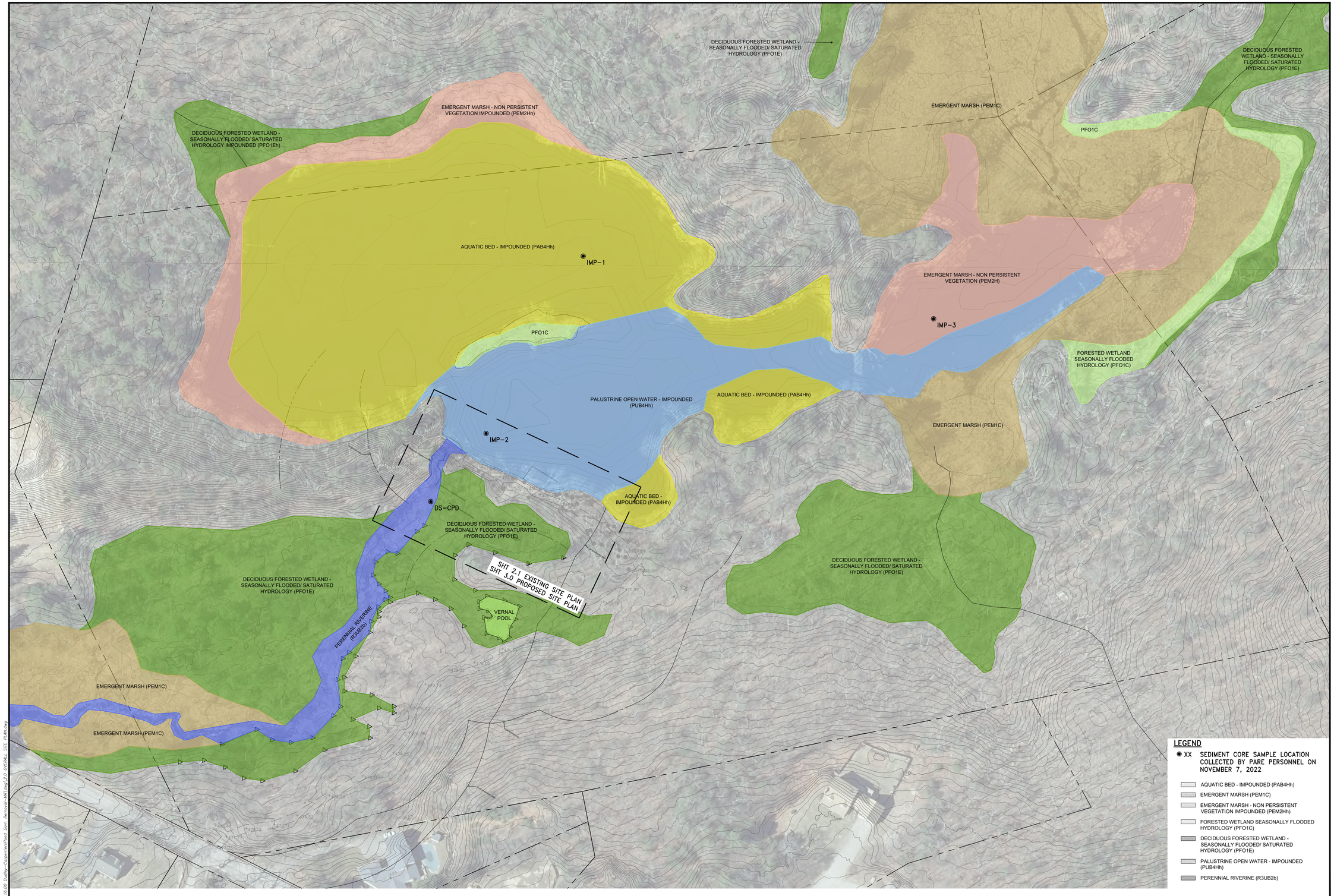
DRAWING TITLE:

NOTES AND LEGEND

DRAWING NO.: 1.0

SHEET NO. 2 OF 10

I:\22116\12 - Ads\12216.00 Dudley-CarpenterPond Dam Removal-MA\dwg\1.0 NOTES AND LEGEND.dwg



© 2022 ALL INFORMATION THESE DOCUMENTS BY PARE CORPORATION

PARE

THIS PROJECT IS FUNDED BY THE EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Carpenter Pond Dam Removal

MA00220

Dudley, Massachusetts

Town of Dudley, Massachusetts

ALLEN R. CARR
No. 43904
REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS

REVISIONS:

PROJECT NO.:	22116.00
DATE:	FEBRUARY 2024
SCALE:	AS NOTED
DESIGNED BY:	ARO
CHECKED BY:	ARO
DRAWN BY:	LMC
APPROVED BY:	ARO

DRAWING TITLE:

OVERALL SITE PLAN

DRAWING NO.: 2.0

SHEET NO. 3 OF 10

P:\JOBS\22_Jobs\22116.00_Dudley_CarpenterPond_Dam_Removal-MA\dwg\2.0_OVERALL_SITE_PLAN.dwg

© 2022 ALL INFORMATION THESE DOCUMENTS BY PARE CORPORATION

CARPENTER POND
WATER ELEV=474.4 JULY 26, 2022

CONCRETE UPSTREAM WALL

BENCHMARK:
BMK A SQ CUT ON CONC DAM
ELEV:..475.20'

OHW OF CARPENTER ROAD POND

STONE BLOCK STEPPED SPILLWAY

ASSUMED WALL ALIGNMENT BENEATH DEBRIS

DRY SET STONE MASONRY WALL

PILED BEAVER DEBRIS

OHW OF PERENNIAL STREAM

OHW OF PERENNIAL STREAM

BORDERING VEGETATED WETLAND

BENCHMARK:
BMK B SPK IN 18 TREE
ELEV: 475.30'

200' RIVERFRONT AREA

100-FOOT VERNAL POOL HABITAT

GRAVEL DRIVE

WOODED

STREAM

EOW

RWS

CONC

Scale: 1"=10'
0 5' 10' 20'

PERMIT SUBMISSION
NOT FOR CONSTRUCTION

P:\Jobs\22116.00 Dudley--CarpenterPond Dam Removal-MA\dwg\2.1 EXISTING SITE PLAN.dwg

PARE

TOWN OF DUDLEY, MASSACHUSETTS INCORPORATED 1733

Executive Office of Energy and Environmental Affairs

THIS PROJECT IS FUNDED BY THE EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Carpenter Pond Dam Removal

MA00220

Dudley, Massachusetts

Town of Dudley, Massachusetts

COMMONWEALTH OF MASSACHUSETTS
ALLEN R. OSBY
CIVIL
No. 46904
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

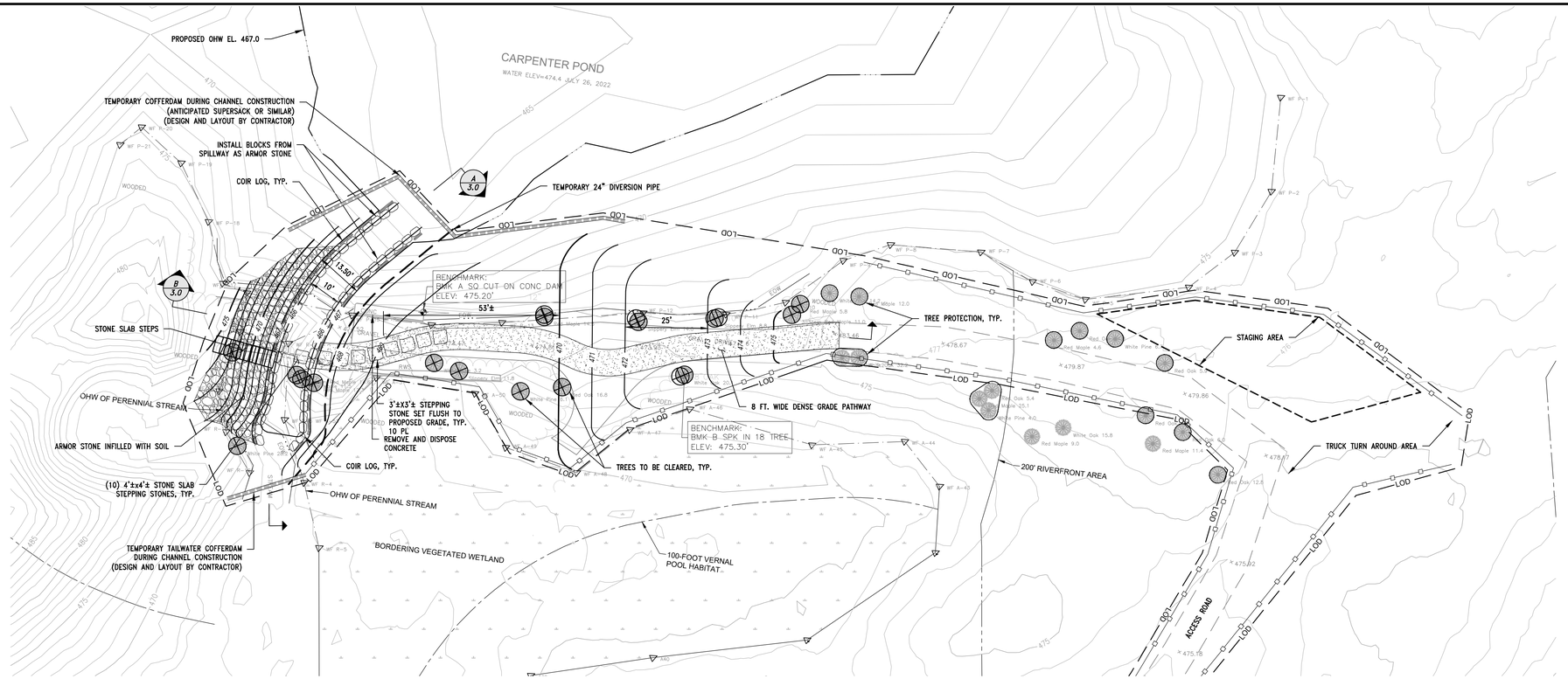
PROJECT NO.:	22116.00
DATE:	FEBRUARY 2024
SCALE:	AS NOTED
DESIGNED BY:	ARO
CHECKED BY:	ARO
DRAWN BY:	LMC
APPROVED BY:	ARO

DRAWING TITLE:

EXISTING SITE PLAN

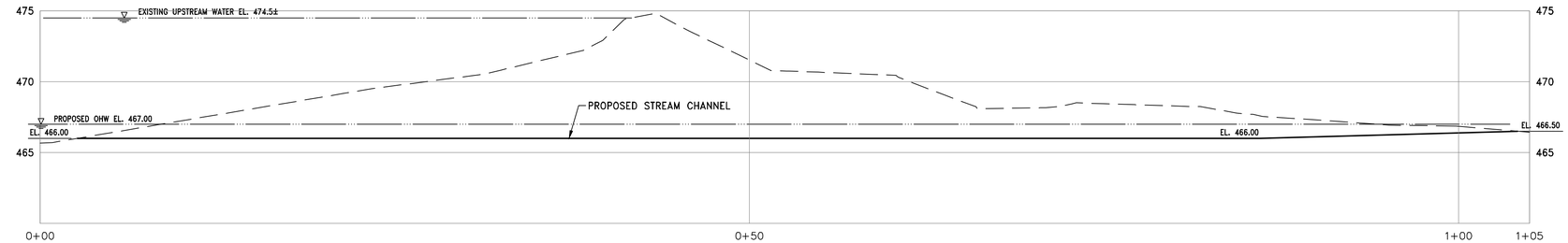
DRAWING NO.:
2.1

SHEET NO. 4 OF 10



PROPOSED SITE PLAN

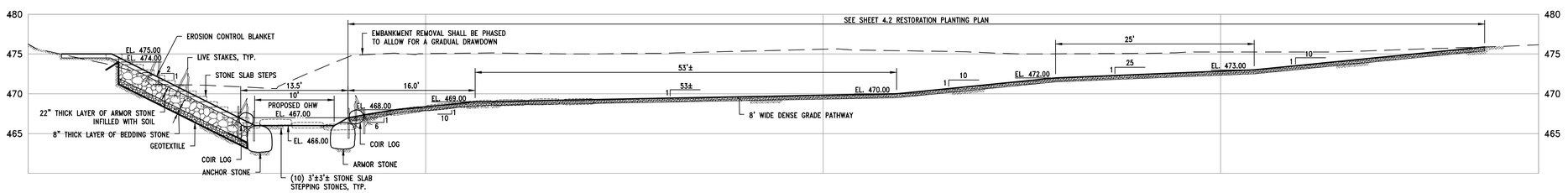
SCALE: 1"=20'±



SECTION A

A 3.0

SCALE: 1"=5'



SECTION B

B 3.0

SCALE: 1"=8'

PERMIT SUBMISSION
NOT FOR CONSTRUCTION

© 2022 ALL INFORMATION THESE DOCUMENTS BY PARE CORPORATION

PARE

Executive Office of Energy and Environmental Affairs

THIS PROJECT IS FUNDED BY THE EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Carpenter Pond Dam Removal

MA00220

Dudley, Massachusetts

Town of Dudley, Massachusetts

COMMONWEALTH OF MASSACHUSETTS
ALLEN K. DESI
CIVIL
No. 46904
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

PROJECT NO.:	22116.00
DATE:	FEBRUARY 2024
SCALE:	AS NOTED
DESIGNED BY:	ARO
CHECKED BY:	ARO
DRAWN BY:	LMC
APPROVED BY:	ARO

DRAWING TITLE:

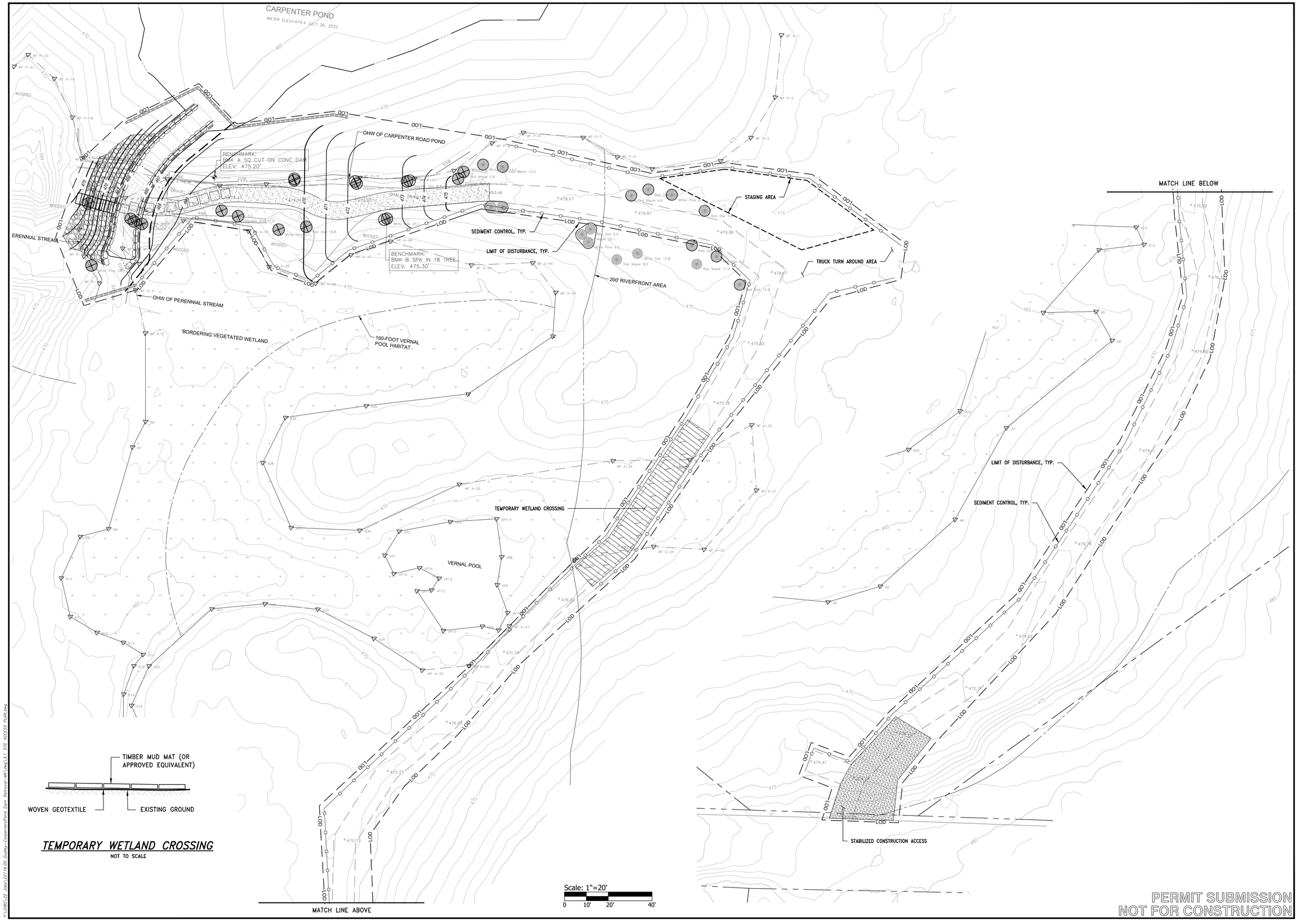
PROPOSED SITE PLAN

DRAWING NO.:

3.0

SHEET NO. 5 OF 10

P:\22116.00 Dudley-CarpenterPond Dam Removal-MA\dwg\3.0 PROPOSED SITE PLAN.dwg



TIMBER MUD MAT (OR APPROVED EQUIVALENT)

WOVEN GEOTEXTILE — EXISTING GROUND

TEMPORARY WETLAND CROSSING

NOT TO SCALE

PERMIT SUBMISSION
NOT FOR CONSTRUCTION

© 2022 ALL INFORMATION THESE DOCUMENTS BY PARE CORPORATION

PARE

THIS PROJECT IS FUNDED BY THE EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Carpenter Pond Dam Removal

MA00220

Dudley, Massachusetts

Town of Dudley, Massachusetts

ALLEN R. O'DELL
No. 46804
REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS

REVISIONS:	

PROJECT NO.:	22116.00
DATE:	FEBRUARY 2024
SCALE:	AS NOTED
DESIGNED BY:	ARO
CHECKED BY:	ARO
DRAWN BY:	LMC
APPROVED BY:	ARO

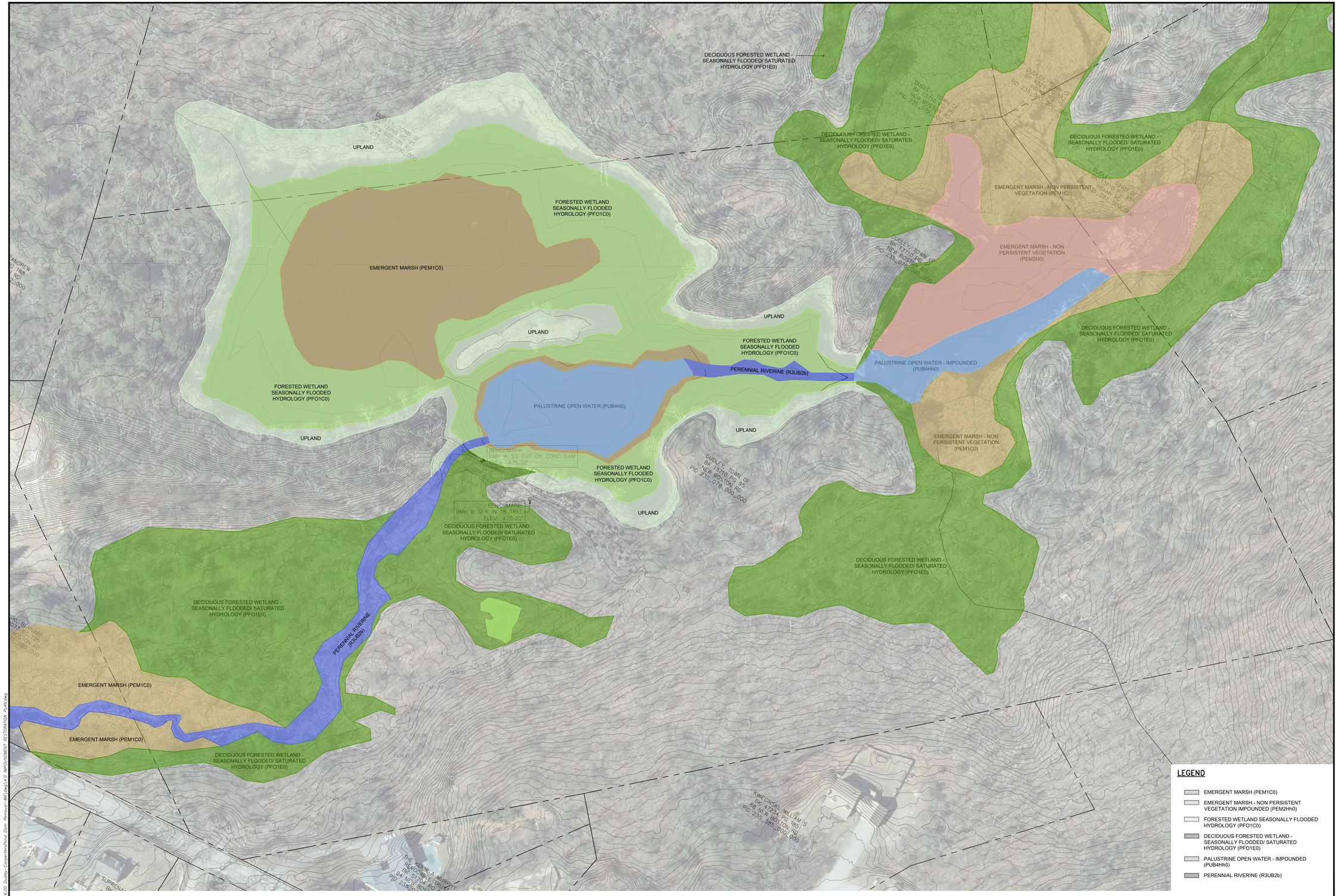
DRAWING TITLE:

SITE ACCESS PLAN

DRAWING NO.: 3.1

SHEET NO. 6 OF ___

K:\JOBS\22_Jobs\22116.00 Dudley-CarpenterPond Dam Removal-MA\dwg\3.1 SITE ACCESS PLAN.dwg



© 2022 ALL INFORMATION THESE DOCUMENTS BY PARE CORPORATION

PARE

TOWN OF DUDLEY, MASSACHUSETTS INCORPORATED 1733

Executive Office of Energy and Environmental Affairs

THIS PROJECT IS FUNDED BY THE EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Carpenter Pond Dam Removal

MA00220

Dudley, Massachusetts

Town of Dudley, Massachusetts

COMMONWEALTH OF MASSACHUSETTS
ALLEN R. OSER
No. 46904
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

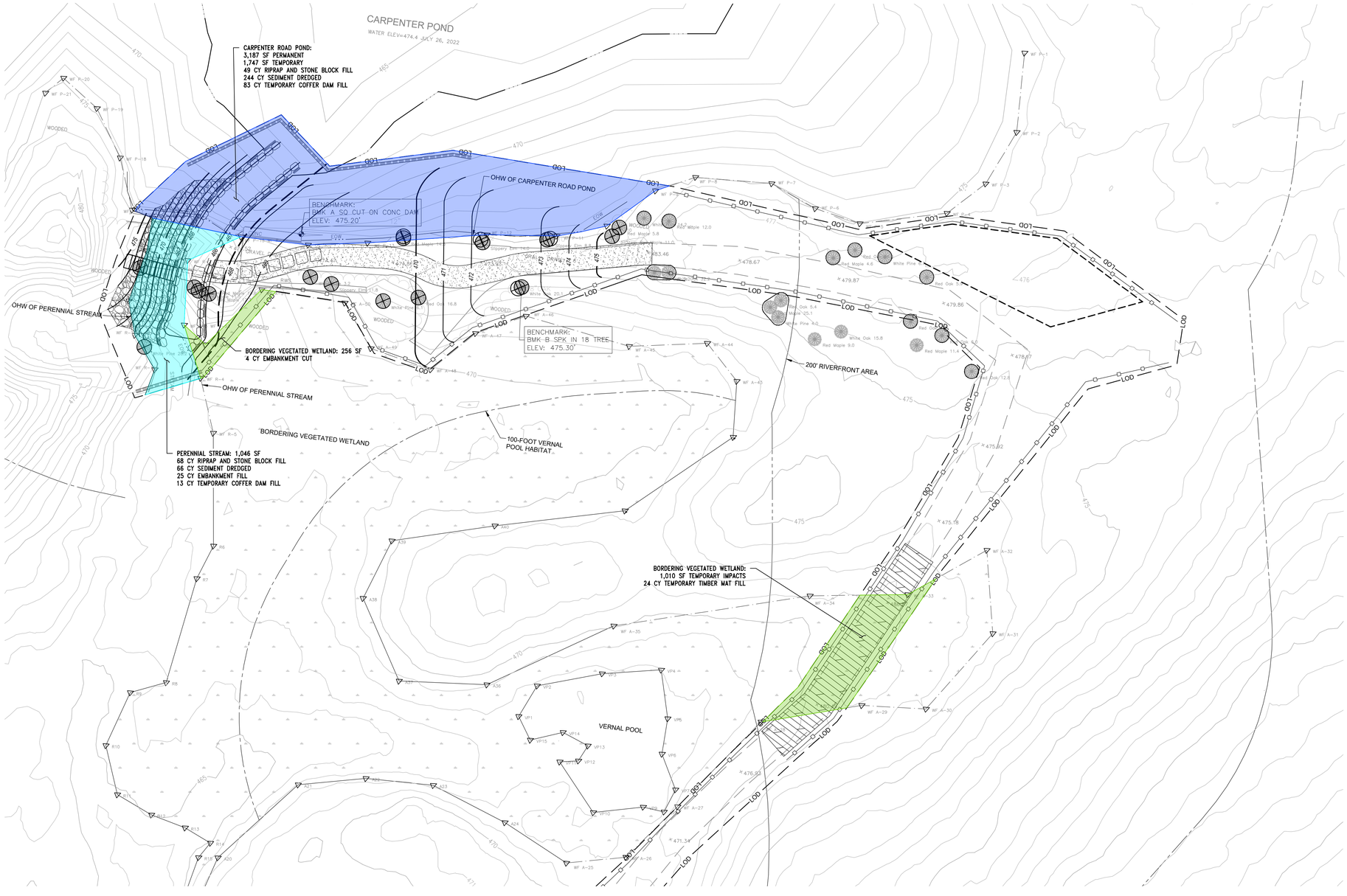
PROJECT NO.:	22116.00
DATE:	FEBRUARY 2024
SCALE:	AS NOTED
DESIGNED BY:	ARO
CHECKED BY:	ARO
DRAWN BY:	LMC
APPROVED BY:	ARO

DRAWING TITLE:

IMPOUNDMENT RESTORATION PLAN

DRAWING NO.: 4.0

SHEET NO. 7 OF 10



Scale: 1"=20'

0 10' 20' 40'

LEGEND

- BORDERING VEGETATIVE WETLAND IMPACTS
- PERENNIAL STREAM IMPACTS
- POND IMPACTS

PERMIT SUBMISSION
NOT FOR CONSTRUCTION

© 2022 ALL INFORMATION THESE DOCUMENTS BY PARE CORPORATION

PARE

THIS PROJECT IS FUNDED BY THE EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Carpenter Pond Dam Removal

MA00220

Dudley, Massachusetts

Town of Dudley, Massachusetts

COMMONWEALTH OF MASSACHUSETTS
ALLEN R. CYR
No. 46804
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

PROJECT NO.:	22116.00
DATE:	FEBRUARY 2024
SCALE:	AS NOTED
DESIGNED BY:	ARO
CHECKED BY:	ARO
DRAWN BY:	LMC
APPROVED BY:	ARO

DRAWING TITLE:

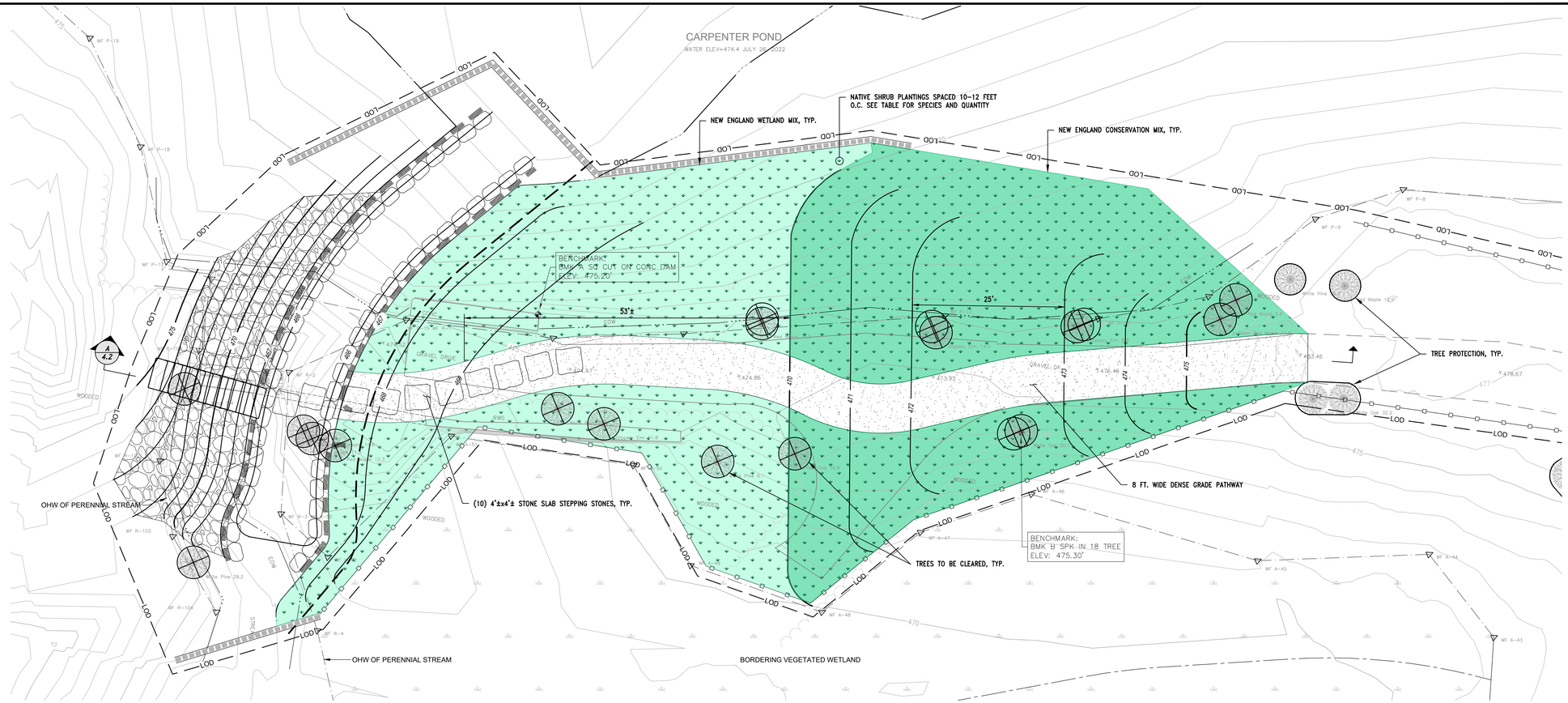
WETLAND IMPACT PLAN

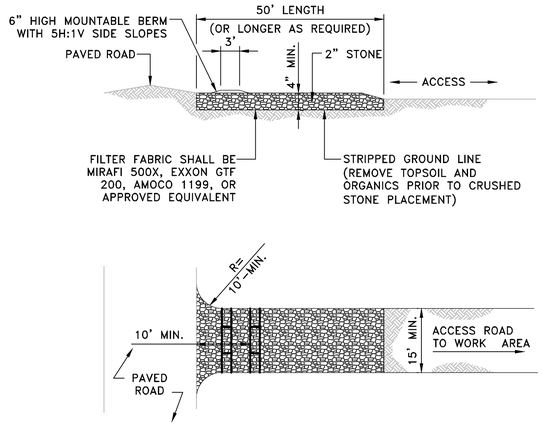
DRAWING NO.:

4.1

SHEET NO. 8 OF 10

X:\22851\22116.00 Dudley--Carpenter\Pond Dam Removal\MA\dwg\4.1 WETLAND IMPACT PLAN.dwg


CARPENTER POND
WATER ELEV=474.4 JULY 28, 2022
NATIVE SHRUB PLANTINGS SPACED 10-12 FEET O.C. SEE TABLE FOR SPECIES AND QUANTITY
NEW ENGLAND WETLAND MIX, TYP.
NEW ENGLAND CONSERVATION MIX, TYP.
BENCHMARK:
BMK A SQ CUT ON CONC DAM
ELEV: 475.20'
53'±
25'
TREE PROTECTION, TYP.
8 FT. WIDE DENSE GRADE PATHWAY
(10) 4'±x4'± STONE SLAB STEPPING STONES, TYP.
TREES TO BE CLEARED, TYP.
BENCHMARK:
BMK B SPK IN 18 TREE
ELEV: 475.30'
OHW OF PERENNIAL STREAM
OHW OF PERENNIAL STREAM
BORDERING VEGETATED WETLAND
A
4.2
LOD
WOODED
GRAVEL DRIVE
GRAVEL DRIVE
GRASS
GRASS
GRASS

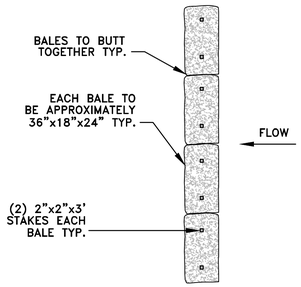


NOTES:

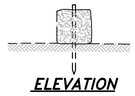
1. THE PURPOSE OF A STABILIZED CONSTRUCTION ENTRANCE IS TO REDUCE THE TRACKING OR FLOWING OF SEDIMENT ONTO LOCAL STREETS.
2. BEFORE INSTALLATION, THE AREA OF THE ENTRANCE SHOULD BE CLEARED OF ALL VEGETATION, ROOTS, PAVEMENT AND OTHER OBJECTIONABLE MATERIAL TO THE DIMENSIONS SHOWN.
3. PLACE EITHER A WOVEN OR NONWOVEN CONSTRUCTION FABRIC ON SUB GRADE PRIOR TO GRAVEL PLACEMENT.
4. THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE STREET. THIS WILL REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND.

STABILIZED CONSTRUCTION ACCESS

NOT TO SCALE



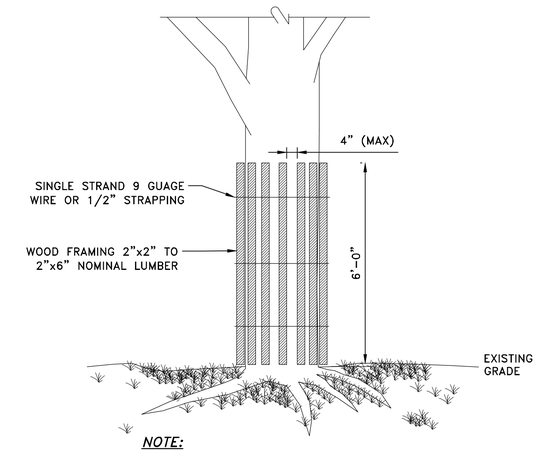
PLAN



ELEVATION

STRAW BALE DETAIL

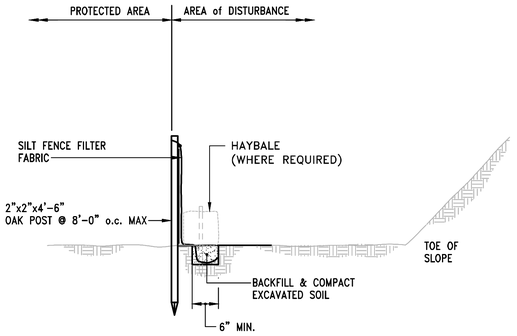
NOT TO SCALE



NOTE:
THIS DETAIL SHALL BE USED TO PROTECT THE TREE'S TRUNK IN SITUATIONS WHERE CONSTRUCTION IS IN CLOSE PROXIMITY.

TREE PROTECTION DEVICE

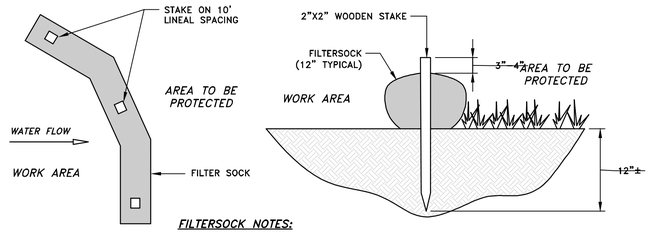
NOT TO SCALE



NOTE:
SILT FENCE FABRIC SHALL NOT BE SLIT. STRAW BALE POST SHALL BE DRIVEN THROUGH SILT FENCE FABRIC.

SILT FENCE DETAIL

NOT TO SCALE

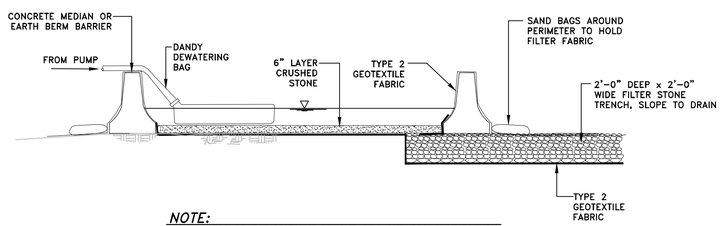


FILTERSOCK NOTES:

1. COMPOST / SOIL / ROCK / SEED FILL TO MEET APPLICATION REQUIREMENTS.
2. COMPOST MATERIAL TO BE REMOVED OR DISPERSED ON SITE AS DETERMINED BY ENGINEER.

FILTERSOCK DETAIL

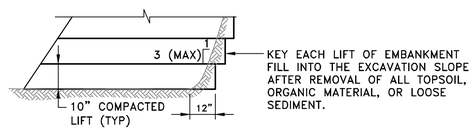
NOT TO SCALE



NOTE:
CONTRACTOR TO PERIODICALLY REMOVE SILT AND STONE AT TRENCH DRAIN TO PROMOTE FLOW OF WATER FROM BASIN. ALTERNATIVELY AN OUTFLOW WEIR MAY BE SUBMITTED FOR APPROVAL.

FILTER FABRIC DEWATERING BASIN

NOT TO SCALE



PLACEMENT OF EMBANKMENT MATERIALS

NOT TO SCALE

PERMIT SUBMISSION
NOT FOR CONSTRUCTION

© 2022 ALL INFORMATION THESE DOCUMENTS BY PARE CORPORATION

PARE

THIS PROJECT IS FUNDED BY THE EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Carpenter Pond Dam Removal

MA00220

Dudley, Massachusetts

Town of Dudley, Massachusetts

COMMONWEALTH OF MASSACHUSETTS
ALLEN R. OSGOOD
No. 40904
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

PROJECT NO.:	22116.00
DATE:	FEBRUARY 2024
SCALE:	AS NOTED
DESIGNED BY:	ARO
CHECKED BY:	ARO
DRAWN BY:	LMC
APPROVED BY:	ARO

DRAWING TITLE:

MISCELLANEOUS DETAILS

DRAWING NO.:

5.0

SHEET NO. 10 OF 10

P:\22116.122 - MA\122116.00 Dudley-CarpenterPond Dam Removal-MA\dwg\5.0 MISCELLANEOUS DETAILS.dwg

dcr
Massachusetts

Certified Mail No. 9589 0710 5270 0474 6304 10
Return Receipt Requested

M.G.L. Chapter 253
Dam Safety Permit
Permit No. 347-2024-445

Applicant

Allen R. Orsi, P.E.
Pare Corporation
10 Lincoln Road, Suite 210
Foxborough, MA 02035

On behalf of:
Town of Dudley
71 West Main Street
Dudley, MA 01571

Re: Carpenter Pond Dam Removal
National Dam ID: MA00220
Registry Location: Worcester County, Deed Book 13710 Page 0095
Owner: Town of Dudley
Dam Location: Dudley, MA

Date: December 12, 2024

Dear Mr. Orsi,

Reference is made to the application dated August 2024 provided by Pare Corporation (Pare) submitted for Department of Conservation and Recreation (DCR) Office of Dam Safety (ODS) regulatory review of the above-referenced dam removal project.

Permission is hereby granted under M.G.L. Chapter 253, as amended, to perform work indicated on the drawings titled **"Town of Dudley, Massachusetts – Carpenter Pond Dam Removal (MA00220), Dudley, MA"** dated February 2024 and as described in supporting documentation provided by Pare.

Permission is granted subject to the following conditions:

Department of Conservation and Recreation
180 Beaman Street
West Boylston, MA 01583
508-792-7423 508-792-7805 Fax
www.mass.gov/dcr

Maura T. Healey
Governor

Kimberley Driscoll
Lt. Governor

Rebecca L. Tepper, Secretary
Executive Office of Energy & Environmental Affairs

Brian Arrigo, Commissioner
Department of Conservation & Recreation

(a) This Ch. 253 Dam Safety Permit is not valid until the dam owner has been issued a Restoration Order of Conditions for the project by the Dudley Conservation Commission. Prior to construction, a copy of the project's Restoration Order of Conditions shall be provided to ODS. If the Restoration Order of Conditions is denied, or if the project is permitted as an Ecological Restoration Limited Project under 310 CMR 10.24(8) and 10.53(4), then the project must undergo MEPA review, and the Ch. 253 Dam Safety Permit shall not become effective until MEPA review is completed.

(b) At least 21 days before the start of construction, the dam owner shall provide the DCR/ODS - Permits Section a completed **DAM SAFETY IMPROVEMENTS – NOTICE OF CONSTRUCTION** (form attached) with a construction schedule and proof of recording of the Ch. 253 Permit at the Registry of Deeds in the county where the dam lies. If the Notice of Construction provided to ODS lacks a construction schedule, proof of recording of the permit, or an explanation of why permit recording is not possible, ODS will return the Notice of Construction to the dam owner indicating the Notice of Construction is incomplete and informing the owner that construction shall not commence until ODS has received a complete Notice of Construction with the required attachments.

(c) For all features of the project, the Dam Engineer (Pare) shall notify ODS of any design change from the original design submitted with the permit application due to regulatory requirements, changes in field conditions or any other unanticipated occurrence. This notification shall be a formal submittal to ODS which includes all relevant revised plans, computations and data (survey, geotechnical, etc.) supporting the design change(s). This submittal shall be forwarded to ODS by registered mail, return receipt requested, and will require an amendment to the permit. Review time may vary based upon the complexity of the design change(s), however, ODS will generally issue the permit amendment within five (5) business days of receipt of a complete design revision submittal.

(d) The Dam Engineer must report to ODS any unforeseen incidents that occur at the work site during project work. Unforeseen incidents include, but are not limited to, significant uncontrolled seepage into the work area, significant earth support failures or slope failures. The report must explain in detail what occurred, corrective measures taken to mitigate the occurrence and any impacts the occurrence may have had on the project. If the incident results in a design change, ODS must be provided revised design documents (refer to Condition (b), above).

(e) The following shall be prepared by the contractor, approved by the Dam Engineer, and submitted to ODS prior to construction:

- Cofferdam designs. The cofferdams shall be carefully designed to resist anticipated forces without failing and to ensure that seepage around, under, or through the cofferdams is manageable;
- A water control and diversion plan describing methods to be employed to allow work to be performed "in the dry" and to manage both the water level in

Carpenter Pond and outflow from Carpenter Pond while construction is in progress; and

- A flood response plan. While construction is underway, weather forecasts, stream flows and water levels shall be monitored to allow adequate time to respond to rising water levels at the construction site. If high water levels are expected, equipment and materials shall be removed from the work area and personnel evacuated. Sufficient materials and equipment required for flood response shall be maintained in a safe location at, or near, the construction site.

(f) A sufficient level of construction oversight shall be provided by the Dam Engineer to ensure the work conforms to: the project plans and specifications; the Ch. 253 Permit conditions; and generally-accepted dam construction practices as determined by the U.S. Army Corps of Engineers, the U.S. Bureau of Reclamation and/or the U.S. Natural Resources Conservation Service.

Guidance, procedures, checklists, worksheets and references to aid in construction quality assurance are available in the United States Department of Agriculture Natural Resources Conservation Service National Engineering Handbook Part 645-Construction Inspection.

For access to a .pdf copy of NEH Part 645, please email ODS at dam.safety@mass.gov .

(g) The Dam Engineer shall invite ODS to the preconstruction meeting, another project meeting at 50% completion and the final inspection meeting. ODS reserves the right to make site visits and inspections at any time during the permit period. ODS requests the following items be addressed at the pre-construction meeting:

- Identification of the
  - resident engineer (Owner's representative overseeing the project);
  - contractor's qualified site superintendent; and
  - Dam Engineer's representative overseeing the project.
- Provide emergency contact information for the contractor and resident engineer;
- Presentation of the resident engineer's weekly work schedule and discussion of the level of construction oversight to be provided by the resident engineer;
- Water control features anticipated and the process for the Dam Engineer to either develop or approve the overall control and diversion of water plan. Flood emergency warning and response procedures must be identified;
- Level of Dam Engineer construction oversight including: identification of any critical construction items to be overseen by the Dam Engineer; procedures for the Dam Engineer's review and approval of shop drawings and other submittals; documentation of Dam Engineer's approval of any design modifications; procedures for coordinating and scheduling the Dam Engineer's inspection of critical construction elements;
- Anticipated schedule of construction meetings and required attendees. It is expected that while construction is ongoing, weekly construction meetings will be held and

attended by the Dam Engineer, the resident engineer, the contractor's superintendent and other appropriate participants; and

- Presentation of the initial construction schedule with identification and discussion of major items.

ODS shall be provided a copy of the preconstruction meeting minutes.

(h) The Dam Engineer shall provide ODS written documentation that he/she has reviewed and approved all pertinent submittals or samples concerning critical project dam features. This documentation may be in the form of a submittal log which may be submitted as part of the "as-built" report, described below.

(i) Upon completion of work the Applicant shall submit to ODS a **DAM SAFETY CERTIFICATE OF COMPLETION** (form attached). With this certificate of completion submit one bound (utilizing plastic comb bindings) as-built report with 11"x17" record drawings signed and stamped by a registered professional civil engineer with contractor's signature attesting that all work was performed according to the plans and specifications. The as-built report shall include documentation of submittals reviewed and approved by the Dam Engineer, copies of any materials or construction testing reports and color photos of construction phases and appurtenant installations. Photograph numbers, location and direction in which each photo was taken must be identified. An electronic copy (as a .pdf) of the as-built report and record drawings shall be provided to ODS via email, .ftp site or on a USB flash drive.

(j) Upon completion of work, the Dam Engineer shall submit an **APPLICATION TO CHANGE HAZARD CLASSIFICATION OF DAM** with supporting documentation demonstrating that the former dam can no longer re-impound and no longer meets the jurisdictional requirements of ODS. Refer to the ODS website for a description of required information.

(k) The Certificate of Completion, as-built report, and Application to Change Hazard Classification of Dam shall be provided to ODS within 90 days of substantial completion of work unless ODS agrees to a later submission of these documents. Submission of these documents is required prior to ODS issuing a Certificate of Approval.

Any permit issued by DCR shall be subject to revocation by order of the Commissioner if the permittee fails to conform to 302 CMR 10.00, Dam Safety Rules and Regulations, provisions of this permit, or any other applicable laws and regulations.

This permit does not release the applicant from the requirements of any other regulatory authority. Such authorizations and/or notifications include, but are not limited to:

Local Conservation Commission;
Massachusetts Department of Environmental Protection (DEP);
Massachusetts Department of Fish and Game (DFG);
Massachusetts Executive Office of Environmental Affairs (EOEA), MEPA Unit; and
U.S. Army Corps of Engineers.

This permit must be recorded by the applicant at the Registry of Deeds in the county where the dam lies. Recording must be done prior to the commencement of construction and a copy of the recorded permit filed with the Office of Dam Safety.

This permit remains valid for two (2) years from the date of issue: **December 12, 2024.**

Permit expiration date: **December 12, 2026.**

William Salomaa, Director
DCR, Office of Dam Safety

David Ouellette, Permit Engineer
DCR, Office of Dam Safety

Attachments: Dam Safety Improvements – Notice of Construction form
Dam Safety Certificate of Completion form
Application of Change Hazard Classification of Dam

Informational (NOT TO BE RECORDED AT REGISTRY OF DEEDS)

Excerpts from Dam Safety Rules Regulations:

302 CMR 10.09(5): Recording a Chapter 253 Permit.

A permit to construct, drawdown, repair, alter, breach or remove a dam shall be recorded at the Registry of Deeds in the county where the dam lies. Recording must be done prior to the commencement of construction and a copy of the recorded permit filed with the Commissioner.

.

To: DCR, Office of Dam Safety – Permits Section
180 Beaman Street
West Boylston, MA 01583

DAM SAFETY IMPROVEMENTS - NOTICE OF CONSTRUCTION

Dam Owner/Applicant
Name:
Representative:
Address:
Phone:
Fax:
Email Address:

Project
Project location Town/City:
Dam name:
National Dam ID Number:
State Dam ID Number:
Nature of Dam Safety Improvements:
Chapter 253 Permit date of issue:
Chapter 253 Permit expiration date:
Permit Recorded at_____ Registry of Deeds
Dam Parcel Registry of Deeds Book Number:
Dam Parcel Registry of Deeds Page Number:
Recorded Permit Registry of Deeds Book Number:
Recorded Permit Registry of Deeds Page Number:
Copy of the recorded permit attached Yes ( )
Construction start date:
Construction schedule attached Yes ( )

Engineer
Company Name:
Representative:
Address:
Phone:
Fax:
Email Address:

Contractor
Company Name:
Representative:
Address:
Phone:
Fax:
Email Address :

Brief description of project, note location and dates of construction:

_____
_____
_____

By Contractor

Print name and title:_____

Signature and date:_____

By Engineer

Print name, title:_____

Signature and date:_____

By Dam Owner/Applicant

Print name and title:_____

Signature and date:_____

To: DCR, Office of Dam Safety – Permits Section
180 Beaman Street
West Boylston, MA 01583

DAM SAFETY CERTIFICATE OF COMPLETION

Dam Owner/Applicant
Name:
Representative:
Address:
Phone:
Fax:
Email Address:

Project
Project location Town/City:
Dam name:
National Dam ID Number:
State Dam ID Number:
Nature of Dam Safety Improvements:
Chapter 253 Permit date of issue:
Chapter 253 Permit expiration date:
Permit Recorded at_____ Registry of Deeds
Dam Parcel Registry of Deeds Book Number:
Dam Parcel Registry of Deeds Page Number:
Recorded Permit Registry of Deeds Book Number:
Recorded Permit Registry of Deeds Page Number:
Project completion date:

Engineer
Company Name:
Representative:
Address:
Phone:
Fax:
Email Address:

Contractor
Company Name:
Representative:
Address:
Phone:
Fax:
Email Address :

Brief description of project and dates of construction:

_____
_____
_____

Statement of project completion in accordance with plans, specifications, dam safety permit conditions and standard construction practices:

_____
_____
_____

By Contractor

Print name and title:_____

Signature and date:_____

By Engineer

Print name, title and PE stamp here:_____

Signature and date:_____

By Dam Owner/Applicant

Print name and title:_____

Signature and date:_____

dcr
Massachusetts

APPLICATION TO CHANGE
HAZARD CLASSIFICATION OF DAM

In accordance with 302 CMR 10.06 (6) Hazard Reconsideration. An owner may at any time request the Commissioner to reconsider the hazard determination. The owner's request must be filed by a registered professional civil engineer, specifying the findings and analyses with which the owner disagrees. The Commissioner will issue a written decision to the owner and the registered professional civil engineer within 30 days of receipt of a request for hazard reconsideration, and such decision shall be final and binding upon the parties.

To request a reconsideration of hazard classification, this application and all supporting information must be completed and sent via certified mail to the Commissioner of DCR at the following address:

Department of Conservation and Recreation
Office of Dam Safety – Hazard Reclassification
180 Beaman Street
West Boylston, MA 01583

All materials submitted must be sent under cover letter by the dam owner's registered professional civil engineer and accompanied by a PDF copy.

Date: _____

National ID Number: _____

Dam Name: _____

Dam Location (City or Town): _____

Owner(s) Name and Address: _____

_____

_____

_____

Engineering Firm (or Engineer) Submitting Request_____

Department of Conservation and Recreation
180 Beaman Street
West Boylston, MA 01583
508-792-7423 508-792-7805 Fax
www.mass.gov/orgs/department-of-conservation-recreation

Charles D. Baker
Governor

Karyn E. Polito
Lt. Governor

Kathleen A. Theoharides, Secretary,
Executive Office of Energy & Environmental Affairs

Stephanie C. Cooper, Acting Commissioner
Department of Conservation & Recreation

Fill in Part A or Part B

PART A: Application to Raise Hazard Classification (e.g., from Significant to High)

Current Hazard Classification:_____
(as listed in DCR Office of Dam Safety Database)

Proposed Hazard Classification: _____

Reason for Change: _____

_____

_____

_____

Attach any applicable supporting information.

_____

PART B: Application to Reduce Hazard Classification (e.g., from Significant to Low)

Current Hazard Classification:_____
(as listed in DCR Office of Dam Safety Database)

Proposed Hazard Classification: _____

Applicant must submit engineering studies to justify the change in Hazard Class. Please note that studies must be signed and stamped by the responsible engineer. Indicate the studies that accompany this application:

Hydrologic / Hydraulic Analyses
Dam Breach / Inundation Analyses
Incremental Damage Assessment
Other_____

Reason for Change: _____

_____

_____

_____

2025 00023027
Bk: 71779 Pg: 377
Page: 1 of 20 03/26/2025 03:42 PM WD

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5A – Restoration Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
146-0811
MassDEP File #

Dudley
City/Town

A. General Information

Please note: this form has been modified with added space to accommodate the Registry of Deeds Requirements

1. From: Dudley
Conservation Commission

2. This issuance is for (check one):

a. ☒ Restoration Order of Conditions b. ☐ Amended Restoration Order of Conditions

3. To: Applicant:

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.

Jonathan
a. First Name

Ruda
b. Last Name

Town of Dudley
c. Organization

71 West Main Street
d. Mailing Address

Dudley
e. City/Town

MA
f. State

01571
g. Zip Code

4. Property Owner (if different from applicant):

a. First Name

b. Last Name

c. Organization

d. Mailing Address

e. City/Town

f. State

g. Zip Code

5. Project Location:

New Boston Road
a. Street Address

Dudley
b. City/Town

235
c. Assessors Map/Plat Number

78
d. Parcel/Lot Number

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5A – Restoration Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP: 146-0811
MassDEP File #

Dudley
City/Town

A. General Information (cont.)

Latitude and Longitude, if known: 42.028753 (d. Latitude (in decimal)) 71.904941 (e. Longitude (in decimal))

Note: If the Ecological Restoration Project involves work on a stream crossing, baseline photo-points that capture longitudinal views of the crossing inlet, the crossing outlet and the upstream and downstream channel beds during low flow conditions. The latitude and longitude coordinates of the photo-points shall be included in the baseline data.

6. Property recorded at the Registry of Deeds for (attach additional information if more than one parcel):

Worcester
a. County

b. Certificate Number (if registered land)

13710
c. Book

95
d. Page

7. Dates: 01/30/2025 (a. Date Ecological Restoration NOI Filed) 03/19/2025 (b. Date Public Hearing Closed) (c. Issuance Date)

8. Final Approved Plans and Other Documents (attach additional plan or document references as needed):

Carpenter Pond Dam Removal
a. Plan Title

Pare Corporation
b. Prepared By

Allen Orsi, P.E.
c. Signed and Stamped by

February 2024
d. Final Revision Date

varies
e. Scale

f. Additional Plan or Document Title

g. Date

B. Findings

1. Findings pursuant to the Massachusetts Wetlands Protection Act:

Following the review of the Ecological Restoration Notice of Intent described in Section A and based on the information provided in this application and presented at the public hearing, this Commission finds that the areas in which work is proposed is significant to the following interests of the Wetlands Protection Act (the Act). Check all that apply:

a. ☒ Public Water Supply
b. ☒ Private Water Supply
c. ☒ Groundwater Supply
d. ☒ Flood Control
e. ☒ Storm Damage Prevention
f. ☒ Prevention of Pollution
g. ☐ Land Containing Shellfish
h. ☐ Fisheries
i. ☒ Wildlife Habitat

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5A – Restoration Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
146-0811
MassDEP File #

Dudley
City/Town

B. Findings (cont.)

2. This Commission hereby finds the project, as proposed, is an Ecological Restoration Project for:

☒ Dam Removal

☐ Freshwater Stream Crossing Repair and Replacement

☐ Stream Daylighting

☐ Tidal Restoration

☐ Rare Species Habitat Restoration

☐ Restoring Fish Passageways

Approved subject to:

☒ The following conditions are required in accordance with the Ecological Restoration eligibility criteria 310 CMR 10.13 (1) through (7) and performance standards set forth in the wetlands regulations. This Commission orders that all work shall be performed in accordance with the Ecological Restoration Notice of Intent for the project described in Section A. The General Conditions in Section C and Special Conditions checked in Section D are incorporated into this Restoration Order. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Ecological Restoration Notice of Intent, these conditions shall control.

Denied because:

☐ The proposed work does not meet the eligibility criteria in 310 CMR 10.13(1) through (7). Therefore, work on this project may not go forward unless and until a new Notice of Intent (WPA Form 3 or 3A) is submitted and a Final Order of Conditions (WPA Form 5 or 5A) has been issued. The Commission has determined that following the eligibility criteria have NOT been met.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5A – Restoration Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
146-0811
MassDEP File #

Dudley
City/Town

B. Findings (cont.)

Inland Resource Area Impacts: Check all that apply below. (For Approvals Only)

Resource Area	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
4. ☒ Bank	295 a. linear feet	b. linear feet	161 c. linear feet	d. linear feet
5. ☒ Bordering Vegetated Wetland	256 perm.,1,010 a. square feet	b. square feet	256, see restoration c. square feet	d. square feet
6. ☒ Land Under Waterbodies and Waterways	278,800-conversion a. square feet	b. square feet	see restoration c. square feet	d. square feet
	310,530 redistributio e. c/y dredged	f. c/y dredged		
7. ☐ Bordering Land Subject to Flooding	a. square feet	b. square feet	c. square feet	d. square feet
Cubic Feet Flood Storage	e. cubic feet	f. cubic feet	g. cubic feet	h. cubic feet
8. ☐ Isolated Land Subject to Flooding	a. square feet	b. square feet		
Cubic Feet Flood Storage	c. cubic feet	d. cubic feet	e. cubic feet	f. cubic feet
9. ☒ Riverfront Area	17, 639 a. total sq. feet	17639 b. total sq. feet		
Sq ft within 100 ft	c. square feet	d. square feet	e. square feet	f. square feet
Sq ft between 100-200 ft	g. square feet	h. square feet	i. square feet	j. square feet

Coastal Resource Area Impacts: Check all that apply below. (For Approvals Only)

	Proposed Alteration	Permitted Alteration	Proposed Replacement	Permitted Replacement
10. ☐ Designated Port Areas	Indicate size under Land Under the Ocean, below			
11. ☐ Land Under the Ocean	a. square feet	b. square feet		
	c. c/y dredged	d. c/y dredged		
12. ☐ Barrier Beaches	**Note:** *No armoring of a Coastal Dune or Barrier Beach is permitted.* Indicate size under Coastal Beaches and/or Coastal Dunes below			
13. ☐ Coastal Beaches	a. square feet	b. square feet	c/y c. nourishment	c/y d. nourishment

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5A – Restoration Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP: 146-0811 MassDEP File #

Dudley City/Town

B. Findings (cont.)

14. ☐ Coastal Dunes — a. square feet ____ b. square feet ____ c. nourishment c/y ____ d. nourishment c/y ____

Note: *No armoring of a Coastal Dune or Barrier Beach is permitted.*

15. ☐ Coastal Banks — a. linear feet ____ b. linear feet ____

16. ☐ Rocky Intertidal Shores — a. square feet ____ b. square feet ____

17. ☐ Salt Marshes — a. square feet ____ b. square feet ____ c. square feet ____ d. square feet ____

18. ☐ Land Under Salt Ponds — a. square feet ____ b. square feet ____ c. c/y dredged ____ d. c/y dredged ____

19. ☐ Land Containing Shellfish — a. square feet ____ b. square feet ____ c. square feet ____ d. square feet ____

20. ☐ Fish Runs — Indicate size under Coastal Banks, Inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above — a. c/y dredged ____ b. c/y dredged ____

21. ☐ Land Subject to Coastal Storm Flowage — a. square feet ____ b. square feet ____

22. ☐ Riverfront Area — a. total sq. feet ____ b. total sq. feet ____

Sq ft within 100 ft — c. square feet ____ d. square feet ____ e. square feet ____ f. square feet ____

Sq ft between 100-200 ft — g. square feet ____ h. square feet ____ i. square feet ____ j. square feet ____

23. ☒ Restoration/Enhancement *:

192,000 sf a. square feet of BVW ____ b. square feet of salt marsh 29,750 sf and 1,260 lf c. square feet of other wetland resource areas

24. ☐ Stream Crossing(s):

a. number of new stream crossings ____ b. number of replacement stream crossings ____

* If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.5.c (BVW) or B.17.c (Salt Marsh) above, please enter the additional amount here

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5A – Restoration Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
146-0811
MassDEP File #

Dudley
City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act

The following conditions are only applicable to Approved projects.

1. Failure to comply with all conditions stated herein, and with all related statutes and other regulatory measures, shall be deemed cause to revoke or modify this Restoration Order of
2. The Restoration Order does not grant any property rights or any exclusive privileges; it does not authorize any injury to private property or invasion of private rights.

3. This Restoration Order does not relieve the permittee or any other person of the necessity of complying with all other applicable federal, state, or local statutes, ordinances, bylaws, or regulations.

4. The work authorized hereunder shall be completed within three years from the date of this Restoration Order unless either of the following apply::
   a. the work is a maintenance dredging project as provided for in the Act; or
   b. the time for completion has been extended to a specified date more than three years, but less than five years, from the date of issuance. If this Restoration Order is intended to be valid for more than three years, the extension date and the special circumstances warranting the extended time period are set forth as a special condition in this Restoration Order.

5. This Restoration Order may be extended by the issuing authority for one or more periods of up to three years each upon application to the issuing authority at least 30 days prior to the expiration date of the Restoration Order.

6. If this Restoration Order constitutes an Amended Restoration Order of Conditions, this Amended Restoration Order of Conditions does not extend the issuance date of the original Final Order of Conditions and the Restoration Order will expire on _____ unless extended in writing by the Department.
7. Any fill used in connection with this project shall be clean fill. Any fill shall contain no trash, refuse, rubbish, or debris, including but not limited to lumber, bricks, plaster, wire, lath, paper, cardboard, pipe, tires, ashes, refrigerators, motor vehicles, or parts of any of the foregoing.

8. This Restoration Order is not final until all administrative appeal periods from this Restoration Order have elapsed, or if such an appeal has been taken, until all proceedings before the Department have been completed.

9. No work shall be undertaken until the Restoration Order has become final and then has been recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Restoration Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land upon which the proposed work is to be done. In the case of the registered land, the Final Restoration Order shall also be noted on the Land Court Certificate of Title of the owner of the land upon which the proposed work is done. The recording information shall be submitted to the Conservation Commission on the form at the end of this Restoration Order, which form must be stamped by the Registry of Deeds, prior to the commencement of work.

C. General Conditions Under Massachusetts Wetlands Protection Act **(cont.)**

10. A sign shall be displayed at the site not less then two square feet or more than three square feet in size bearing the words,

    "Massachusetts Department of Environmental Protection" [or, "MassDEP"]

    "File Number 146-0811 "

11. Where the Department of Environmental Protection is requested to issue a Superseding Restoration Order, the Conservation Commission shall be a party to all agency proceedings and hearings before MassDEP.

12. Upon completion of the work described herein, the applicant shall submit a Request for Certificate of Compliance (WPA Form 8A) to the Conservation Commission.

13. The work shall conform to the plans and special conditions referenced in this order.

14. Any change to the plans identified in Condition #13 above shall require the applicant to inquire of the Conservation Commission in writing whether the change is significant enough to require the filing of a new Notice of Intent.

15. The Agent or members of the Conservation Commission and the Department of Environmental Protection shall have the right to enter and inspect the area subject to this Restoration Order at reasonable hours to evaluate compliance with the conditions stated in this Restoration Order, and may require the submittal of any data deemed necessary by the Conservation Commission or Department for that evaluation.

16. This Restoration Order of Conditions shall apply to any successor in interest or successor in control of the property subject to this Restoration Order and to any contractor or other person performing work conditioned by this Restoration Order.

17. Prior to the start of work, and if the project involves work adjacent to a Bordering Vegetated Wetland, the boundary of the wetland in the vicinity of the proposed work area shall be marked by wooden stakes or flagging. Once in place, the wetland boundary markers shall be maintained until a Certificate of Compliance has been issued by the Conservation Commission.

18. All sedimentation barriers shall be maintained in good repair until all disturbed areas have been fully stabilized with vegetation or other means. At no time shall sediments be deposited in a wetland or water body. During construction, the applicant or his/her designee shall inspect the erosion controls on a daily basis and shall remove accumulated sediments as needed. The applicant shall immediately control any erosion problems that occur at the site and shall also immediately notify the Conservation Commission, which reserves the right to require additional erosion and/or damage prevention controls it may deem necessary. Sedimentation barriers shall serve as the limit of work unless another limit of work line has been approved by this Restoration Order.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands
WPA Form 5A – Restoration Order of Conditions
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
146-0811
MassDEP File #

Dudley
City/Town

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

General Conditions for all Ecological Restoration Projects

19. The project shall be conducted in accordance with any preliminary written determination obtained from the Natural Heritage and Endangered Species Program as set forth in 310 CMR 10.11(2) and any time of year restrictions or other conditions recommended in writing by the Division of Marine Fisheries (for projects in coastal Resource Areas) and the Division of Fisheries and Wildlife (for projects in inland Resource Areas) as set forth in 310 CMR 10.11(3), (4) and (5).
20. The applicant shall implement the plan submitted with the Notice of Intent as approved by the Issuing Authority to prevent and control invasive species.
21. If the project involves the dredging of 100 cubic yards or more in a Resource Area or dredging of any amount in an Outstanding Resource Water, the dredging and Dredged Material management shall be performed in accordance with the Water Quality Certification submitted with the Notice of Intent.
22. If the project involves infrastructure, the owner shall operate and maintain the infrastructure in accordance with the operation and maintenance plan submitted with the Notice of Intent as approved by the Issuing Authority. Implementation of the operation and maintenance plan as approved by the Issuing Authority shall be a continuing condition that shall be set forth in the Certificate of Compliance.
23. The work associated with this Order (the "Project")
    (1) ☐ is subject to the Massachusetts Stormwater Standards
    (2) ☒ is NOT subject to the Massachusetts Stormwater Standards

    If the work is subject to the Stormwater Standards, then the project is subject to the following conditions:

    a) All work, including site preparation, land disturbance, construction and redevelopment, shall be implemented in accordance with the construction period pollution prevention and erosion and sedimentation control plan and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Construction General Permit as required by Stormwater Condition 8. Construction period erosion, sedimentation and pollution control measures and best management practices (BMPs) shall remain in place until the site is fully stabilized.

    b) No stormwater runoff may be discharged to the post-construction stormwater BMPs unless and until a Registered Professional Engineer provides a Certification that:

    i. all construction period BMPs have been removed or will be removed by a date certain specified in the Certification. For any construction period BMPs intended to be converted to post construction operation for stormwater attenuation, recharge, and/or treatment, the conversion is allowed by the MassDEP Stormwater Handbook BMP specifications and that the BMP has been properly cleaned or prepared for post construction operation, including removal of all construction period sediment trapped in inlet and outlet control structures;

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

ii. as-built final construction BMP plans are included, signed and stamped by a Registered Professional Engineer, certifying the site is fully stabilized;
iii. any illicit discharges to the stormwater management system have been removed, as per the requirements of Stormwater Standard 10;
iv. all post-construction stormwater BMPs are installed in accordance with the plans (including all planting plans) approved by the issuing authority, and have been inspected to ensure that they are not damaged and that they are in proper working condition;
v. any vegetation associated with post-construction BMPs is suitably established to withstand erosion.

c) The landowner is responsible for BMP maintenance until the issuing authority is notified that another party has legally assumed responsibility for BMP maintenance. Prior to requesting a Certificate of Compliance, or Partial Certificate of Compliance, the responsible party (defined in General Condition 18(e)) shall execute and submit to the issuing authority an Operation and Maintenance Compliance Statement ("O&M Statement) for the Stormwater BMPs identifying the party responsible for implementing the stormwater BMP Operation and Maintenance Plan ("O&M Plan") and certifying the following:

i.) the O&M Plan is complete and will be implemented upon receipt of the Certificate of Compliance, and

ii.) the future responsible parties shall be notified in writing of their ongoing legal responsibility to operate and maintain the stormwater management BMPs and implement the Stormwater Pollution Prevention Plan.

d) Post-construction pollution prevention and source control shall be implemented in accordance with the long-term pollution prevention plan section of the approved Stormwater Report and, if applicable, the Stormwater Pollution Prevention Plan required by the National Pollution Discharge Elimination System Multi-Sector General Permit.

e) Unless and until another party accepts responsibility, the landowner, or owner of any drainage easement, assumes responsibility for maintaining each BMP. To overcome this presumption, the landowner of the property must submit to the issuing authority a legally binding agreement of record, acceptable to the issuing authority, evidencing that another entity has accepted responsibility for maintaining the BMP, and that the proposed responsible party shall be treated as a permittee for purposes of implementing the requirements of Conditions 18(f) through 18(k) with respect to that BMP. Any failure of the proposed responsible party to implement the requirements of Conditions 18(f) through 18(k) with respect to that BMP shall be a violation of the Restoration Order of Conditions or Certificate of Compliance. In the case of stormwater BMPs that are serving more than one lot, the legally binding agreement shall also identify the lots that will be serviced by the stormwater BMPs. A plan and easement deed that grants the responsible party access to perform the required operation and maintenance must be submitted along with the legally binding agreement.

C. General Conditions Under Massachusetts Wetlands Protection Act (cont.)

f) The responsible party shall operate and maintain all stormwater BMPs in accordance with the design plans, the O&M Plan, and the requirements of the Massachusetts Stormwater Handbook.

g) The responsible party shall:

1. Maintain an operation and maintenance log for the last three (3) consecutive calendar years of inspections, repairs, maintenance and/or replacement of the stormwater management system or any part thereof, and disposal (for disposal the log shall indicate the type of material and the disposal location);
2. Make the maintenance log available to MassDEP and the Conservation Commission ("Commission") upon request; and
3. Allow members and agents of the MassDEP and the Commission to enter and inspect the site to evaluate and ensure that the responsible party is in compliance with the requirements for each BMP established in the O&M Plan approved by the issuing authority.

h) All sediment or other contaminants removed from stormwater BMPs shall be disposed of in accordance with all applicable federal, state, and local laws and regulations.

i) Illicit discharges to the stormwater management system as defined in 310 CMR 10.04 are prohibited.

j) The stormwater management system approved in the Restoration Order of Conditions shall not be changed without the prior written approval of the issuing authority.

k) Areas designated as qualifying pervious areas for the purpose of the Low Impact Site Design Credit (as defined in the MassDEP Stormwater Handbook, Volume 3, Chapter 1, Low Impact Development Site Design Credits) shall not be altered without the prior written approval of the issuing authority.

l) Access for maintenance, repair, and/or replacement of BMPs shall not be withheld. Any fencing constructed around stormwater BMPs shall include access gates and shall be at least six inches above grade to allow for wildlife passage.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5A – Restoration Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
146-0811
MassDEP File #

Dudley
City/Town

D. Special Conditions for Ecological Restoration Projects

☒ **Dam Removal**

This project involves dam removal and the following special conditions shall apply in addition to the general conditions set forth in 310 CMR 10.14(1):

a) An as-built plan and a written statement from a registered professional engineer or other environmental professional expert in ecological restoration certifying substantial compliance with the design plan and construction specifications approved in the Restoration Order of Conditions shall be submitted to the Issuing Authority within 90 days of completion of the dam removal.

b) The applicant shall monitor the dam removal site during the first two years following completion of the dam removal. Said monitoring shall include a topographic survey of the longitudinal profile and stream cross-sections from downstream of the former dam through the upstream end of the former impoundment. The survey reference point shall comprise a permanent marker or recoverable survey point with known coordinates, such as a fixed point shown on the as-built plan, an existing bench mark, or a new benchmark. That marker should be identified or referenced on the plans and on the as-built plans. The applicant shall establish at least two photo-points for pre- and post-restoration monitoring at the dam removal site. At least one photo-point location shall be chosen to document a view of the dam pre-restoration and to document the same site after the dam is removed. A second location shall be chosen to document a view of the impoundment pre- and post-restoration. Photos shall be taken for two years after the dam removal is completed.

c) The applicant shall submit a report detailing the results of this monitoring within six months of the completion of the two year post-construction monitoring period, or within 30 months after the dam removal is complete whichever is sooner. The report shall include a comparison of post-restoration survey data with pre-restoration survey data as illustrated by the photos taken during the monitoring period.

☐ **Freshwater Stream Crossing Repair and Replacement Projects**

The project involves one or more freshwater crossing repair or replacement and the following special conditions in addition to the general conditions apply:

a) An as-built plan and/or a written statement from a registered professional engineer or other environmental professional expert in ecological restoration certifying substantial compliance with the design plans and construction specifications approved in the Restoration Order of Conditions shall be completed within 90 days of completion of construction. The as-built plan shall include the dimensions of the structure, the invert elevation of the upstream and downstream ends of the structure and the road or other surface elevation above the structure.

D. Special Conditions for Ecological Restoration Projects (cont.)

b) The applicant shall monitor the site by collecting sufficient data within 12 months after construction is complete to evaluate the effect of the structure. At a minimum, when a Certificate of Compliance is requested, the applicant shall provide post-construction photo-points that capture longitudinal views of the crossing inlet, the crossing outlet and the upstream and downstream channel beds during low flow conditions. The photo-points shall be located at the same geographic photo-point latitude and longitude coordinates as required in the Notice of Intent per 310 CMR 10.12(1)(n). The applicant shall submit a report to the Issuing Authority detailing the results of this monitoring within 18 months after construction is complete. The report shall include a comparison of the post-restoration data with pre-restoration data.

☐ **Stream Daylighting**

The project involves stream daylighting and the following special conditions in addition to the general conditions apply:

a) An as-built plan and a written statement from a registered professional engineer or other environmental professional expert in ecological restoration certifying substantial compliance with the design plan and construction specifications approved in the Restoration Order of Conditions shall be submitted to the Issuing Authority within 90 days of completion of the project. At a minimum, when a Certificate of Compliance is requested, the applicant shall provide post-construction photo-points that capture longitudinal views of the upstream and downstream channel beds of the daylighted reach during low flow conditions.

b) The applicant shall conduct photo-point monitoring by establishing at least three photo-points for pre- and post-restoration monitoring at the stream daylighting site. One photo-point location shall be chosen to document the upstream end of the site and one photo-point location shall be chosen to document the downstream end of the site. A third photo-point shall be chosen to document conditions in the restored channel. Photos shall be taken during high flow and low (summer) flow of each year during the two years following completion of the project.

c) Within 30 months after the completion of the project, the applicant shall submit a report describing the ecological changes observed at the project site during the two years following completion of the project, as illustrated by the photos.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5A – Restoration Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
146-0811
MassDEP File #

Dudley
City/Town

D. Special Conditions for Ecological Restoration Projects (cont.)

☐ **Tidal Restoration Projects**

The project involves restoration of tidal influence and the following special conditions in addition to the general conditions apply:

a) If the project is a culvert or bridge replacement or repair project, an as-built plan and a written statement from a registered professional engineer or other environmental professional expert in ecological restoration certifying substantial compliance with the design plans and construction specifications approved in the Restoration Order of Conditions shall be submitted to the Issuing Authority within 90 days of completion of construction. The as-built plan shall include the dimensions of the structure, the invert elevation of the upstream and downstream ends of the structure and the road or other surface elevation above the structure.

b) The applicant shall monitor pre- and post-construction tidal conditions upstream and downstream of the tidal restriction with water level readings measured at an interval no greater than every 10 minutes over a minimum of a one-week period that includes a spring tide. Pre- and post-construction water level readings shall be taken at approximately the same locations and shall be referenced to the same vertical elevation datum. The applicant shall prepare a report detailing the results of this monitoring within 12 months after construction is complete. The report shall include and compare pre- and post-construction tidal elevation monitoring data to assess attainment of the project's predicted post-restoration tidal conditions.

☐ **Rare Species Habitat Restoration**

The project is a Rare Species Habitat Restoration Project and in addition to the general conditions the following special conditions apply:

a) An as-built plan and a written statement from a registered professional engineer or other environmental professional expert in ecological restoration certifying substantial compliance with the design plan, construction specifications, and the Habitat Management Plan submitted with the Notice of Intent as approved in the Restoration Order of Conditions shall be submitted to the Issuing Authority within 90 days of completion of the project.

b) The applicant shall establish at least two photo-points for pre- and post-restoration monitoring at the project site. Photos shall be taken for two years after construction is complete. Within 30 months of completion of the project, the applicant shall submit to the Issuing Authority a report describing the ecological changes observed at the project site as illustrated by the photos.

D. Special Conditions for Ecological Restoration Projects (cont.)

☐ **Fish Passageway Restoration**

The project involves the repair or replacement of a fish passageway and in addition to the general conditions the following special conditions:

a) The property owner is responsible for maintaining and repairing the fishway in good condition so that it will support safe and efficient fish passage in accordance with an operation and maintenance plan approved by the Division of Marine Fisheries. This requirement is a continuing condition that shall be set forth in the Certificate of Compliance.

b) a post-construction project summary using surveys, a narrative and photographs as needed, that confirm the fishway slope and entrance and exit elevations shall be submitted to and approved by the Division of Marine Fisheries, prior to submittal of a request for a Certificate of Compliance.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5A – Restoration Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP: 146-0811
MassDEP File #

Dudley
City/Town

E. Findings Under Municipal Wetlands Bylaw or Ordinance

1. Is a municipal wetlands bylaw or ordinance applicable? ☒ Yes ☐ No

2. The Dudley Conservation Commission hereby finds (check one that applies):

   a. ☐ that the proposed work cannot be conditioned to meet the standards set forth in a municipal ordinance or bylaw, specifically:

   _____ (1. Municipal Ordinance or Bylaw) _____ (2. Citation)

   Therefore, work on this project may not go forward unless and until a revised Notice of Intent is submitted which provides measures which are adequate to meet these standards, and a final Order of Conditions is issued.

   b. ☒ that the following additional conditions are necessary to comply with a municipal ordinance or bylaw:

   Town of Dudley (1. Municipal Ordinance or Bylaw) Chapter 294 (2. Citation)

3. The Commission orders that all work shall be performed in accordance with the following conditions and with the Notice of Intent referenced above. To the extent that the following conditions modify or differ from the plans, specifications, or other proposals submitted with the Notice of Intent, the conditions shall control.

   The special conditions relating to municipal ordinance or bylaw are as follows (if you need more space for additional conditions, attach a text document):

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 5A – Restoration Order of Conditions

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:
146-0811
MassDEP File #

Dudley
City/Town

F. Signatures

This Restoration Order is valid for three years, unless otherwise specified as a special condition pursuant to General Conditions #4, from the date of issuance.

March 12 2025
1. Date of Issuance

Please indicate the number of members who will sign this form.
This Restoration Order must be signed by a majority of the Conservation Commission.

7
2. Number of Signers

The Restoration Order must be mailed by certified mail (return receipt requested) or hand delivered to the applicant. A copy also must be mailed or hand delivered at the same time to the appropriate Department of Environmental Protection Regional Office and the property owner, if different from applicant.

Signatures:

☐ by hand delivery on

Date

☒ by certified mail, return receipt requested, on

March 18 2025
Date

G. Appeals

The applicant, the owner, any person aggrieved by this Restoration Order, any owner of land abutting the land subject to this Restoration Order, or any ten residents of the city or town in which such land is located, are hereby notified of their right to request the appropriate MassDEP Regional Office to issue a Superseding Restoration Order of Conditions. The request must be made by certified mail or hand delivery to the Department, with the appropriate filing fee and a completed Request for Departmental Action Fee Transmittal Form, as provided in 310 CMR 10.03(7) within ten business days from the date of issuance of this Restoration Order. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

Any appellants seeking to appeal the Department's Superseding Restoration Order of Conditions associated with this appeal will be required to demonstrate prior participation in the review of this project. Previous participation in the permit proceeding means the submission of written information to the Conservation Commission prior to the close of the public hearing, requesting a Superseding Restoration Order, or providing written information to the Department prior to issuance of a Superseding Restoration Order.

The request shall state clearly and concisely how the project permitted under the Restoration Order which is being appealed does or does not meet the eligibility criteria in 310 CMR 10.13(1) and the relevant provisions of 310 CMR 10.13(2) through (7). To the extent that the Restoration Order is based on a municipal ordinance or bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

H. Recording Information

Prior to commencement of work, this Restoration Order of Conditions must be recorded in the Registry of Deeds or the Land Court for the district in which the land is located, within the chain of title of the affected property. In the case of recorded land, the Final Restoration Order shall also be noted in the Registry's Grantor Index under the name of the owner of the land subject to the Restoration Order. In the case of registered land, this Restoration Order shall also be noted on the Land Court Certificate of Title of the owner of the land subject to the Restoration Order of Conditions. The recording information on this page shall be submitted to the Conservation Commission listed below.

Conservation Commission

Detach on dotted line, have stamped by the Registry of Deeds and submit to the Conservation Commission.

To:

Conservation Commission

Please be advised that the Restoration Order of Conditions for the Project at:

Project Location | MassDEP File Number

Has been recorded at the Registry of Deeds of:

County | Book | Page

For
Property Owner

and has been noted in the chain of title of the affected property in:

Book | Page

In accordance with the Restoration Order of Conditions issued on:

Date

If recorded land, the instrument number identifying this transaction is:

Instrument Number

If registered land, the document number identifying this transaction is:

Document Number

Signature of Applicant

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Request for Departmental Action Fee Transmittal Form

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

Provided by DEP

A. Request Information

1. Location of Project

a. Street Address

b. City/Town, Zip

c. Check number

d. Fee amount

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.



2. Person or party making request (if appropriate, name the citizen group's representative):

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

3. Applicant (as shown on Determination of Applicability (Form 2), Order of Resource Area Delineation (Form 4B), Order of Conditions (Form 5), Restoration Order of Conditions (Form 5A), or Notice of Non-Significance (Form 6)):

Name

Mailing Address

City/Town

State

Zip Code

Phone Number

Fax Number (if applicable)

4. DEP File Number:

B. Instructions

1. When the Departmental action request is for (check one):

☐ Superseding Order of Conditions – Fee: $120.00 (single family house projects) or $245 (all other projects)

☐ Superseding Determination of Applicability – Fee: $120

☐ Superseding Order of Resource Area Delineation – Fee: $120

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

Request for Departmental Action Fee Transmittal Form

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

Provided by DEP

B. Instructions (cont.)

Send this form and check or money order, payable to the *Commonwealth of Massachusetts*, to:

Department of Environmental Protection
Box 4062
Boston, MA 02211

2. On a separate sheet attached to this form, state clearly and concisely the objections to the Determination or Order which is being appealed. To the extent that the Determination or Order is based on a municipal bylaw, and not on the Massachusetts Wetlands Protection Act or regulations, the Department has no appellate jurisdiction.

3. Send a **copy** of this form and a **copy** of the check or money order with the Request for a Superseding Determination or Order by certified mail or hand delivery to the appropriate DEP Regional Office (see http://www.mass.gov/eea/agencies/massdep/about/contacts/).

4. A copy of the request shall at the same time be sent by certified mail or hand delivery to the Conservation Commission and to the applicant, if he/she is not the appellant.

ATTEST: WORC. Kathryn A. Toomey, Register

DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
NEW ENGLAND DISTRICT
696 VIRGINIA ROAD
CONCORD MA 01742-2751

August 7, 2024

Regulatory Division
File Number: NAE-2024-00689

Jonathan Ruda,
Town of Dudley
71 West Main Street
Dudley, Massachusetts 01571
(Via Email): townadmin@dudleyma.gov

Dear Jonathan Ruda:

This regards your application submitted to the U.S. Army Corps of Engineers to permanently impact 6.4 acres of Carpenter Road Pond for the purposes of removing the Pond dam due to its poor structural integrity, to provide improved aquatic habitat connectivity, and to allow unrestricted movement of water and sediment. The dam is approximately 213 feet long and 8.2 feet tall. The impoundment created by the dam is approximately 6.4 acres. The dam removal is estimated to convert approximately 2 acres of the impoundment to upland while the remaining 4.4 acres is expected to either convert into wetlands or remain as the streambed. Approximately 314 cubic yards of sediment will be dredged out of the pond. Approximately 142 cubic yards of material will be reused on site to create ripraps along the bank that will occupy 4,233 square feet of area. Rest of the dredged material will be disposed of at an upland site. A temporary crossing made of construction mats will be established over wetlands to access the work site which will temporarily impact 1,644 square feet of area. Approximately 530 cubic yards of sediment is anticipated to mobilize on its own once the dam is removed. Dry conditions for the dam removal will be met with temporary cofferdams and streamflow will be diverted via a 24-inch diversion pipe during the construction phase. This project is located in Carpenter Road Pond, New Boston Road, Dudley, Massachusetts 01571 at site coordinates 42.028590, -71.904308. The work is shown on the enclosed plans titled “TOWN OF DUDLEY, MASSACHUSETTS CARPENTER POND DAM REMOVAL”, on 10 sheets, and dated “FEBRUARY 2024”.

Based on the information that you have provided, we verify that the activity is authorized under General Permit # 9 and # 10 of the June 2, 2023, federal permit known as the Massachusetts General Permits (GPs). The GPs are available at https://www.nae.usace.army.mil/Missions/Regulatory/State-General-Permits/Massachusetts-General-Permit.

Please review the enclosed GPs carefully, in particular the general conditions beginning on page 35, and ensure that you and all personnel performing work authorized by the GPs are fully aware of and comply with its terms and conditions. A copy of the

GPs and this verification letter shall be available at the work site as required by General Condition 17. You must perform this work in compliance with the following special condition(s):

1) You must complete and return the enclosed Work Start Notification Form to this office at least two weeks before the anticipated start date. The form shall be emailed to Maninder Singh at Maninder.Singh@usace.army.mil and cenae-r@usace.army.mil; or mailed to Maninder Singh, Regulatory Division, U.S. Army Corps of Engineers, New England District, 696 Virginia Road, Concord, Massachusetts 01742-2751.

2) You must complete and return the enclosed Compliance Certification Form to this office within one month of the completion of work. The form shall be emailed to Maninder Singh at Maninder.Singh@usace.army.mil and cenae-r@usace.army.mil; or mailed to Maninder Singh, Regulatory Division, U.S. Army Corps of Engineers, New England District, 696 Virginia Road, Concord, Massachusetts 01742-2751.

This authorization expires on June 1, 2028. You must commence or have under contract to commence the work authorized herein by June 1, 2028, and complete the work by June 1, 2029. If not, you must contact this office to determine the need for further authorization and we recommend you contact us *before* the work authorized herein expires. Please contact us immediately if you change the plans or construction methods for work within our jurisdiction as we must approve any changes before you undertake them. Performing work within our jurisdiction that is not specifically authorized by this determination or failing to comply with the special condition(s) provided above or all the terms and conditions of the GPs may subject you to the enforcement provisions of our regulations.

This authorization does not obviate the need to obtain other federal, state, or local authorizations required by law. Applicants are responsible for applying for and obtaining any other approvals.

We continually strive to improve our customer service. To better serve you, we would appreciate your completing our Customer Service Survey located at https://regulatory.ops.usace.army.mil/customer-service-survey.

Please contact Maninder Singh of my staff at (978) 318-8967 or (978)-257-6884 or Maninder.Singh@usace.army.mil if you have any questions.

Sincerely,

Paul Maniccia

Paul Maniccia
Chief, Massachusetts Section
Regulatory Division

Enclosures

Cc:
Seaver Anderson, Pare Corporation, sanderson@parecorp.com
Allen Orsi, Pare Corporation, Aorsi@parecorp.com
Ed Reiner, U.S. EPA, Region 1, Boston, MA, reiner.ed@epa.gov
Rachel Croy, U.S. EPA, Region 1, Boston, MA, croy.rachel@epa.gov
DEP CERO, Wetlands and Waterways, Worcester, MA; cero_noi@mass.gov
David Wong, MassDEP, david.w.wong@mass.gov
Kenneth Alepidis, MassDEP, Kenneth.Alepidis@Mass.gov
David Robinson, MA Board of Underwater Archaeological Resources (BUAR); david.s.robinson@mass.gov
Dudley Conservation Commission, conservation@dudleyma.gov

PERMIT SUBMISSION
NOT FOR CONSTRUCTION

Prepared for The:

TOWN OF DUDLEY, MASSACHUSETTS

CARPENTER POND DAM REMOVAL

MA00220

DUDLEY, MASSACHUSETTS

FEBRUARY 2024

Drawing Index

0.0 COVER SHEET

1.0 NOTES AND LEGEND

2.0 OVERALL SITE PLAN

2.1 EXISTING SITE PLAN

3.0 PROPOSED SITE PLAN

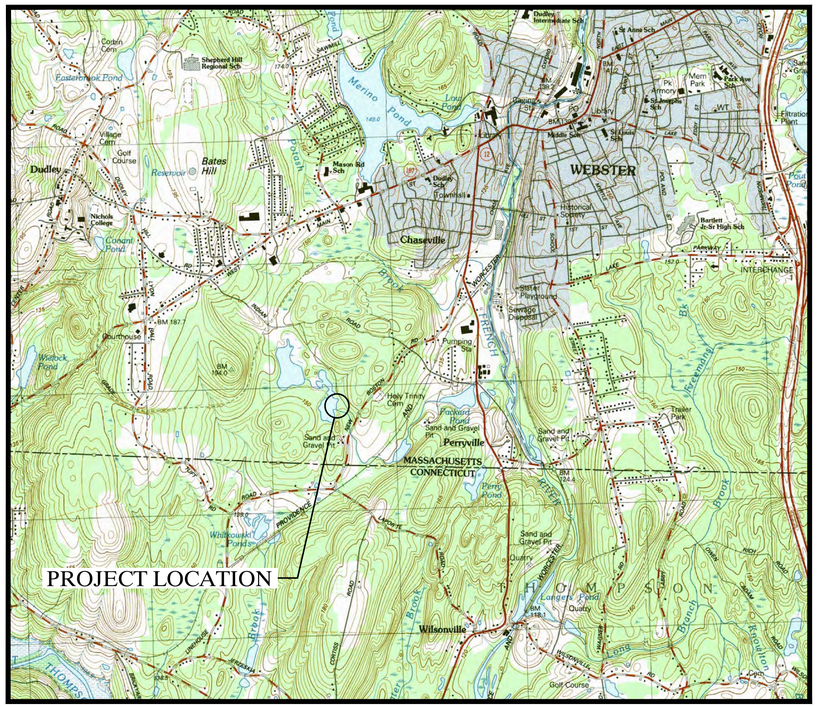
3.1 SITE ACCESS PLAN

4.0 IMPOUNDMENT RESTORATION PLAN

4.1 WETLAND IMPACT PLAN

4.2 RESTORATION PLANTING PLAN

5.0 MISCELLANEOUS DETAILS



LOCUS PLAN

SCALE: 1" = 2000'



AERIAL PLAN

SCALE: 1" = 400'

Town of Dudley Massachusetts

THIS PROJECT IS FUNDED BY
THE EXECUTIVE OFFICE OF ENERGY
AND ENVIRONMENTAL AFFAIRS

Prepared by:

PARE CORPORATION

Foxboro, Massachusetts

PARE

PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS

8 BLACKSTONE VALLEY PLACE
LINCOLN, RI 02865
401-334-4100

10 LINCOLN ROAD, SUITE 210
FOXBORO, MA 02035
508-543-1755

14 BOBALA ROAD, SUITE 2B
HOLYOKE, MA 01040
413.507.3448

H:\JOBS\12_2024\12160_Dudley_CarpenterPond_Dam_Removal_Admin\Cover\[0.0_Cover_Sheet.dwg]

GENERAL NOTES:

1. FOR THE PURPOSE OF THIS PROJECT

   OWNER – TOWN OF DUDLEY
   71 WEST MAIN STREET
   DUDLEY, MASSACHUSETTS 01571

   ENGINEER – PARE CORPORATION
   10 LINCOLN ROAD, SUITE 210
   FOXBORO, MA 02035

   CONTACT – ALLEN R. ORSI, P.E.

2. ACCORDANCE WITH THE LATEST EDITION OF MASSACHUSETTS STATE BUILDING CODE, THE SPECIFICATIONS INCLUDED IN THIS CONTRACT, AND APPLICABLE MASSACHUSETTS RULES AND REGULATIONS. THESE PLANS ARE INCOMPLETE UNLESS ACCOMPANIED BY THE SPECIFICATIONS INCLUDED IN THE CONTRACT DOCUMENTS. WHERE REFERENCE IS MADE TO ANY STANDARD SPECIFICATION IT SHALL MEAN THE MOST RECENT SPECIFICATION, CODE, STANDARD, OR INTERIM SPECIFICATIONS OF THE ORGANIZATION REFERRED TO AND SHALL BE CONSIDERED A PART OF THESE CONTRACT DOCUMENTS TO THE EXTENT INDICATED. IN CASE OF CONFLICT, THE MORE RIGID REQUIREMENTS AND CODES SHALL GOVERN. THESE CODES INCLUDE, BUT ARE NOT LIMITED TO: AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM), AND THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO).

3. THE PLANS WERE DEVELOPED BASED UPON AVAILABLE LIDAR TOPOGRAPHIC IMAGERY AND "EXISTING CONDITIONS PLAN" PREPARED BY WSP USA, INC. OF WORCESTER, MA DATED JULY 29, 2022. ANY DISCREPANCIES ON THESE PLANS WITH REGARD TO DIMENSION OR CONDITION SHALL BR BROUGHT TO THE ATTENTION OF THE ENGINEER BEFORE PROCEEDING WITH AFFECTED PORTION OF WORK. THE BRUSH AND TREE GROWTH HAS CONTINUED SINCE THE DATE OF THE SURVEY AND SHOULD BE REVIEWED BY THE CONTRACTOR.

4. WETLAND RESOURCE AREAS WERE DELINEATED BY PARE CORPORATION ON JULY 21, 2022. THE FOLLOWING WETLAND FLAGS WERE LOCATED BY WSP USA, INC: P1 TO P21, R1 TO R5, R100 TO R104, A28 TO A35, AND A43 TO A53. THE REMAINING WETLAND FLAGS WERE LOCATED USING A HANDHELD GPS UNIT WITH SUB-METER ACCURACY.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS. PLANS SHALL NOT BE SCALED FOR DIMENSIONS.

6. CONSTRUCTION SHALL BE MADE FROM APPROVED SHOP DRAWINGS ONLY.

7. NOTES, TYPICAL DETAILS, AND SCHEDULES APPLY TO ALL WORK UNLESS OTHERWISE NOTED. FOR CONDITIONS NOT SPECIFICALLY SHOWN, PROVIDE DETAILS OF SIMILAR NATURE. VERIFY APPLICABILITY BY SUBMITTING SHOP DRAWINGS FOR REVIEW.

8. INFORMATION REGARDING THE LOCATION OF SURROUNDING STRUCTURES, UTILITIES, AND THE AS-BUILT CONFIGURATION AND CONDITION OF THE EXISTING DAM AND SPILLWAY IS FURNISHED SOLELY FOR THE CONVENIENCE OF THE CONTRACTOR AND SHALL BE FIELD VERIFIED. THE CONTRACTOR SHALL CONDUCT ITS OWN INDEPENDENT EXAMINATION OF SITE CONDITIONS FOR THE PURPOSE OF BIDDING, FABRICATION, AND CONSTRUCTION ASSOCIATED WITH THE PROJECT. ANY RELIANCE UPON INFORMATION MADE AVAILABLE BY THE OWNER OR THE ENGINEER SHALL BE AT THE CONTRACTOR'S RISK.

9. THE VERTICAL DATUM FOR THE PROJECT IS NAVD 1988. HORIZONTAL DATUM IS MASSACHUSETTS STATE PLANE NAD 1983. CONTRACTOR SHALL ESTABLISH HORIZONTAL AND VERTICAL CONTROL AS REQUIRED TO ENABLE COMPLETION OF WORK.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL PROJECT DEMOLITION AND EXCESS MATERIAL IN ACCORDANCE WITH MASSACHUSETTS, LOCAL, AND FEDERAL LAWS.

11. THE CONTRACTOR SHALL PROTECT ALL ADJACENT STRUCTURES AND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF ALL DAMAGE TO ADJACENT STRUCTURES AND UTILITIES AT NO ADDITIONAL COST TO THE OWNER.

12. THE CONTRACTOR SHALL COMPLY WITH ALL CONDITIONS OF ALL PERMITS FOR THE WORK. THE CONTRACTOR SHALL COORDINATE SCHEDULE WITH THE OWNER AND ANTICIPATED PERMIT ISSUE DATES.

13. THE CONTRACTOR SHALL FOLLOW ALL OSHA AND OTHER APPLICABLE FEDERAL, STATE, AND LOCAL STANDARDS FOR ALL PROJECT COMPONENTS AND ACTIVITIES. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL SITE SAFETY PROCEDURES AND PRACTICES REGARDLESS OF THE PRESENCE OF THE OWNER OR ENGINEER.

14. ALL CONSTRUCTION ACTIVITIES SHALL BE CONFINED TO THE LIMITS OF WORK AND TEMPORARY EASEMENTS DEFINED HEREIN.

15. WHERE REFERENCE IS MADE TO ANY STANDARD SPECIFICATION, IT SHALL MEAN THE MOST RECENT SPECIFICATION, CODE, STANDARD, OR INTERIM SPECIFICATIONS OF THE ORGANIZATION REFERRED TO AND SHALL BE CONSIDERED A PART OF THESE CONTRACT DOCUMENTS TO THE EXTENT INDICATED. IN CASE OF CONFLICT, THE MORE RIGID REQUIREMENTS AND CODES SHALL GOVERN. THESE CODES INCLUDE, BUT ARE NOT LIMITED TO: AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM).

16. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT A CONSTRUCTION SCHEDULE TO THE OWNER WITHIN 3 DAYS OF THE PRE-CONSTRUCTION CONFERENCE. THE CONTRACTOR SHALL UPDATE THEIR SCHEDULE AS NEEDED AND AS REQUESTED BY THE OWNER THROUGHOUT THE COURSE OF WORK.

17. THE CONTRACTOR SHALL STAGE ALL EQUIPMENT IN THE DESIGNATED STAGING AREAS. ALL GREASING AND REFUELING ACTIVITIES SHALL OCCUR IN THE STAGING AREA.

18. THE CONTRACTOR SHALL MAINTAIN A SECURE SITE AND PROVIDE APPROPRIATE SAFETY MEASURES TO PREVENT ACCIDENTS. THE SAFETY MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO SIGNAGE, BARRICADES, FENCES, FLASHING WARNING LIGHTS, AND POLICING IF NECESSARY.

19. UPON COMPLETION OF THE PROJECT, CONTRACTOR SHALL PROVIDE TWO AS-BUILT PLAN SETS TO THE OWNER DEPICTING ANY FIELD CHANGES OF DIMENSION OR DETAIL, LOCATION OF UNDERGROUND STRUCTURES AND/OR UTILITIES, CONSTRUCTION DEVIATIONS, CHANGES DUE TO FIELD OR CHANGE ORDER, AND DETAILS NOT ON THE ORIGINAL DRAWINGS.

20. NO WORK OR DISCHARGES, OTHER THAN THAT SHOWN, SHALL BE PERFORMED WITHIN WETLANDS WITHOUT FIRST RECEIVING PROPER PERMITS FROM THE REGULATORY AGENCIES HAVING JURISDICTION OVER ALL OR PORTIONS OF THE WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING, RESTORING AND REPAIRING ALL DAMAGE AS A RESULT OF UNAUTHORIZED WORK OR DISCHARGES TO THE WETLAND AREA AT NO ADDITIONAL COST TO THE OWNER.

21. UPON COMPLETION OF THE WORK, ALL DISTURBED AREAS SHALL BE DRESSED AND SEEDED WITH SLOPE OR PLOT MIX AND MAINTAINED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. CONTRACTOR SHALL BE REQUIRED TO WATER SEEDED SLOPES ON A DAILY BASIS UNTIL A SATISFACTORY STAND OF GRASS HAS DEVELOPED.

22. THE CONTRACTOR SHALL ATTEND WEEKLY PROGRESS MEETINGS IN ACCORDANCE TO SPECIFICATION SECTION 01200: PROJECT MEETINGS.

23. THE CONTRACTOR SHALL STOCKPILE ALL SUITABLE MATERIAL ENCOUNTERED DURING EXCAVATION AND DEMOLITION ACTIVITY FOR REUSE. THE CONTRACTOR SHALL PROVIDE TARPS, COVERS, AND OTHER MEASURES TO PROTECT STOCKPILES FROM BECOMING SATURATED, FROZEN, OR OTHERWISE UNSUITABLE FOR REUSE.

24. CONTRACTOR SHALL THOROUGHLY WASH AND CLEAN EQUIPMENT PRIOR TO DELIVERY TO THE SITE TO AVOID TRANSPORT AND INTRODUCTION OF INVASIVE SPECIES.

EMERGENCY RESPONSE NOTES:

1. CONTRACTOR SHALL MAINTAIN ON SITE AND READILY AVAILABLE, MATERIALS OF SUFFICIENT TYPE AND QUANTITY TO CONTAIN AN ACCIDENTAL EQUIPMENT-BASED RELEASE OF FUEL OR OIL. AT A MINIMUM SUCH MATERIALS SHALL INCLUDE OIL BOOM OF SUFFICIENT LENGTH TO SPAN THE EXISTING OR PROPOSED CHANNEL AND A 55 GALLON CONSTRUCTION SITE SPILL KIT SUITABLE FOR CONTAINING SPILLS ON LAND OR IN WATER.

2. FOLLOWING ANY ACCIDENTAL RELEASE OF OIL OR HAZARDOUS MATERIALS THE CONTRACTOR SHALL, AS SOON AS PRACTICABLE, NOTIFY THE FALL RIVER FIRE DEPARTMENTS BY CALLING 911. CONTRACTOR SHALL ALSO NOTIFY THE OWNER AND ENGINEER.

3. RELEASES OF REPORTABLE QUANTITIES SHALL BE REPORTED IN ACCORDANCE WITH THE PROVISIONS OF THE MASSACHUSETTS CONTINGENCY PLAN.

EROSION AND SEDIMENT CONTROL NOTES:

1. CONTRACTOR SHALL INSTALL STRAW BALES AND SILT FENCE AS INDICATED IN THE CONTRACT DOCUMENTS. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SEDIMENT CONTROL DEVICES.

2. CONTRACTOR SHALL LIMIT STOCKPILING OF MATERIALS TO THE INDICATED STAGING AREAS. ALL STOCKPILED MATERIAL SHALL BE SURROUNDED BY STRAW BALES AND SILT FENCE.

3. THE LOCATION OF SEDIMENT CONTROL BARRIERS SHOWN IS CONSIDERED TO BE THE MINIMUM ACCEPTABLE AND SHALL BE MODIFIED, SUPPLEMENTED, OR EXPANDED BY THE CONTRACTOR AS FIELD CONDITIONS WARRANT.

4. SEDIMENT CONTROL BARRIERS SHALL CONSIST OF SILT FENCE, STRAW BALES, SILT FENCE BACKED BY STRAW BALES, AND/OR STRAW WATTLES AS FIELD CONDITIONS WARRANT. PROJECT ENGINEER SHALL APPROVE THE BARRIER TYPE.

5. THE CONDITION OF THE SEDIMENT CONTROL BARRIERS SHALL BE MONITORED ON AN ON-GOING BASIS, AT A MINIMUM OF ONCE PER WEEK AND AFTER ANY RAINFALL EVENT IN EXCESS OF 0.25' IN 24 HOURS. ANY FAILURE OF THE BARRIER SHALL BE CORRECTED WITHIN 24 HOURS OF DISCOVERY.

6. SEDIMENT SHALL BE REMOVED AND DISPOSED BEFORE IT EXCEEDS 1/2 THE ORIGINAL EXPOSED HEIGHT OF THE BARRIER.

7. STONE ANTI-TRACKING PADS SHALL BE UTILIZED AS NECESSARY TO PREVENT VEHICLE TRACKING OF SEDIMENTS ONTO PUBLIC ROADWAYS.

8. THE CONTRACTOR SHALL BE PREPARED TO DEPLOY ADAPTIVE MEASURES AS NECESSARY TO LIMIT EXCESSIVE SHORT-TERM MOBILIZATION OF SEDIMENT SHOULD SUCH OCCUR DURING DAM REMOVAL OR BREACH CREATION. AS DETERMINED NECESSARY BY THE CONTRACTOR OR AS RECOMMENDED BY THE PROJECT ENGINEER, IN-STREAM ADAPTIVE SEDIMENT CONTROL MEASURES MAY INCLUDE THE IMPLEMENTATION OF A SEDIMENT BASIN IN THE STREAM CHANNEL DOWNSTREAM OF THE DAM WITH CLEANUP PERFORMED AS NEEDED. ANY SUCH BASIN SHALL BE CONSTRUCTED USING ABOVE-GROUND BARRIERS (E.G., SUPERSACKS) TO CREATE A BERM RATHER THAN EXCAVATION IN THE RIVER CHANNEL.

9. UPON COMPLETION OF THE PROJECT AND PERMANENT STABILIZATION OF THE GROUND SURFACE, ALL SEDIMENT CONTROL BARRIERS SHALL BE REMOVED AND DISPOSED OF IN AN APPROPRIATE FASHION.

10. THIS WORK IS SUBJECT TO A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM PERMIT AS REQUIRED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA) CONSTRUCTION GENERAL PERMIT (CGP). THE CONTRACTOR SHALL BE RESPONSIBLE FOR FILING A NOTICE OF INTENT WITH THE EPA, PREPARING A STORMWATER POLLUTION PREVENTION PLAN (SWPPP), CONDUCTING THE REQUIRED SITE INSPECTIONS, MAINTAINING THE SWPPP PER THE CGP AND FILING A NOTICE OF TERMINATION WITH THE EPA AFTER SITE STABILIZATION REQUIREMENTS HAVE BEEN MET.

11. SOIL EROSION AND SEDIMENTATION CONTROLS SHALL BE PROVIDED IN ACCORDANCE WITH THE STATE OF MASSACHUSETTS, AND THE NOTES AND DETAILS SHOWN IN THIS PLAN SET.

LOAM AND SEED NOTES:

1. CONTRACTOR SHALL APPLY FERTILIZER AND LOAM TO PREPARED TOPSOIL SURFACE AT THE RATES INDICATED IN THE PROJECT SPECIFICATIONS AND AS OTHERWISE RECOMMENDED BY THE SOIL CHEMICAL ANALYSIS.

2. CONTRACTOR SHALL SEED ALL LOAMED AREAS AND OTHER AREAS DISTURBED BY THE WORK AS INDICATED IN THE PROJECT SPECIFICATIONS.

3. CONTRACTOR SHALL MULCH ENTIRE SEEDED AREA WITH STRAW MULCH.

4. CONTRACTOR SHALL INSTALL JUTE MESH OVER THE ENTIRE SEEDED AREA IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR OVERLAPPING, ANCHORING, AND DIRECTION OF PLACEMENT.

5. NATIVE NEW ENGLAND CONSERVATION/WILDLIFE MIX SHALL BE UTILIZED FOR SEEDING RELOCATED EMBANKMENT MATERIAL IN ADJACENT FIELD.

6. UPON COMPLETION OF THE WORK ALL DISTURBED AREAS SHALL BE DRESSED AND COVERED WITH A MINIMUM OF 6-INCH OF LOAM IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, UNLESS NOTED OTHERWISE.

7. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SEEDED AREA THROUGH ONE GROWING SEASON, MAINTENANCE INCLUDES MOWING, WATERING, AND RE-SEEDING AS REQUIRED TO DEVELOP A SATISFACTORY STAND OF HEALTHY GRASS AS DEFINED IN THE PROJECT SPECIFICATIONS (SECTION 02900: LANDSCAPING).

DIVERSION NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITION IN THE FIELD PRIOR TO ANY DEMOLITION OR CONSTRUCTION. ANY DISCREPANCIES RELATING TO THE DRAWINGS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.

2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OFFSITE DISPOSAL OF ALL PROJECT DEMOLITION MATERIAL, TRASH, AND DEBRIS IN ACCORDANCE WITH THE LOCAL STATE LAWS.

3. THE CONTRACTOR SHALL MAINTAIN STREAM FLOW THROUGHOUT CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PREVENTING ANY SOIL OR OTHER MATERIAL FROM ENTERING THE DISCHARGE CHANNEL OR IMPOUNDMENT.

4. THE CONTRACTOR SHALL NOT PERFORM ANY DRAW DOWN OF THE IMPOUNDMENT UNLESS THEY HAVE RECEIVED WRITTEN PERMISSION FROM THE OWNER OR MUST EXECUTE EMERGENCY PROCEDURES OUTLINED IN THE CONSTRUCTION FLOOD CONTINGENCY PLAN.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL LOSS AND DAMAGE DUE TO A FAILURE OF ANY COFFERDAMS OR DIVERSION STRUCTURES CONSTRUCTED DURING THE WORK.

6. THE CONTRACTOR SHALL REGULATE DISCHARGES AND PHASE CONSTRUCTION SO THAT CONSTRUCTION MATERIAL DOES NOT PASS THROUGH FLOWING WATER.

7. ANY NECESSARY COFFERDAMS AND DIVERSIONS SHALL BE DESIGNED BY THE CONTRACTOR AND BEAR THE STAMP OF A PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF MASSACHUSETTS. APPROVAL BY THE OWNER AND ENGINEER IS REQUIRED PRIOR TO INSTALLATION. ALL DIVERSIONS SHALL BE INSTALLED AND REMOVED IN THEIR ENTIRETY AT NO ADDITIONAL COST TO THE OWNER.

8. THE CONTRACTOR SHALL MAINTAIN A STOCKPILE OF MATERIAL ONSITE TO BE UTILIZED TO STABILIZE THE EXCAVATION IN THE EVENT OF HIGH WATER OR OTHER CONDITIONS WHICH MAY COMPROMISE THE COFFERDAM STABILITY. THE STOCKPILE SHALL BE MAINTAINED IN ACCORDANCE WITH A FLOOD EMERGENCY RESPONSE PLAN TO BE DEVELOPED BY THE CONTRACTOR AND SUBJECT TO APPROVAL BY THE ENGINEER AND OWNER.

9. WITH THE APPROVAL OF THE ENGINEER, THE CONTRACTOR MAY UTILIZE WATER WITHDRAWALS FROM THE LOWER RESERVOIR FOR THE PURPOSES OF LOAM AND SEED OPERATIONS AND MAINTENANCE, DUST CONTROL, EARTHWORK OPERATION, AND CONCRETE AND MORTAR MIXING. SUCH WATER SHALL NOT BE USED FOR THE FOLLOWING BUT NOT LIMITED TO: EQUIPMENT WASH DOWN, MAINTENANCE (E.G. CONCRETE WASHOUT, EXTERIOR CLEANING, OR TRACK WASH DOWN), OR WASHING STONE OR STRIPPED MATERIALS.

CONSTRUCTION SEQUENCE:

THE FOLLOWING SEQUENCE IS INTENDED TO BE GENERAL IN NATURE AND SHALL NOT BE CONSIDERED DIRECTION BY THE ENGINEER OR THE OWNER. ALTHOUGH IT IS LIKELY THAT SOME OF THE WORK ITEMS WILL OVERLAP, CONSTRUCTION SEQUENCES FOR THE VARIOUS PROJECT COMPONENTS ARE DESCRIBED SEPARATELY AND MAY NOT NECESSARILY PROCEED IN CONSECUTIVE ORDER. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.

1. MOBILIZE TO THE SITE; ESTABLISH ACCESS WAYS AND STAGING AREAS.
2. INSTALL EROSION AND SEDIMENT CONTROL DEVICES.
3. INSTALL CONTROL OF WATER DEVICES INCLUDING DIVERSIONS; COMMENCE IMPOUNDMENT DRAWDOWN
   A. INSTALL DIVERSION PIPE
   B. INSTALL TEMPORARY UPSTREAM AND TAILWATER COFFERDAMS
4. COMPLETE REMOVAL OF THE DAM:
   A. REMOVE TREES AND BRUSH AS NEEDED WITHIN THE PROPOSED BREACH AS SHOWN IN PLAN
   B. DEMOLISH THE STONE MASONRY SPILLWAY SECTION; IMPLEMENT DRAWDOWN
      a. SEQUENTIALLY DEMOLISH SPILLWAY TO IMPLEMENT DRAWDOWN IN ACCORDANCE WITH ALLOWABLE DRAW DOWN RATE; STOCKPILE STONE FOR REUSE
      b. EXCAVATE UPSTREAM SOILS AS REQUIRED TO IMPLEMENT DRAWDOWN DURING SPILLWAY DEMOLITION
   C. EXCAVATE TO PROPOSED GRADES AND LINES TO CREATE THE PROPOSED CHANNEL
      a. REMOVE BOULDERS; STOCKPILE FOR REUSE
      b. REMOVE CONCRETE (IF ANY) AND UNSUITABLE MATERAIL; DISPOSE OF OFFSITE
      c. STORE EXCESS SOILS IN IDENTIFIED STORAGE AREAS
         (ALT: REMOVE AND DISPOSE EXCESS SOILS OFFSITE)
   D. INSTALL BANK PROTECTION RIVER RIGHT; PLACE STOCKPILED BOULDERS WHERE INDICATED; ESTABLISH VEGETATION WITHIN CHANNEL AS INDICATED ON PLAN.
   E. REMOVE COFFERDAMS; DIVERT FLOW TO CONSTRUCTED CHANNEL AND REMOVE DIVERSION PIPE
   F. COMPLETE EXCAVATION OF THE EMBANKMENT TO THE LIMITS SHOWN
5. SITE FINISHING AND DEMOBILIZATION:
   A. INSTALL OTHER SURFACE FINISHED AS SPECIFIED (I.E. PLANTINGS, SHRUB, COIR LOGS, LOAM, SEED, ETC.)
   B. UNLESS OTHERWISE NOTED, INSTALL LOAM AND ESTABLISH GRASS IN ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES.
   C. RESTORE SITE ACCESS WAYS INCLUDING GRADING IMPROVEMENTS, EROSION CONTROL, AND STABILIZATION.
   D. DEMOBILIZE.

INVASIVE SPECIES MONITORING NOTES:

1. CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING A MONITORING PROGRAM AS PART OF THE BASE SCOPE OF WORK. SHOULD INVASIVE SPECIES TREATMENT BE REQUIRED, THE SCOPE OF WORK SHALL BE IDENTIFIED BY THE CONTRACTOR AND COMPLETED THROUGH CHANGE ORDER OR AS OTHERWISE DEEMED APPROPRIATE.
2. MONITORING FOR INVASIVE PLANT SPECIES WILL COMMENCE AS SOON AS POND DRAW DOWN IS COMPLETE. THIS MAY BE IN ADVANCE OF THE PHYSICAL REMOVAL OF THE DAM.
3. MONITORING SHALL BE OVERSEEN BY A QUALIFIED WETLANDS SPECIALIST WITH EXPERIENCE IDENTIFYING AND MANAGING INVASIVE PLANT SPECIES IN THE NORTHEASTERN UNITED STATES. DOCUMENTATION OF SUCH QUALIFICATIONS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.
4. THE INVASIVE SPECIES MONITORING WILL BE IMPLEMENTED WITHIN THE LIMITS OF DISTURBANCE FOR THE DAM REMOVAL, AND TO THE APPROXIMATE BOUNDARY OF THE FORMER IMPOUNDMENT.
5. POTENTIAL INVASIVE PLANT SPECIES OF CONCERN AT THE SITE INCLUDE PURPLE LOOSESTRIFE (LYTHRUM SALICARIA), COMMON REED (PHRAGMITES AUSTRALIS), REED CANARY GRASS (PHALARIS ARUNINACEA), GLOSSY BUCKTHORN (RHAMNUS FRANGULA), YELLOW IRIS (IRIS PSEUDOCORUS), MULTIFLORA ROSE (ROSA MULTIFLORA), AND JAPANESE BARBERRY (BERBERIS THUNBERGII).
6. POST-CONSTRUCTION MONITORING & CONTROL:
   A. FOLLOWING IMPOUNDMENT RESTORATION, MONITOR AND CONTROL ONCE PER MONTH FOR THE REMAINDER OF THE FIRST GROWING SEASON. (TO BE COMPLETED BY CONTRACTOR)
   B. FOR TWO GROWING SEASONS FOLLOWING IMPOUNDMENT RESTORATION, MONITORING AND CONTROL SHALL BE CONDUCTED MONTHLY FROM JUNE THROUGH SEPTEMBER.
   C. SHOULD INVASIVE COLONIZATION BE ENCOUNTERED, CONTROL MEASURES SHALL BE IMPLEMENTED IMMEDIATELY. CONTROL MEASURES SHALL BE SPECIFIC TO THE SPECIES ENCOUNTERED AND SHALL BE DETERMINED BY THE QUALIFIED WETLANDS SPECIALIST RESPONSIBLE FOR MONITORING.
   D. CONTROL MEASURES MAY INCLUDE PHYSICAL AND/OR CHEMICAL TREATMENT OF THE COLONIZATION.
   E. PHYSICAL TREATMENT MAY INCLUDE CUTTING OR PULLING INDIVIDUAL PLANTS, OR REMOVING ROOT SYSTEMS.
   F. CHEMICAL CONTROL MAY BE ACCOMPLISHED BY USING A SHORT-LIFE HERBICIDE SUITABLE FOR USE IN AN AQUATIC ENVIRONMENT.
   G. COMBINATION TREATMENT MAY INCLUDE 'CUT AND PAINT' METHODS.
   H. DOCUMENTATION OF MONITORING AND CONTROL ACTIVITIES SHALL BE SUBMITTED MONTHLY TO THE PROJECT OWNER.

LEGEND

EXISTING		PROPOSED
	STATE HIGHWAY LINE	
	EASEMENT BOUNDARY	
52	1' CONTOUR	52
55	5' CONTOUR	55
	EDGE OF PAVEMENT	
	CURBING	
	EDGE OF GRAVEL	
	EDGE OF WATER	
	STONE MASONRY WALL	
	FENCE	
	GUARD RAIL	
	TREELINE	
	UTILITY POLE	
	OVERHEAD WIRE	
	STRAW BALES	
	SILT FENCE	
	COFFER DAM	
	TURBIDITY BARRIER	
	LIMIT OF DISTURBANCE	

ABBREVIATIONS

ABAN	ABANDON
CD1	COFFER DAM ORIENTATION NO. 1
CD2	COFFER DAM ORIENTATION NO. 2
CD1&2	COFFER DAM PRESENT DURING ORIENTATION NOS. 1 AND 2
LOD	LIMIT OF DISTURBANCE
R&D	REMOVE & DISPOSE
SILT	SILT FENCE
STRAW	STRAW BALES
TB	TURBIDITY BARRIER
D/S	= DOWNSTREAM
U/S	= UP STREAM
EMB	= EMBANKMENT
ENG	= ENGINEERED
CP	= CONTROL POINT
BO	= BLOW OFF

PERMIT SUBMISSION
NOT FOR CONSTRUCTION

© 2022 ALL INFORMATION THESE DOCUMENTS BY PARE CORPORATION

PARE

TOWN OF DUDLEY, MASSACHUSETTS INCORPORATED 1732

Executive Office of Energy and Environmental Affairs
THIS PROJECT IS FUNDED BY THE EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Carpenter Pond Dam Removal

MA00220

Dudley, Massachusetts

Town of Dudley, Massachusetts

COMMONWEALTH OF MASSACHUSETTS
ALLEN R. ORSI
No. 43904
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

PROJECT NO.:	22116.00
DATE:	FEBRUARY 2024
SCALE:	AS NOTED
DESIGNED BY:	ARO
CHECKED BY:	ARO
DRAWN BY:	LMC
APPROVED BY:	ARO

DRAWING TITLE:

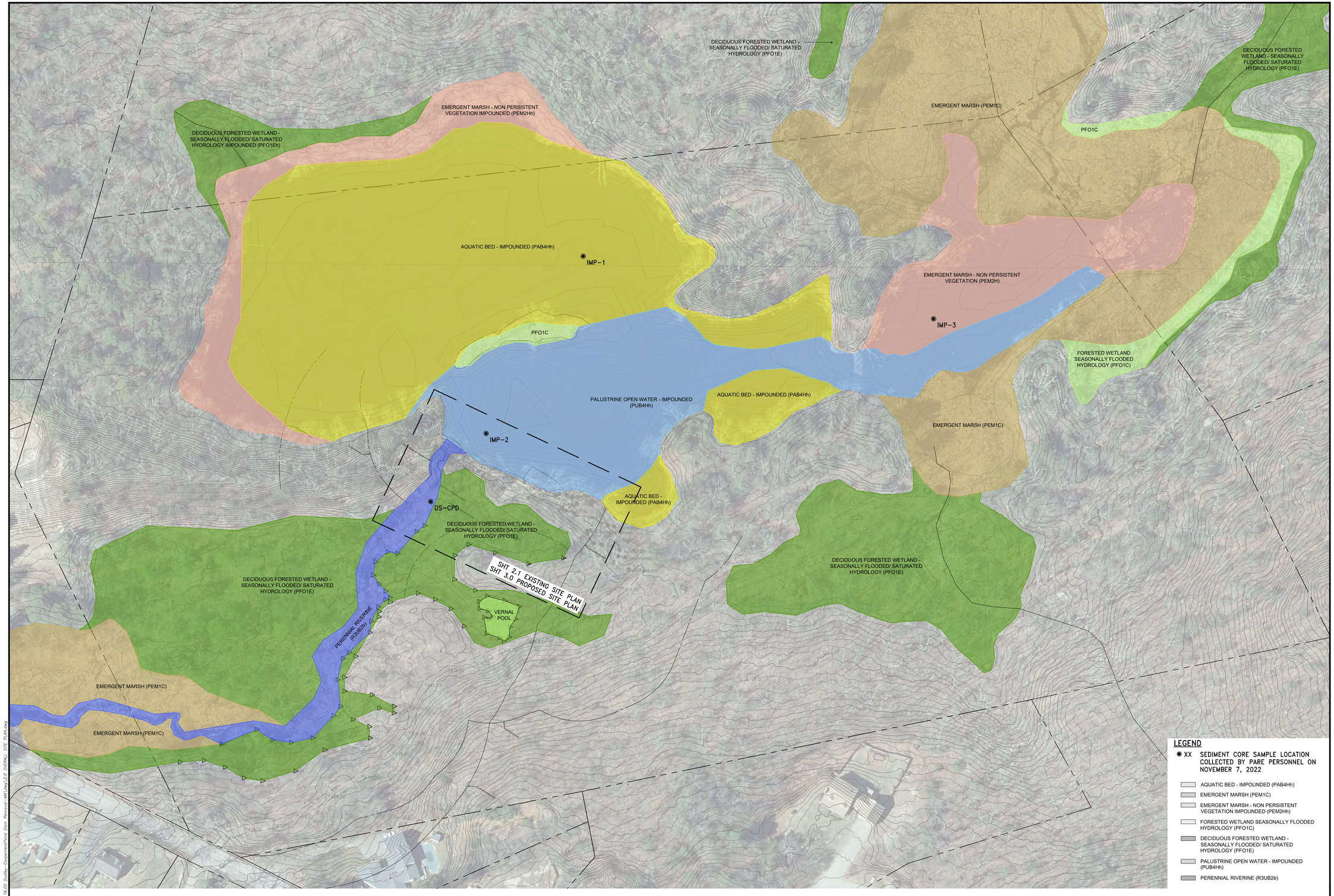
NOTES AND LEGEND

DRAWING NO.:

1.0

SHEET NO. 2 OF 10

I:\22116.22 - AMA\22116.00 Dudley-Carpenter\Pond Dam Removal-MA\dwg\1.0 NOTES AND LEGEND.dwg



© 2022 ALL INFORMATION THESE DOCUMENTS BY PARE CORPORATION

PARE

THIS PROJECT IS FUNDED BY THE EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Carpenter Pond Dam Removal

MA00220

Dudley, Massachusetts

Town of Dudley, Massachusetts

ALLEN R. OSTBY No. 43904 REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

PROJECT NO.:	22116.00
DATE:	FEBRUARY 2024
SCALE:	AS NOTED
DESIGNED BY:	ARO
CHECKED BY:	ARO
DRAWN BY:	LMC
APPROVED BY:	ARO

DRAWING TITLE:

OVERALL SITE PLAN

DRAWING NO.: 2.0

SHEET NO. 3 OF 10

P:\JOBS\22_Jobs\22116.00_Dudley_CarpenterPond_Dam_Removal-MA\dwg\2.0_OVERALL_SITE_PLAN.dwg

© 2022 ALL INFORMATION THESE DOCUMENTS BY PARE CORPORATION

CARPENTER POND
WATER ELEV=474.4 JULY 26, 2022

CONCRETE UPSTREAM WALL

BENCHMARK:
BMK A SQ CUT ON CONC DAM
ELEV:..475.20'

OHW OF CARPENTER ROAD POND

STONE BLOCK STEPPED SPILLWAY

ASSUMED WALL ALIGNMENT BENEATH DEBRIS

DRY SET STONE MASONRY WALL

PILED BEAVER DEBRIS

OHW OF PERENNIAL STREAM

OHW OF PERENNIAL STREAM

BORDERING VEGETATED WETLAND

100-FOOT VERNAL POOL HABITAT

BENCHMARK:
BMK B SPK-IN-18 TREE
ELEV: 475.30'

200' RIVERFRONT AREA

Scale: 1"=10'
0 5' 10' 20'

PERMIT SUBMISSION
NOT FOR CONSTRUCTION

PARE

TOWN OF DUDLEY, MASSACHUSETTS INCORPORATED 1732

Executive Office of Energy and Environmental Affairs

THIS PROJECT IS FUNDED BY THE EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Carpenter Pond Dam Removal

MA00220

Dudley, Massachusetts

Town of Dudley, Massachusetts

COMMONWEALTH OF MASSACHUSETTS
ALLEN R. OSGI
CIVIL
No. 46904
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

PROJECT NO.:	22116.00
DATE:	FEBRUARY 2024
SCALE:	AS NOTED
DESIGNED BY:	ARO
CHECKED BY:	ARO
DRAWN BY:	LMC
APPROVED BY:	ARO

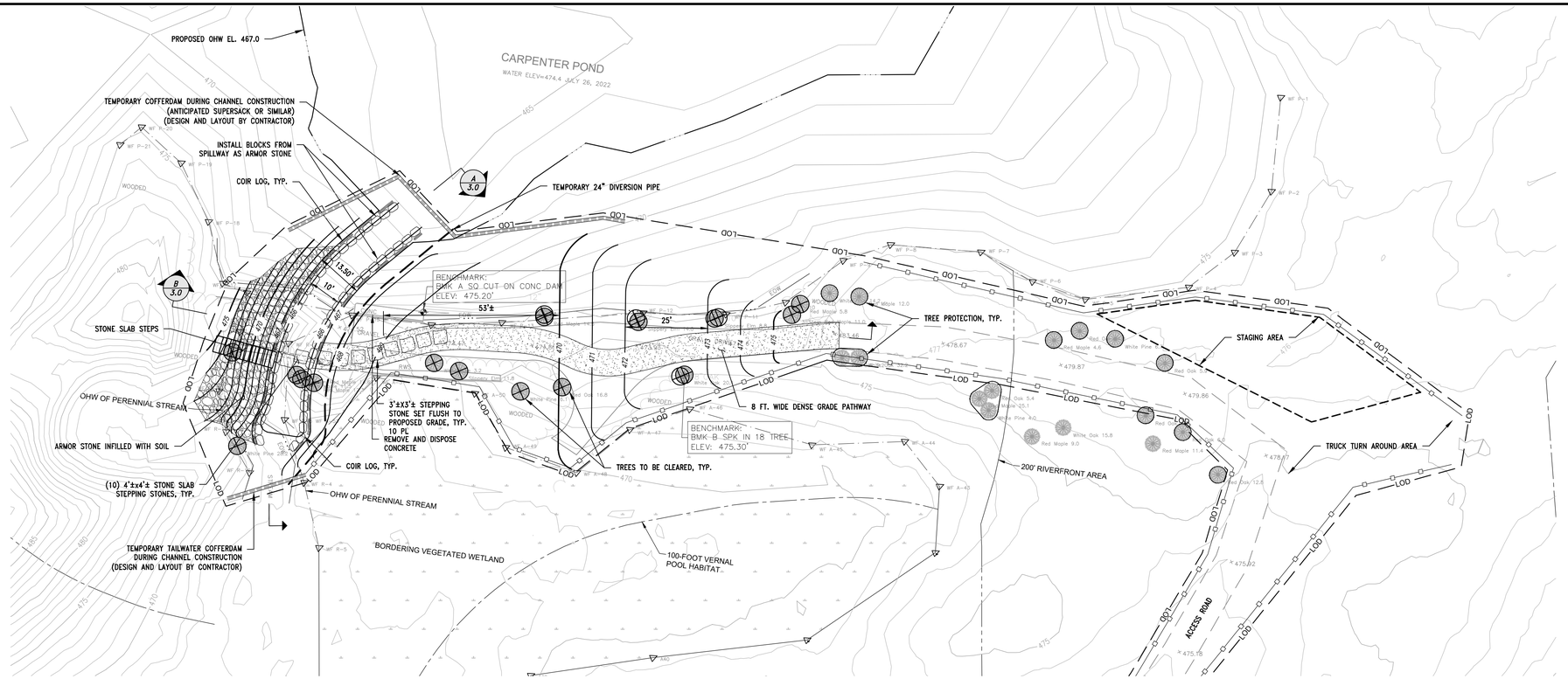
DRAWING TITLE:

EXISTING SITE PLAN

DRAWING NO.:
2.1

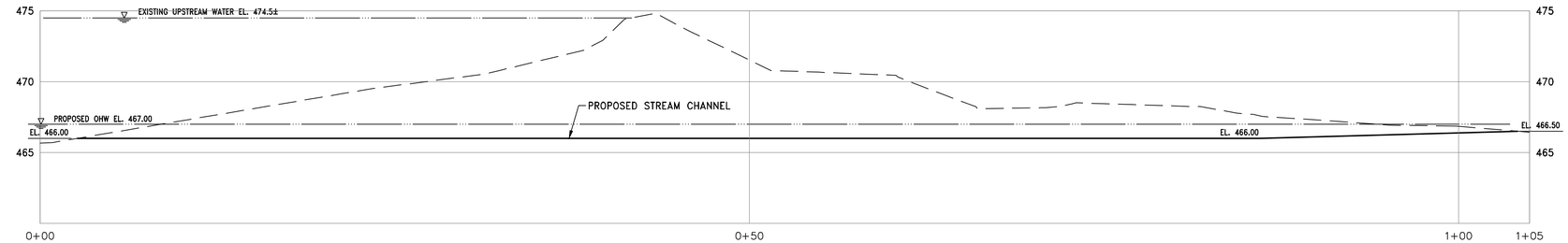
SHEET NO. 4 OF 10

P:\22851\22-Jobs\22116.00 Dudley--CarpenterPond Dam Removal-MA\dwg\2.1 EXISTING SITE PLAN.dwg



PROPOSED SITE PLAN

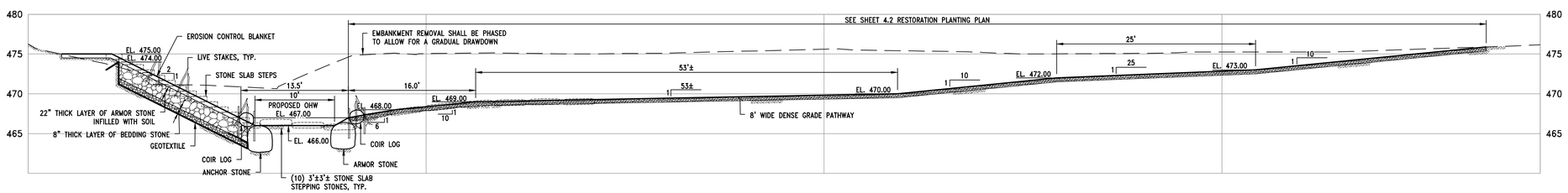
SCALE: 1"=20'±



SECTION A

A 3.0

SCALE: 1"=5'



SECTION B

B 3.0

SCALE: 1"=8'

PERMIT SUBMISSION
NOT FOR CONSTRUCTION

© 2022 ALL INFORMATION THESE DOCUMENTS BY PARE CORPORATION

PARE

TOWN OF DUDLEY, MASSACHUSETTS INCORPORATED 1732

Executive Office of Energy and Environmental Affairs

THIS PROJECT IS FUNDED BY THE EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Carpenter Pond Dam Removal

MA00220

Dudley, Massachusetts

Town of Dudley, Massachusetts

COMMONWEALTH OF MASSACHUSETTS
ALLEN K. DOSI
CIVIL
No. 46904
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

PROJECT NO.:	22116.00
DATE:	FEBRUARY 2024
SCALE:	AS NOTED
DESIGNED BY:	ARO
CHECKED BY:	ARO
DRAWN BY:	LMC
APPROVED BY:	ARO

DRAWING TITLE:

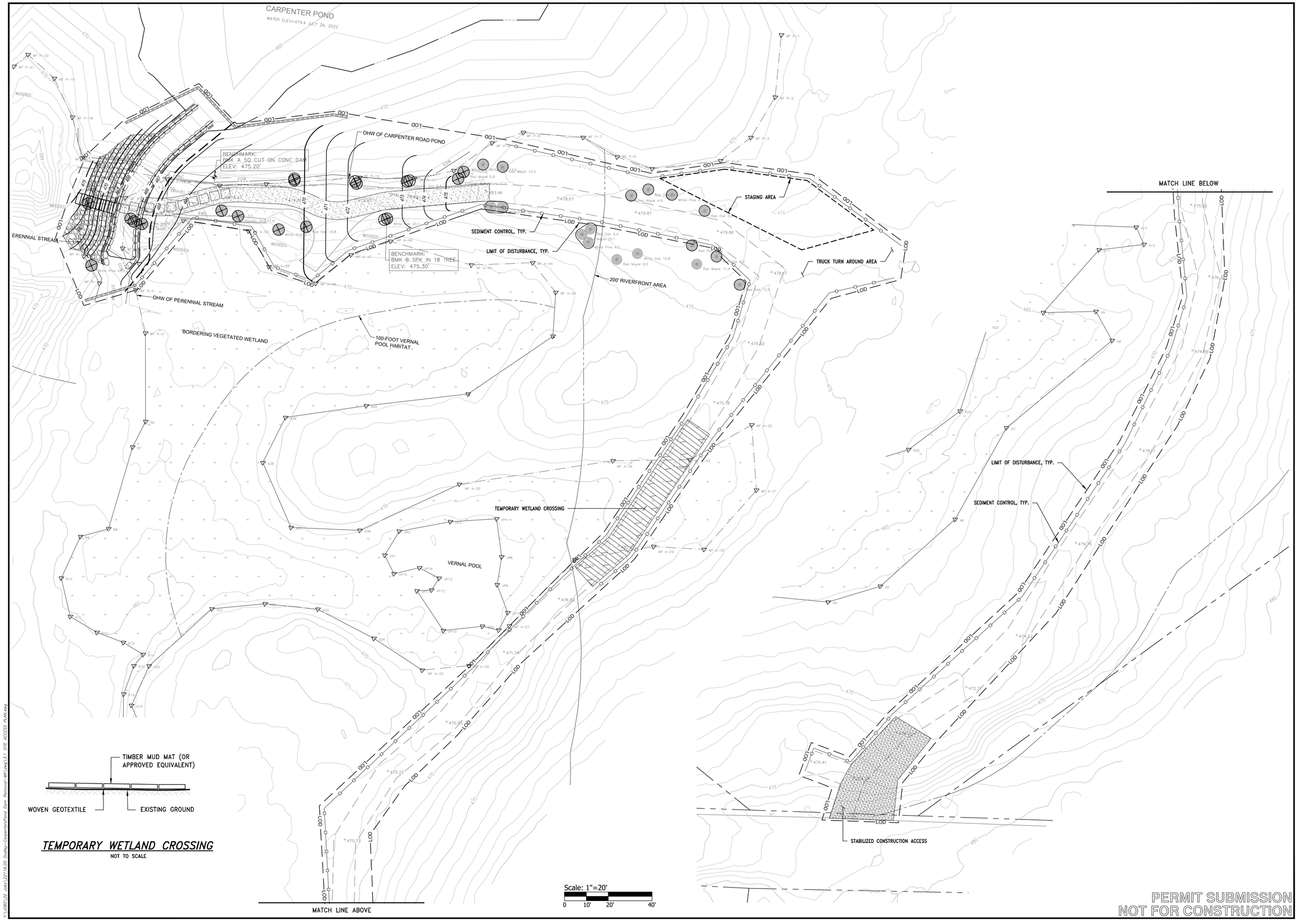
PROPOSED SITE PLAN

DRAWING NO.:

3.0

SHEET NO. 5 OF 10

P:\22116.00 Dudley-CarpenterPond Dam Removal-MA\dwg\3.0 PROPOSED SITE PLAN.dwg



TIMBER MUD MAT (OR APPROVED EQUIVALENT)

WOVEN GEOTEXTILE — EXISTING GROUND

TEMPORARY WETLAND CROSSING

NOT TO SCALE

PERMIT SUBMISSION
NOT FOR CONSTRUCTION

© 2022 ALL INFORMATION THESE DOCUMENTS BY PARE CORPORATION

PARE

TOWN OF DUDLEY, MASSACHUSETTS INCORPORATED 1732

Executive Office of Energy and Environmental Affairs

THIS PROJECT IS FUNDED BY THE EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Carpenter Pond Dam Removal

MA00220

Dudley, Massachusetts

Town of Dudley, Massachusetts

COMMONWEALTH OF MASSACHUSETTS
ALLEN R. OSGOOD
CIVIL
No. 44904
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

PROJECT NO.:	22116.00
DATE:	FEBRUARY 2024
SCALE:	AS NOTED
DESIGNED BY:	ARO
CHECKED BY:	ARO
DRAWN BY:	LMC
APPROVED BY:	ARO

DRAWING TITLE:

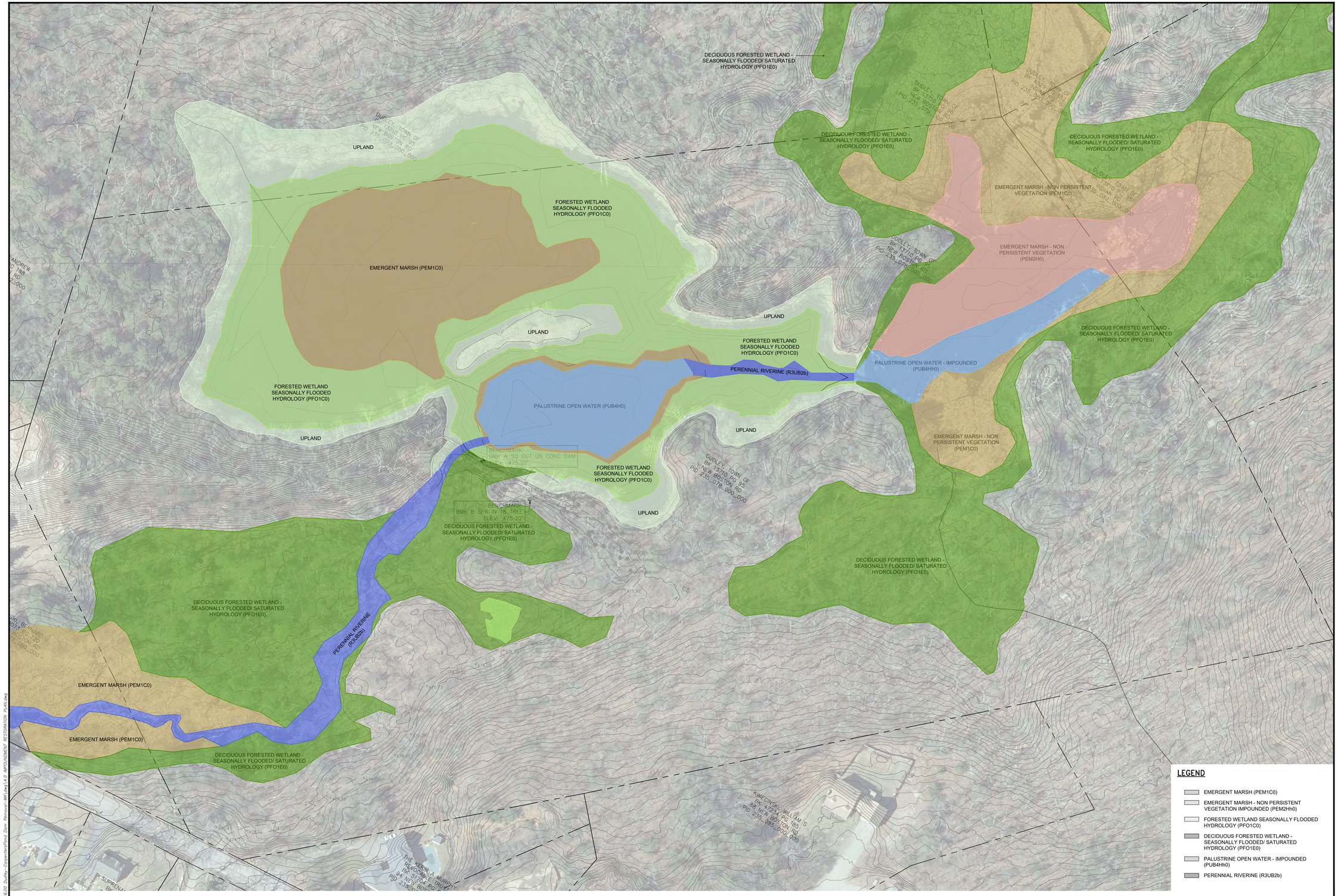
SITE ACCESS PLAN

DRAWING NO.:

3.1

SHEET NO. 6 OF 10

J:\22\22116.00 Dudley-CarpenterPond Dam Removal-MA\dwg\3.1 SITE ACCESS PLAN.dwg



© 2022 ALL INFORMATION THESE DOCUMENTS BY PARE CORPORATION

PARE

TOWN OF DUDLEY, MASSACHUSETTS INCORPORATED 1732

Executive Office of Energy and Environmental Affairs

THIS PROJECT IS FUNDED BY THE EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Carpenter Pond Dam Removal

MA00220

Dudley, Massachusetts

Town of Dudley, Massachusetts

COMMONWEALTH OF MASSACHUSETTS
ALLEN R. OLSEN
CIVIL
No. 46904
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

PROJECT NO.:	22116.00
DATE:	FEBRUARY 2024
SCALE:	AS NOTED
DESIGNED BY:	ARO
CHECKED BY:	ARO
DRAWN BY:	LMC
APPROVED BY:	ARO

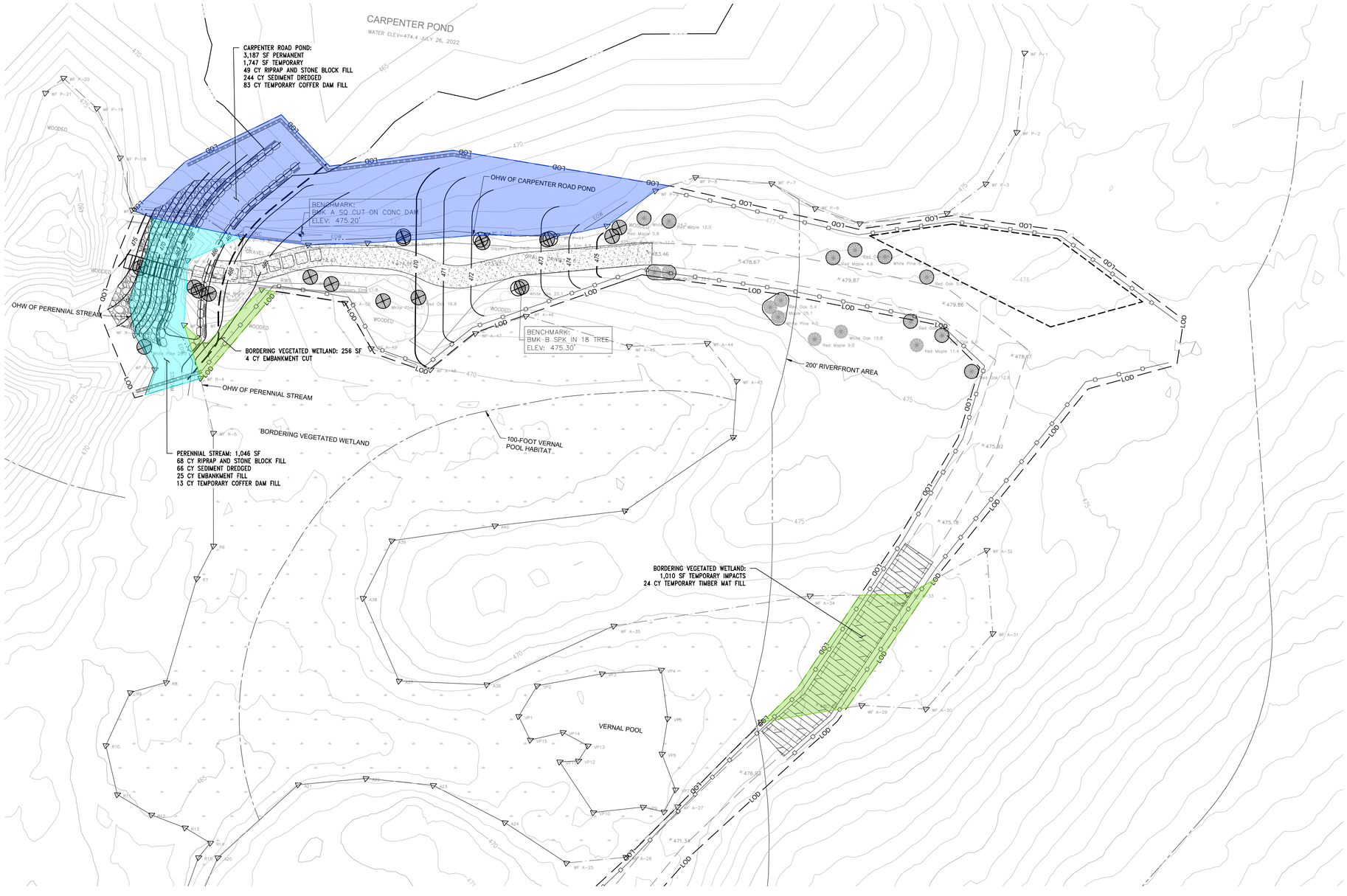
DRAWING TITLE:

IMPOUNDMENT RESTORATION PLAN

DRAWING NO.: 4.0

SHEET NO. 7 OF 10

J:\JOBS\22 Jobs\22116.00 Dudley - CarpenterPond Dam Removal\MA\dwg\4.0 IMPOUNDMENT RESTORATION PLAN.dwg



Scale: 1"=20'

0 10' 20' 40'

LEGEND

- BORDERING VEGETATIVE WETLAND IMPACTS
- PERENNIAL STREAM IMPACTS
- POND IMPACTS

PERMIT SUBMISSION
NOT FOR CONSTRUCTION

© 2022 ALL INFORMATION THESE DOCUMENTS BY PARE CORPORATION

PARE

TOWN OF DUDLEY, MASSACHUSETTS INCORPORATED 1732

Executive Office of Energy and Environmental Affairs

THIS PROJECT IS FUNDED BY THE EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Carpenter Pond Dam Removal

MA00220

Dudley, Massachusetts

Town of Dudley, Massachusetts

COMMONWEALTH OF MASSACHUSETTS
ALLEN R. CARLSON
No. 46804
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

PROJECT NO.:	22116.00
DATE:	FEBRUARY 2024
SCALE:	AS NOTED
DESIGNED BY:	ARO
CHECKED BY:	ARO
DRAWN BY:	LMC
APPROVED BY:	ARO

DRAWING TITLE:

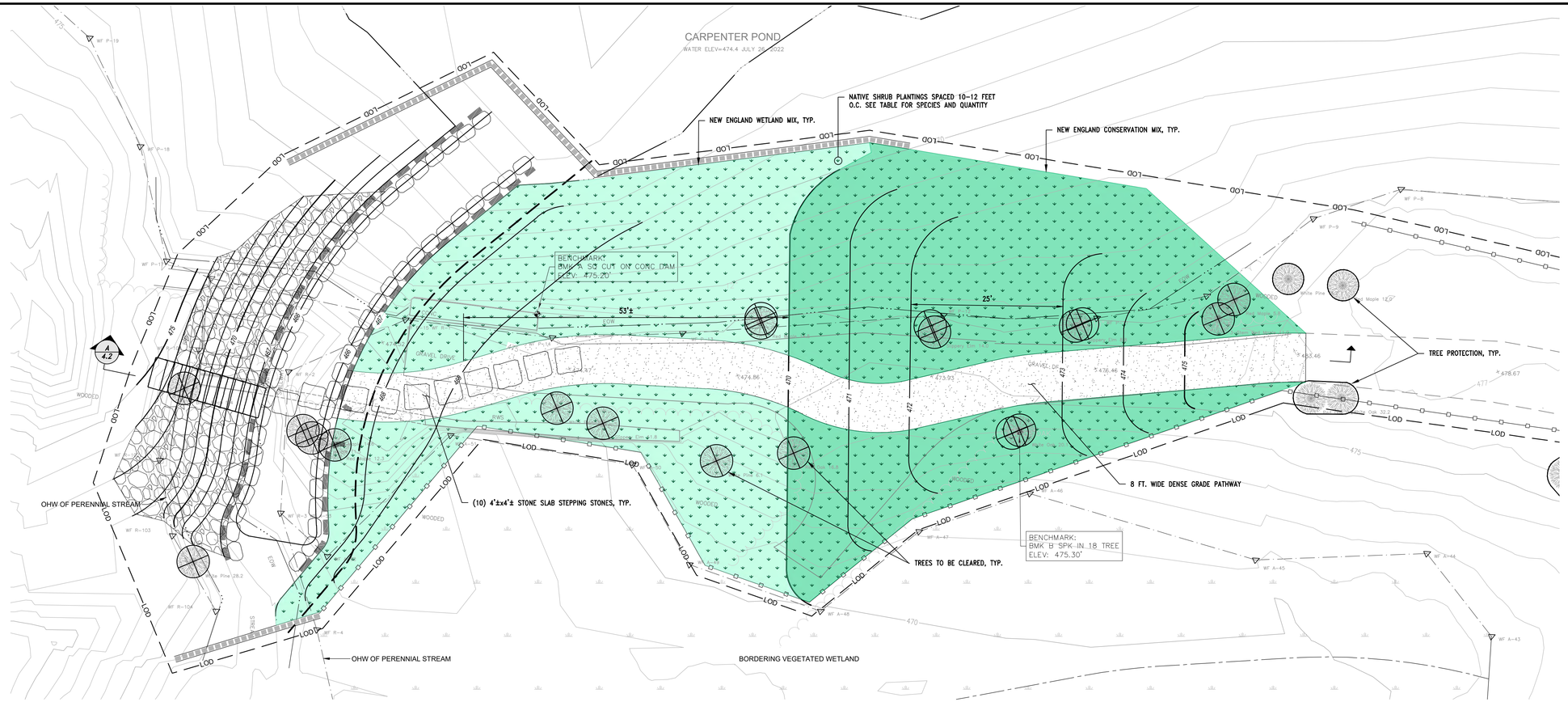
WETLAND IMPACT PLAN

DRAWING NO.:

4.1

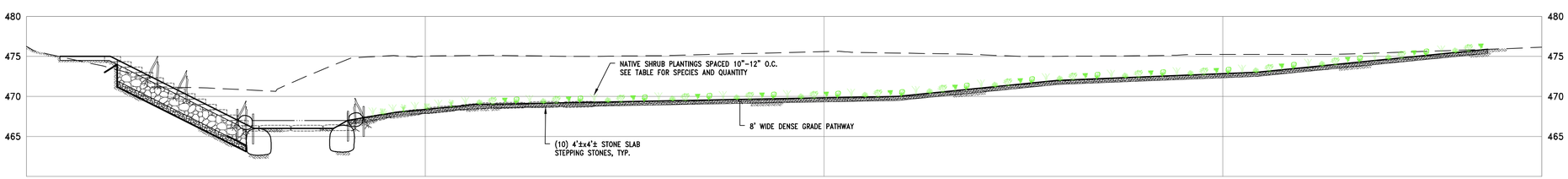
SHEET NO. 8 OF 10

X:\2021\22116.00 Dudley-CarpenterPond Dam Removal-MA\dwg\4.1 WETLAND IMPACT PLAN.dwg

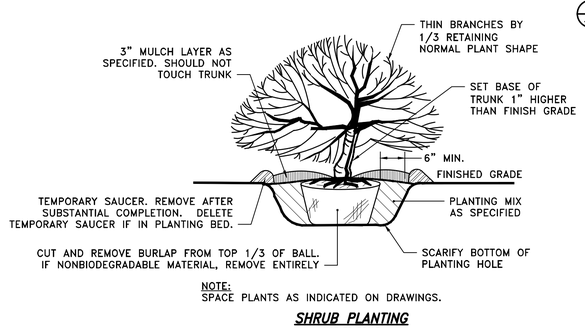


Scale: 1"=10'
0 5' 10' 20'

RESTORATION PLANTING PLAN
SCALE: 1"=10'±



Scale: 1"=8'
0 4' 8' 16'



NOTE:
SPACE PLANTS AS INDICATED ON DRAWINGS.

SHRUB PLANTING
NOT TO SCALE

SECTION A
A 4.2
SCALE: 1"=8'

NOTES

1. REMOVE DEBRIS FROM PLANTING AREAS.
2. SCARIFY SOILS PRIOR TO PLANTING TO AERATE AND LOOSEN COMPACTED SOILS.
3. THE RESTORATION AREA SHALL BE PLANTED WITH NATIVE PLANTINGS SPECIFIED IN THE PLANTING TABLE. SAPLINGS SHALL BE PLANTED AT AN AVERAGE OF 12' ON CENTER. SHRUBS SHALL BE PLANTED AT AN AVERAGE OF 10-12' ON CENTER TO MIMIC NATURAL SURROUNDINGS.
4. A NEW ENGLAND WETLAND SEED MIX SHALL BE APPLIED TO BVW AREAS. A NEW ENGLAND CONSERVATION/WILDLIFE MIX SHALL BE APPLIED TO UPLAND AREAS.

SPECIES	QUANTITY	SIZE	SPACING
ACER RUBRUM	25	2 GALLON	10-12' O.C.
CLETHRA ALNIFOLIA	25	1 GALLON	10'-12' O.C.
LINDERA BENZOIN	25	1 GALLON	10'-12' O.C.
VACCINIUM CORYMBOSUM	25	1 GALLON	10'-12' O.C.
SALIX SPP. TUBELINGS	50	PLUGS	10'-12' O.C.
LIVE STAKES (SALIX SP.)	300	VARIABLE	0.5' O.C.
WETLAND SEED MIX*	2 LBS.	3,000 S.F	THROUGHOUT
CONSERVATION WILDLIFE MIX**	2 LBS.	3,200 S.F.	THROUGHOUT

* NEW ENGLAND WETLAND PLANTS WETMIX OR APPROVED EQUIVALENT.
** NEW ENGLAND WETLAND PLANTS CONSERVATION WILDLIFE MIX OR APPROVED EQUIVALENT.

PERMIT SUBMISSION
NOT FOR CONSTRUCTION

© 2022 ALL INFORMATION THESE DOCUMENTS BY PARE CORPORATION

PARE

TOWN OF DUDLEY, MASSACHUSETTS INCORPORATED 1732

Executive Office of Energy and Environmental Affairs

THIS PROJECT IS FUNDED BY THE EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Carpenter Pond Dam Removal
MA00220
Dudley, Massachusetts
Town of Dudley, Massachusetts

COMMONWEALTH OF MASSACHUSETTS
ALLEN K. CHI
Civil
No. 46904
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

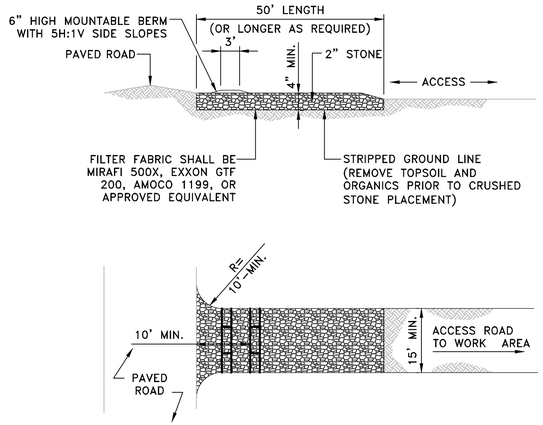
PROJECT NO.:	22116.00
DATE:	FEBRUARY 2024
SCALE:	AS NOTED
DESIGNED BY:	ARO
CHECKED BY:	ARO
DRAWN BY:	LMC
APPROVED BY:	ARO

DRAWING TITLE:
RESTORATION PLANTING PLAN

DRAWING NO.:
4.2

SHEET NO. 9 OF 10

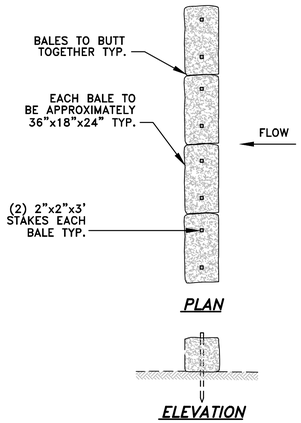
P:\22116\22116.00 Dudley--Carpenter\Pond Dam Removal-MA\dwg\4.2 RESTORATION PLANTING PLAN.dwg



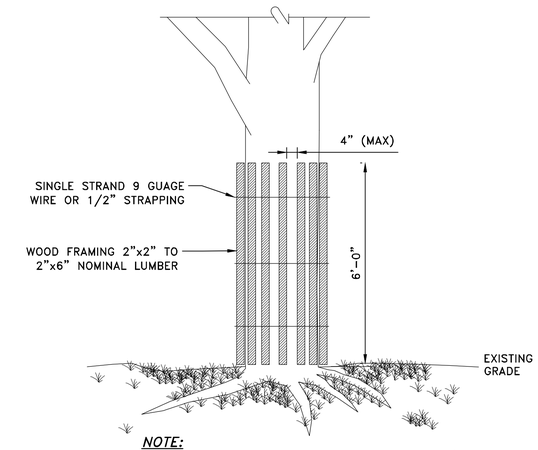
NOTES:

1. THE PURPOSE OF A STABILIZED CONSTRUCTION ENTRANCE IS TO REDUCE THE TRACKING OR FLOWING OF SEDIMENT ONTO LOCAL STREETS.
2. BEFORE INSTALLATION, THE AREA OF THE ENTRANCE SHOULD BE CLEARED OF ALL VEGETATION, ROOTS, PAVEMENT AND OTHER OBJECTIONABLE MATERIAL TO THE DIMENSIONS SHOWN.
3. PLACE EITHER A WOVEN OR NONWOVEN CONSTRUCTION FABRIC ON SUB GRADE PRIOR TO GRAVEL PLACEMENT.
4. THE ENTRANCE SHOULD BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO THE STREET. THIS WILL REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE OR ADDITIONAL LENGTH AS CONDITIONS DEMAND.

STABILIZED CONSTRUCTION ACCESS
NOT TO SCALE

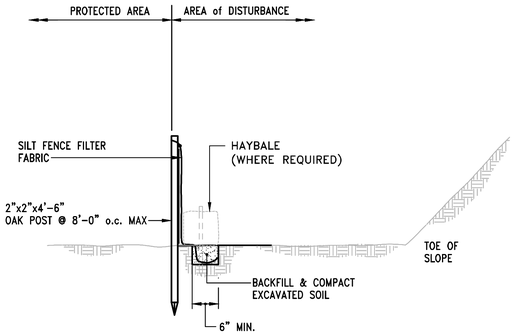


STRAW BALE DETAIL
NOT TO SCALE



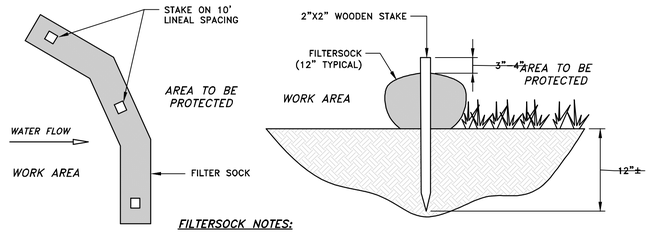
NOTE:
THIS DETAIL SHALL BE USED TO PROTECT THE TREE'S TRUNK IN SITUATIONS WHERE CONSTRUCTION IS IN CLOSE PROXIMITY.

TREE PROTECTION DEVICE
NOT TO SCALE



NOTE:
SILT FENCE FABRIC SHALL NOT BE SLIT. STRAW BALE POST SHALL BE DRIVEN THROUGH SILT FENCE FABRIC.

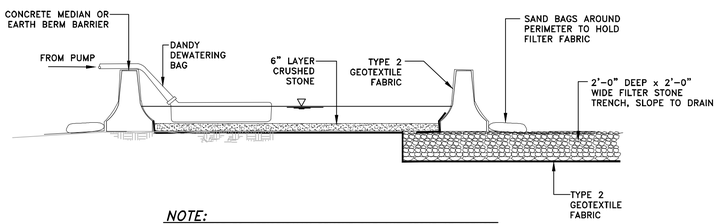
SILT FENCE DETAIL
NOT TO SCALE



FILTERSOCK NOTES:

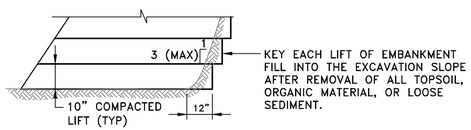
1. COMPOST / SOIL / ROCK / SEED FILL TO MEET APPLICATION REQUIREMENTS.
2. COMPOST MATERIAL TO BE REMOVED OR DISPERSED ON SITE AS DETERMINED BY ENGINEER.

FILTERSOCK DETAIL
NOT TO SCALE



NOTE:
CONTRACTOR TO PERIODICALLY REMOVE SILT AND STONE AT TRENCH DRAIN TO PROMOTE FLOW OF WATER FROM BASIN. ALTERNATIVELY AN OUTFLOW WEIR MAY BE SUBMITTED FOR APPROVAL.

FILTER FABRIC DEWATERING BASIN
NOT TO SCALE



PLACEMENT OF EMBANKMENT MATERIALS
NOT TO SCALE

PERMIT SUBMISSION
NOT FOR CONSTRUCTION

© 2022 ALL INFORMATION THESE DOCUMENTS BY PARE CORPORATION

PARE

TOWN OF DUDLEY, MASSACHUSETTS INCORPORATED 1732

Executive Office of Energy and Environmental Affairs

THIS PROJECT IS FUNDED BY THE EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Carpenter Pond Dam Removal

MA00220

Dudley, Massachusetts

Town of Dudley, Massachusetts

COMMONWEALTH OF MASSACHUSETTS
ALLEN R. OSGOOD
CIVIL
No. 46904
REGISTERED PROFESSIONAL ENGINEER

REVISIONS:

PROJECT NO.:	22116.00
DATE:	FEBRUARY 2024
SCALE:	AS NOTED
DESIGNED BY:	ARO
CHECKED BY:	ARO
DRAWN BY:	LMC
APPROVED BY:	ARO

DRAWING TITLE:

MISCELLANEOUS DETAILS

DRAWING NO.:
5.0

SHEET NO. 10 OF 10

P:\22116.122 - MA\122116.00 Dudley-CarpenterPond Dam Removal-MA\dwg\5.0 MISCELLANEOUS DETAILS.dwg

US Army Corps of Engineers®
New England District

WORK-START NOTIFICATION FORM

(Minimum Notice: Two weeks before work begins)

****

EMAIL TO: Maninder.Singh@usace.army.mil and cenae-r@usace.army.mil; or

MAIL TO: Maninder Singh
Regulatory Division
U.S. Army Corps of Engineers, New England District
696 Virginia Road
Concord, Massachusetts 01742-2751

Also, if the work is in the Massachusetts Coastal Zone (https://www.mass.gov/service-details/czm-regions-coastal-communities-and-coastal-zone-boundary), email this form to Sean.Duffey@mass.gov and patrice.bordonaro@mass.gov or mail it to: The Massachusetts Office of Coastal Zone Management, Project Review Coordinator, Suite 800, 251 Causeway Street, Boston, MA 02114.

****

Corps of Engineers Permit No. **NAE-2024-00689** was issued to **Jonathan Ruda**. This work is located in **Carpenter Pond Dam, New Boston Road, Dudley, Massachusetts 01571 at site coordinates 42.028590, -71.904308** and to permanently impact 6.4 acres of Carpenter Road Pond for the purposes of removing the Pond dam due to its poor structural integrity, to provide improved aquatic habitat connectivity, and to allow unrestricted movement of water and sediment. The dam is approximately 213 feet long and 8.2 feet tall. The impoundment created by the dam is approximately 6.4 acres. The dam removal is estimated to convert approximately 2 acres of the impoundment to upland while the remaining 4.4 acres is expected to either convert into wetlands or remain as the streambed. Approximately 314 cubic yards of sediment will be dredged out of the pond. Approximately 142 cubic yards of material will be reused on site to create ripraps along the bank that will occupy 4,233 square feet of area. Rest of the dredged material will be disposed of at an upland site. A temporary crossing made of construction mats will be established over wetlands to access the work site which will temporarily impact 1,644 square feet of area. Approximately 530 cubic yards of sediment is anticipated to mobilize on its own once the dam is removed. Dry conditions for the dam removal will be met with temporary cofferdams and streamflow will be diverted via a 24-inch diversion pipe during the construction phase.

The people (e.g., contractor) listed below will do the work, and they understand the permit's conditions and limitations.

PLEASE PRINT OR TYPE

Name of Person/Firm: _____

Business Address: _____

_____

_____

Phone & email: (___) _____ (___) _____ _____

Proposed Work Dates: **Start:** _____ **Finish:** _____

Permittee/Agent Signature: _____ **Date:** _____

Printed Name: _____ **Title:** _____

Date Permit Issued: _____ **Date Permit Expires:** _____

****

FOR USE BY THE CORPS OF ENGINEERS

PM: _____ **Submittals Required:** _____

Inspection Recommendation: _____

US Army Corps of Engineers®
New England District

COMPLIANCE CERTIFICATION FORM

(Minimum Notice: Permittee must sign and return notification within one month of the completion of work.)

Permit Number: NAE-2024-00689

Project Manager: Maninder Singh

Name of Permittee: Jonathan Ruda

Permit Issuance Date: August 7, 2024

Please sign this certification and return it to our office upon completion of the activity.

```
**********************************************************************
* E-MAIL TO: cenae-r-ma@usace.army.mil; & Maninder.singh@usace.army.mil *
*                                                                    *
*    MAIL TO: Massachusetts Section                                  *
*             Regulatory Division                                    *
*             U.S. Army Corps of Engineers, New England District     *
*             696 Virginia Road                                      *
*             Concord, MA  01742-2751                                *
**********************************************************************
```

Please note that your permitted activity is subject to a compliance inspection by an U.S. Army Corps of Engineers representative. If you fail to comply with this permit you are subject to permit suspension, modification, or revocation.

I hereby certify that the work authorized by the above referenced permit was completed in accordance with the terms and conditions of the above referenced permit, and any required mitigation was completed in accordance with the permit conditions.

_____ _____

Signature of Permittee Date

_____ _____

Printed Name Date of Work Completion

( ) _____ ( ) _____

Telephone Number Telephone Number

APPENDIX B – REFERENCE DOCUMENTS

June 26, 2023

Mr. William Scanlon
Town Planner
Town of Dudley
71 West Main Street
Dudley, MA 01571
planner@dudleyma.gov

Re: **Environmental Due Diligence Findings**
Carpenter Pond Dam Removal
Dudley, Massachusetts
Pare Project No.: 22116.00

Dear Mr. Scanlon:

In accordance with our proposal, Pare Corporation (Pare) has completed a due diligence review of the area surrounding Carpenter Pond to evaluate the likelihood that sediment in the pond has been contaminated by oil or hazardous materials, as defined in 310 CMR 40.0000. Specifically, the due diligence review consisted of identifying contaminated properties that, through groundwater or overland migration, currently or previously had the potential to impact sediment behind the dam. A query of potentially contaminated properties surrounding Carpenter Pond Dam (hereinafter, the "Dam") inclusive of the upgradient watershed area was obtained from Environmental Data Resources, Inc. (EDR) through a database search of reported releases within pre-defined search radii. EDR also provided Pare with historical city directories for the Site and nearby and abutting parcels, searched the Sanborn Fire Insurance Map Library collection for the Site, and provided aerial photographs of the Site and surrounding area. A copy of this documentation is enclosed for your use.

SITE EVALUATION

The area subject to this report (hereinafter, the "Site") consists of the limits of disturbance in association with the proposed Dam removal at Carpenter Pond. The Dam is located on a 26.5-acre parcel identified by the Town of Dudley Tax Assessor's Office as Lot 78 on Assessor's Map 235 and addressed on New Boston Road in Dudley, Massachusetts. Areas anticipated to be disturbed during the Dam removal include areas within the Dam impoundment, which includes the water bodies within the parcels identified as Assessor's Map 235, Lots 79, 80, and 82.

The parcel is currently owned by the Town of Dudley and consists of the majority of Carpenter Pond. The surrounding areas which are anticipated to be disturbed are also owned by the Town. Lot 78 is abutted by New Boston Road to the southeast, as well as addresses 88 and 94 New Boston Road to the east and 97 New Boston Road to the south. A former landfill to the north is also owned by the Town of Dudley (Assessor's Map 122 Lots 27 and 28).

HISTORICAL SITE USAGE

No structures have been located on the Site. The surrounding areas were likely utilized for agricultural purposes, as the abutting property is identified by the Massachusetts Cultural Resource Information System (MACRIS) as an 18th-century agricultural homestead. This homestead was owned by W. and E. Upman until 1898.

The Dam was originally constructed in the early 1900s to provide a makeup water supply for power generation at Packard Mills. Once the mills were shut down, the Dam was no longer maintained. The land was eventually donated by Mr. and Mrs. Hugh Crawford in 1991. The 26.5-acre parcel including Carpenter Pond which was a component of the 93.3-acre donation and was renamed Ardlock Acres. Ardlock Acres is currently protected by the Dudley Conservation Commission, aiming to preserve the natural habitat, water resources, and environmental system of the Site.

EDR provided Pare with historical records including aerial images, local street directories, and fire insurance maps dating back to the mid-1930s. Based on a compilation of these records, it appears that the area is approximately 1000' south of the Dam which was utilized for residential development along New Boston Road. Through information provided by EDR, it was determined that the Dudley Sanitary Landfill located to the north of the Site was operational in 1930. Phase I and II expansions were added to the landfill in 1979. The landfill became inactive in 1992 after the Phase I and II expansions were closed, while a Short-Term Phase III expansion was implemented by the Town. The landfill was later capped in February of 2001.

ENVIRONMENTAL RECORDS

EDR also provided a summary of environmental listings for properties within an approximate 1-mile radius of the subject Site. The complete list of environmental databases reviewed and the findings are presented in the attached Radius Report. Environmental databases are searched within a prescribed distance from the subject Site as set forth in the ASTM due diligence standard 1527-21. A total of twenty-six (26) listings within the spatial radius from the Site were identified by EDR. Based on the findings in the Radius Report, several properties within the search radius were further reviewed through the Massachusetts Department of Environmental Protection (MassDEP) Waste Site/Reportable Releases database. The information provided by EDR and the MassDEP online portal includes account numbers, addresses, notification dates, contaminant type, compliance status, Response Action Outcome (RAO) classification, and MassDEP reportable documents for known contaminated properties. The records reviewed are summarized below:

Property Location	**Landfill Release, 7 Indian Road**
Database Listings	Release Site (RTN 2-21744)
Distance	Approx. 500’ N of a tributary to Carpenter Pond, ~2,600-feet N of the Dam
Gradient	Topographically upgradient
Summary	• Quarterly groundwater monitoring was performed by Weston & Sampson at the landfill in 2021 pursuant to their current landfill closure plan with MassDEP. PFAS was recently identified in samples collected from the Town of Dudley drinking water supply and was specifically requested for analysis as a component of the post-closure monitoring program. • In October 2021, MassDEP determined that levels of PFAS and 1,4 dioxane at the landfill constituted a Condition of Substantial Release Mitigation (SRM) to downgradient private drinking water wells located approximately 500' from the landfill. • The Town and MassDEP were notified of the release and Weston & Sampson responded by implementing an Immediate Response Action (IRA). The IRA included notification to the 17 property owners within a 500' radius of the landfill, as well as a sampling of private drinking water wells. • Levels of PFAS were detected above Massachusetts Contingency Plan (MCP) Method 1 GW-1 Cleanup Standards at the following residences on Eagle Drive during the most recent monitoring round (October 2022): 41, 42, 44, 48, 50, 52, 54, 56, 62, and 63. There has also been a history of PFAS levels above GW-1 Cleanup Standards at 58, 60, and 72 Eagle Drive. • Levels of 1,4-Dioxane were detected above MCP Method 1 GW-1 Cleanup Standards at the following residences on Eagle Drive during the most recent monitoring round (October 2022): 63 Eagle Drive. • In addition to collecting samples from private drinking wells, Weston & Sampson and the Town have provided bottled water services to any residence where PFAS and/or 1,4 Dioxane concentrations have been detected above GW-1 Standards. • A Point of Entry Treatment (POET) System has been implemented at 63 Eagle Drive and has been shown to reduce PFAS and 1,4 Dioxane concentrations to below GW-1 Standards.
Property Location	**Gentex Optics, 183 West Main Street**
Database Listings	Release Site (RTN 2-10514)
Distance	Approx. 400’ N of a tributary to Carpenter Pond, ~3,700-feet N of the Dam
Gradient	Topographically upgradient

Summary	• In October 1994, Gentex Optics had a release of ethylene glycol from a chiller unit that was installed on the roof of the main building. A contractor broke the sampling valve on the unit, releasing approximately 100 gallons of 40% glycol and 60% water solution onto the rooftop. The mixture eventually flowed into a catch basin and drainage swale on site from nearby roof drains. • Gentex was able to collect any mixture that was collected on the roof and/or clogging the roof drains. Clean Harbors, Inc. was retained to pump out any material that had been collected in the catch basin and adjacent drainage swale. • This release is not likely to affect the Site. A permanent solution was achieved that reduced contamination to that of background levels.
Property Location	**Former Tri-State Subaru, 191 West Main Street**
Database Listings	Release Site (RTN 2-11944), Release Site (RTN 2-12155)
Distance	Approx. 1500' NE of a tributary to Carpenter Pond, ~4,700-feet NE of the Dam
Gradient	Topographically upgradient
Summary	• In October 1997, the release was reported to MassDEP when contaminated soil was encountered during the removal of a 3,000-gallon UST that was utilized for the storage of No. 2 fuel oil. • Approximately 30 cubic yards of contaminated soil was removed as a component of the IRA submitted by Environmental Science Services (ESS) in December 1997. Testing of the surrounding soil and groundwater yielded contaminant concentrations below MCP Method 1 GW-1 Standards. • This release is not likely to affect the Site. A permanent solution was achieved that reduced contamination onsite but not to that of background levels. • A similar release was reported in February of 1998 related to the spill of hydraulic fluid from one (1) of the twelve (12) existing lifts. • MicroSorb Biocatalyst, Super concentrate microbes, and nutrients were injected into wells surrounding the lift that were drilled to promote bioremediation of the hydraulic fluid. Testing of the surrounding soil and groundwater yielded contaminant concentrations below MCP Method 1 GW-1 Standards. • This release is not likely to affect the Site. A permanent solution was achieved that reduced contamination onsite but not to that of background levels.
Property Location	**Cumberland Farms, 186 West Main Street**
Database Listings	Historical Release (RTN 2-10758), Open Release (RTN 2-18362), Open Release (RTN 2-18365) Release Site (RTN 2-18354), Sudden Release (RTN 2-19076)
Distance	Approx. 1800' NE of a tributary to Carpenter Pond, ~5,000-feet NE of the Dam
Gradient	Topographically upgradient

Summary	• In May 1995, the historical release was reported to MassDEP when a gasoline inventory discrepancy of 370 gallons was reported. The crash valve on a gasoline dispenser was found with a leak present. In November 1997, a RAM activity was implemented to remove 775 tons of soil and 6,700 gallons of potentially impacted groundwater. • This release is not likely to affect the Site. A permanent solution was achieved that reduced contamination onsite but not to that of background levels. • In October 2011, three (3) 8,000-gallon USTs were removed and relocated onsite. During tank removals, soil screening revealed headspace readings above 100 ppm. The open release was classified by MassDEP, and an IRA was implemented to remove and excavate the soil and groundwater surrounding the USTs. The IRA completion report has not been submitted to MassDEP. • This release is not likely to affect the Site. A permanent solution was achieved that reduced contamination onsite but not to that of background levels. • In October 2011, a UST containing No. 2 heating oil was removed onsite. During tank removal, soil screening revealed headspace readings above 100 ppm. The open release was classified by MassDEP, and an IRA was implemented to remove and excavate the soil and groundwater surrounding the USTs. The IRA completion report was submitted to MassDEP in December 2011. • This release is not likely to affect the Site. A permanent solution was achieved that reduced contamination onsite but not to that of background levels. • Soil borings conducted in August 2011 yielded Arsenic and VOC concentrations in excess of MCP Method 1 GW-1 Standards. These concentrations were consistent with findings from RTN 2-10758 (see above), so no MCP reportable condition was necessary. A RAM plan was implemented in October 2011 to excavate impacted soils and groundwater. Approximately 6,000 gallons of groundwater and 500 cubic yards of soil were extracted. Test pits and additional excavation were performed until January 2012 to confirm laboratory analytical results. Post-excavation soil sampling indicated that arsenic was not detected at concentrations that exceeded MCP Method 1 GW-1 Standards. • This release is not likely to affect the Site. A permanent solution was achieved that reduced contamination onsite but not to that of background levels. • In December 2013, a release occurred during a fuel delivery by P.S. Marston Associates. Recent rainfall and snow melt contributed to an increase in contaminated surface area. TMC Environmental Services removed approximately 318 gallons of contaminated liquid from the Site pertaining to the UST mats and the concrete pump dispenser. No elevated PID readings were observed in surrounding catch basins and outfalls. • This release is not likely to affect the Site. A permanent solution was achieved that reduced contamination to that of background levels. • In January 2019, a release occurred when a passenger overfilled their vehicle. Eighteen (18) gallons of gasoline were released onto the concrete and pavement with some flowing into a nearby catch basin. As a component of the IRA, catch basins were screened for Total Organic Vapors (TOV), and any liquids/solids from the catch basins were removed to reduce TOV concentrations. Results of the IRA yielded a No Significant Risk (NSR) to human health or the environment.

Property Location	**Apartments, 9 Nelco Avenue**
Database Listings	Release Site (RTN 2-12842)
Distance	Approx. 2,000' N of a tributary to Carpenter Pond, ~5,200-feet N of the Dam
Gradient	Topographically upgradient
Summary	• In June 1999, a resident reported a heating oil spill in the basement of the apartment complex located at 9 Nelco Avenue. Approximately 15 to 20 gallons of heating oil were released in the basement and the exterior ground surface. Approximately 10 cubic yards of material were excavated around the heating tank and the basement sump pump. Laboratory analysis yielded values below method detection limits for VPH and EPH fractions. • This release is not likely to affect the Site. A permanent solution was achieved that reduced contamination, on site but not to that of background levels.
Property Location	**Gas Service Station, 251 West Main Street**
Database Listings	Release Site (RTN 2-19053)
Distance	Approx. 2,600' NW of a tributary to Carpenter Pond, ~5,200-feet NW of the Dam
Gradient	Topographically upgradient
Summary	• Prior to Patriot Gas owning the property, Drake Petroleum Company Inc. was responsible for the release of oil in July 1992. A total of 500 cubic yards were removed from the Site when six (6) USTs were removed in November 1991. TPH and VOC concentrations were detected below applicable MCP Method 1 GW-2 Standards. • Additional RAMs were conducted from April 2004 to November 2005, in conjunction with three (3) releases related to PCB and lead contamination, as well as the removal of a Class V Shallow Injection Well (UIC). • Post-excavation samples indicate that no VOCs, VPH, or PCBs were detected above Method 1 standards. EPH fractions were found to be above the GW-2 Standard in two (2) monitoring wells after excavation was completed. • The RAM Completion Report specifies that 264.5 tons of material were removed in November 2005 (gasoline contamination), 117 tons of PCB-contaminated soil were removed in October 2005, and six (6) 55-gallon drums of sludge were removed from the UIC. • Corporate Environmental Advisors (CEA) classified the Site as a condition of No Significant Risk (NSR) to human health and the environment has been achieved at the Site following the abatement measures. • In November 2013, while excavating for upgrades to the existing UST system on site, samples were collected for Total Organic Vapors (TOV) between the two (2) existing 500-gallon USTs. 700 cubic yards of material were removed from the Site through IRA approval submitted to MassDEP. Quarterly Groundwater Monitoring has been established at the Site, and no (0) parameters have been reported above RCGW-2 concentrations. • This release is not likely to affect the Site. A permanent solution was achieved with no conditions at Patriot Gas.

FINDINGS OF ENVIRONMENTAL REVIEW

Based on our review of the EDR Radius Map Report, the historical data provided by EDR, and our review of the MassDEP Waste Site/Reportable Releases database, Pare identified potential migration of PFAS compounds and 1,4 Dioxane from the landfill upgradient of Carpenter Pond. Surface water bodies border the landfill to the south and west, which transports runoff from the landfill downstream to Carpenter Pond. Additionally, multiple instances of oil releases occurred within a 1-mile radius of the Site. The Cumberland Farms located at the intersection of West Main Road and Airport Road is most likely to contribute gasoline-contaminated groundwater to downgradient receptors.

Sediment sampling locations were selected based on the findings of the environmental due diligence review and the proposed limits of work associated with the Dam removal in order to adequately characterize the potential impacts of the proposed project, including proposed channels within the Dam impoundment and exposed upland disposal of sediment.

SEDIMENT CHARACTERIZATION

On November 7, 2022, Pare personnel collected three (3) core samples (IMP-1 through IMP-3) of sediment from within the impoundment and one (1) core sample (DS-CPD) from a downstream area for chemical and physical analysis. Core locations were selected to provide generally uniform spatial distribution upstream and downstream of the impoundment. The location of IMP-1, 300' northeast of the primary spillway was selected to evaluate the potential stream channel that would form within the impoundment after the Dam is removed. IMP-2 is located 30' to the north of the primary spillway and is a potential dredging location for accumulating sediment. IMP-3 was selected for a similar evaluation to IMP-1, 600' east of the primary spillway. This potential future channel will serve to transport surface water from upgradient water bodies. DS-CPD was selected to compare downstream sediment to the sediment behind the impoundment. On March 21, 2023, Pare returned to the Site to collect (1) additional core sample within the IMP-2 sample location, behind the primary spillway.

Each sample was collected in laboratory-provided glassware and transported with chain-of-custody documentation to Eurofins Testing Laboratory in North Kingstown, Rhode Island for chemical and physical analysis. In accordance with 314 CMR 9.07(2), the samples (IMP-1, IMP-2, and IMP-3) were analyzed for the following parameters:

- Metals (arsenic, cadmium, chromium, copper, lead, mercury, nickel, and zinc);
- Polychlorinated Biphenyls (PCBs);
- Polynuclear Aromatic Hydrocarbons (PAHs);
- Percent Water;
- Grain Size Analysis - #4 to #200 sieve (ASTM D422);
- Volatile Organic Compounds (VOCs); and
- Total Organic Carbon (TOC).

The samples were further analyzed for the following parameter(s) in accordance with the Massachusetts Division of Ecological Restoration's sediment quality spreadsheet that is structured to provide comparisons useful during 401 Water Quality Certification:

- Extractable Petroleum Hydrocarbons (EPH) – MAEPH2.1

The additional core sample collected (IMP-2 PFAS) was collected in laboratory-provided glassware and transported with Chain-of-Custody documentation to Alpha Analytical in Mansfield, Massachusetts for chemical and physical analysis. In accordance with the environmental due diligence performed by Pare, the samples were analyzed for the following parameters:

- PFAAS via LC/MS/MS;
- Low-Level 1,4-Dioxane; and
- Total Solids.

Eurofins Testing Laboratory provided chemical and physical analytical results on December 20, 2022, which are summarized in the attached Analytical Data Summary Table (see Appendix E). Laboratory Certificates of Analysis and Chain-of-Custody documentation are provided in Appendix F.

A sieve analysis was performed on the (4) four sediment samples (see Appendix F). The results of the sieve analysis indicate that IMP-1 consisted of dark brown fine-grained sand with gravel, IMP-2 and IMP-3 as dark brown fine-grained sand with fines, while DS-CPD consisted of brown to dark brown poorly graded sand with gravel. The silt content (i.e., particles passing the #200 sieve) for IMP-1 was 9.7%, IMP-2 was 47.6%, IMP-3 was 56.0%, and DS-CPD was 3.6%. The MassDEP guidance document entitled *Dam Removal and Wetland Regulations*[1] indicates the following with respect to fine-grained sediments:

> *"Fine-grained sediments (i.e., those passing the #200 sieve) have a higher potential for having chemical contaminant adsorption. Fine-grained sediments, whether or not contaminated, are also more likely to be transported as the river sediment load to distant points downstream and ultimately to the ocean."*

Therefore, samples with high percentages of fines (i.e., greater than 10% according to the MassDEP Dam Removal Guidance document) pose a higher risk of mobilizing and distributing potentially contaminated sediment downstream during the construction process. Based on the results of the sieve analysis, there is a moderate potential that sediment located behind the Dam could remobilize during construction and be redistributed downstream.

Pare compared the analytical results to (2) two potentially applicable screening criteria, as shown in Appendix E. These two sediment screening criteria cover (2) two potential jurisdictional conditions that could arise from the removal of sediment from the pond. Should the sediment be disturbed and carried downstream and naturally redistributed, the sediment would be jurisdictional under the MassDEP 401 Water Quality Regulations. Therefore, the analytical results were compared to Threshold Effects Concentration (TEC) criteria and Probable Effects Concentration (PEC) criteria as described in the

[1] Dam Removal and Wetland Regulations, March 2007, MassDEP Bureau of Resource Protection, Wetlands/Waterways Program.

MassDEP Revised Sediment Screening Values, Interim Technical Update.[2] In areas where the sediment may become exposed, such as stockpiling of the material and/or upland reuse of the material, the sediment would be jurisdictional under the Massachusetts Contingency Plan (MCP) set forth in 310 CMR 40.0000. Therefore, the concentrations of contaminants in the sediment samples were compared to the MCP Method 1 S-1/GW-1 cleanup standards.

The analytical results from the samples indicate that sediments both upstream and downstream of the impoundment are impacted by metals, polycyclic aromatic hydrocarbons (PAHs), volatile organic compounds (VOCs), and extractable petroleum hydrocarbon (EPH) fractions. All samples were compared to their respective TEC and PEC values in addition to the MCP S1/GW-1 standard.

- IMP-1 – Two (2) metals were reported above the laboratory detection limit: chromium and lead. Both metals were reported at concentrations below their respective TEC and PEC, as well as the MCP S-1/GW-1 standard. One (1) EPH fraction, C19-C36 aliphatic hydrocarbons (20.3 mg/kg), was detected in excess of the TEC, but below the PEC and MCP S-1/GW-1 standard.

- IMP-2 – Two (2) metals were reported above the laboratory detection limit: lead and zinc. Lead (62.1 mg/kg) was reported above its TEC (35.80 mg/kg) but below its PEC and MCP S-1/GW-1 standard. Zinc was reported below its respective TEC, PEC, and MCP S-1/GW-1 standard. The compound 2-Butanone (MEK), a known lab contaminant, was detected in the IMP-2 sample. One (1) EPH fraction, C19-C36 aliphatic hydrocarbons (78.9 mg/kg), was detected in excess of the TEC, but below its PEC and MCP S-1/GW-1 standard. The concentration observed in IMP-2 was the highest of the four collected samples.

- IMP-3 – Five (5) metals were reported above the laboratory detection limit: arsenic, chromium, lead, mercury, and zinc. Arsenic (15.1 mg/kg) was reported to be above its TEC (9.79 mg/kg) but below its respective PEC and MCP S-1/GW-1 standard. The remaining metals were reported to be below their respective TEC, PEC, and MCP S-1/GW-1 standard. One (1) EPH fraction, C19-C36 aliphatic hydrocarbons (23.3 mg/kg) was detected in excess of the TEC but below the PEC and MCP S-1/GW-1 standard.

- DS-CPD – Five (5) metals were reported above the laboratory detection limit: arsenic, chromium, lead, nickel, and zinc. Arsenic (17.0 mg/kg) was reported to be above its TEC (9.79 mg/kg) but below its PEC and MCP S-1/GW-1 standard. The remaining metals were reported to be below their respective TEC, PEC, and MCP S-1/GW-1 standard. One (1) low-level PAH, fluoranthene, was detected above the laboratory limit but was well below the TEC concentration. The compound 2-Butanone (MEK), a known lab contaminant, was detected in the DS-CPD sample. Two (2) EPH fractions, C19-C36 aliphatic hydrocarbons (23.3 mg/kg) and C11-C22 aromatic hydrocarbons (11.3 mg/kg) were detected in excess of their respective TEC, but below their PEC and MCP S-1/GW-1 standard.

- No PCBs were detected above laboratory reporting limits in any of the four (4) samples.

[2] "*Revised Sediment Screening Values – Update to: Section 9 of Guidance for Disposal Site Risk Characterization – In Support of the Massachusetts Contingency Plan (199*6)," dated January 2006.

Alpha Analytical has developed a procedure to evaluate 41 PFAS compounds within soil and/or sediment samples. Similar to EPA Method 533, the laboratory utilizes isotope dilution through liquid chromatography-tandem mass spectrometry (LC/MS/MS) with solid phase extraction (SPE). Alpha Analytical provided chemical and physical analytical results on April 11, 2023, which are summarized in the attached Analytical Data Summary Table (see Appendix E). Laboratory Certificates of Analysis and Chain-of-Custody documentation are provided in Appendix F.

The analytical results from the core sample indicate that the sediment upstream of the impoundment is impacted by PFAS compounds. The samples were compared to the MCP S-1/GW-1 Standard. The MCP specifies that the MassDEP soil standards apply to both the compounds listed in 310 CMR 40, which are identified as acid forms of PFAS compounds, as well as their anionic derivatives and salts. No TEC or PEC has been established for PFAS compounds within soil/sediment samples.

- IMP-2 (PFAS) - One (1) PFAS compound was reported above the laboratory detection limit: Perfluorooctanesulfonic Acid (PFOS). This compound was reported at 1,150 ng/kg, which is below its respective MCP S-1/GW-1 Standard. The remaining PFAS compounds were reported below laboratory detection limits. Low-level 1,4-Dioxane was not detected above the laboratory detection limit.

CONCLUSION

Based upon the results of the environmental due diligence review and sediment characterization, it is unlikely that the proposed work at the Carpenter Pond Dam will have a significant effect on downstream sediments due to environmental impacts observed both upstream and downstream. No PAH compounds were detected in upstream or downstream sediments above their respective TECs and/or PECs. The concentrations of metals in both upstream and downstream samples were relatively consistent, with only minor exceedances of the TEC. In general, metal concentrations above the TEC but below the PEC are considered background conditions due to the long history of anthropogenic human activities in the northeast. EPH fraction C19-C36 aliphatic hydrocarbons were detected in all sediment samples, though a slightly elevated concentration was noted in the upstream sample IMP-2, compared to the downstream sample.

In-stream management of sediments may be a viable option for this project given the relatively clean nature of the impounded sediment. However, the total volume of sediment could have an adverse impact on sensitive downgradient receptors if the sediment is released too quickly or if excessive turbidity occurs downstream for an extended amount of time. If the removal and reuse of sediment are proposed, the concentrations of contaminants present in sediment should be compared to the receiving site to ensure that the receiving site would not be adversely impacted by this sediment. This may preclude the use of this sediment in residential or recreational areas, as the sediment could potentially contain contaminants that do not currently exist in the residential or recreational area. Reuse of this sediment may be limited to industrial or commercial areas already impacted to a slight degree by petroleum and metals.

Currently, no standardized analytical methods have been established related to evaluating PFAS compounds in non-drinking water sample media, specifically sediment. Of the PFAS compounds that were analyzed by the laboratory, only one (1), PFOS (1,150 ng/kg) was detected above laboratory detection limits. The presence of one compound at this concentration should not have a significant impact on the Dam removal

project. However, based on the environmental due diligence review, Pare believes that the landfill is leaching PFAS into the surrounding environment. While low concentrations were observed in the sediment sample collected, more PFAS compounds could be present in the environment surrounding the landfill.

We trust that this Letter Report and attachments provide sufficient information to assist the Town in advancing the design and permitting of the removal of the Carpenter Pond Dam. If you have any questions or concerns, please do not hesitate to contact me at your convenience at (401) 334-4100.

Sincerely,

Timothy P. Thies, P.E.
Senior Vice President

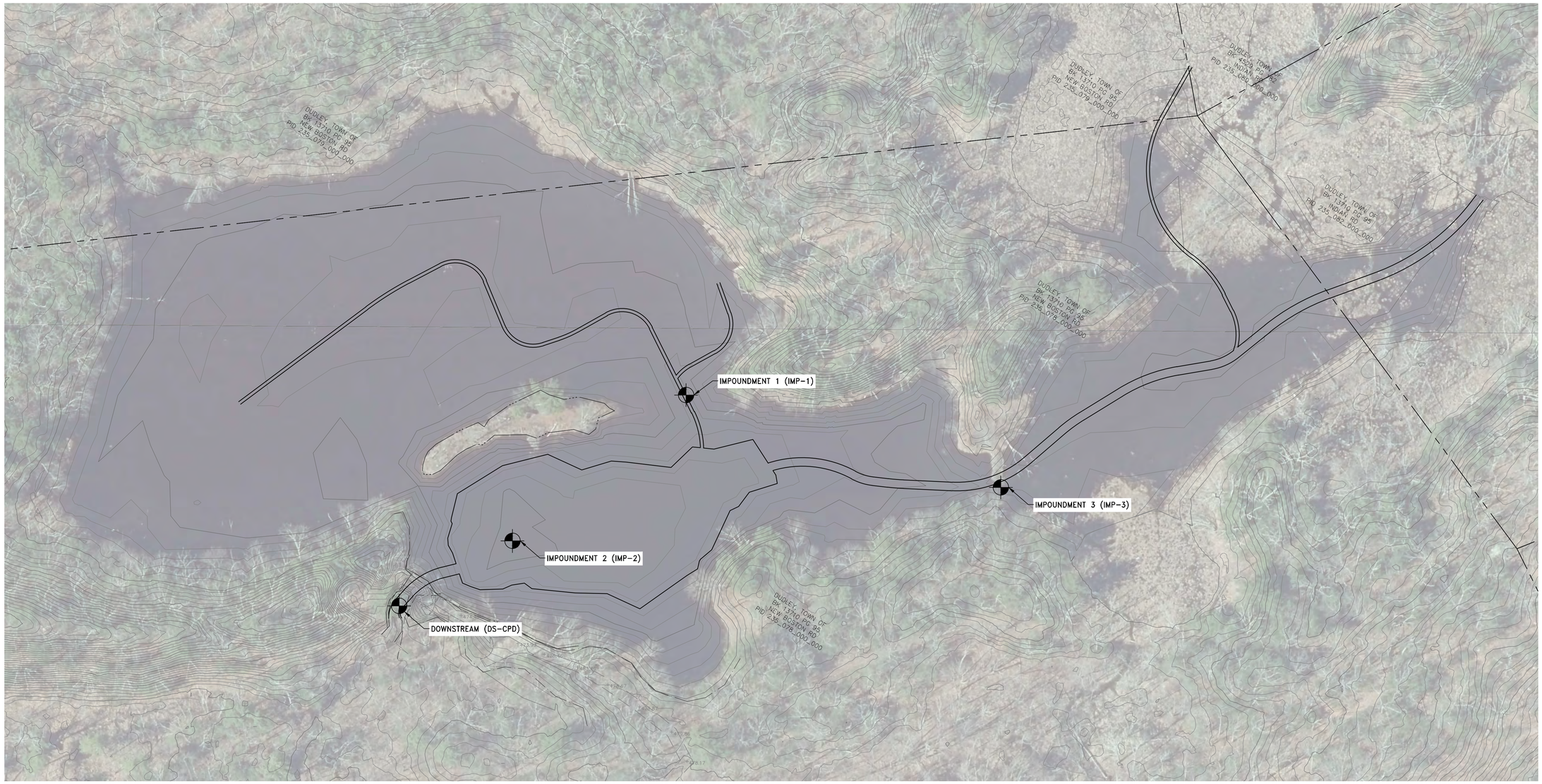
TPT/MDD/kji

Enclosures
- Appendix A – Sediment Survey Plan
- Appendix B – EDR Radius Map Report
- Appendix C – EDR Sanborn Fire Insurance Map Report
- Appendix D – EDR Historical Aerial Photography Report
- Appendix E – Carpenter Pond Sediment Results Table
- Appendix F – Laboratory Certificates of Analysis & Chain-of-Custody Documentation

cc: Allen R. Orsi, P.E. – Pare Corporation
Matthew DaSilva – Pare Corporation

APPENDIX A

Sediment Survey Plan



Scale: 1"=50'

0 25' 50' 100'

© 2022 ALL INFORMATION THESE DOCUMENTS BY PARE CORPORATION

PARE

TOWN OF DUDLEY, MASSACHUSETTS INCORPORATED 1732

Executive Office of Energy and Environmental Affairs

THIS PROJECT IS FUNDED BY THE EXECUTIVE OFFICE OF ENERGY AND ENVIRONMENTAL AFFAIRS

SCALE ADJUSTMENT GUIDE

0" 1"

BAR IS ONE INCH ON ORIGINAL DRAWING

Carpenter Pond Dam Removal

MA00220

Dudley, Massachusetts

Town of Dudley, Massachusetts

REVISIONS:

PROJECT NO.:	22116.00
DATE:	FEBRUARY 2023
SCALE:	AS NOTED
DESIGNED BY:	TPT
CHECKED BY:	TPT
DRAWN BY:	MDD
APPROVED BY:	TPT

DRAWING TITLE:

SAMPLING LOCATION PLAN

DRAWING NO.:

SHEET NO. 1 OF 1

P:\22116.00 Dudley-CarpenterPond Dam Removal-MA\dwg\SAMPLING LOCATION PLAN.dwg

APPENDIX B

EDR Radius Map Report

22116.00
97 New Boston Road
Dudley, MA 01571

Inquiry Number: 7213211.2s
December 28, 2022

The EDR Radius Map™ Report with GeoCheck®

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

TABLE OF CONTENTS

SECTION	PAGE
Executive Summary	ES1
Overview Map	2
Detail Map	3
Map Findings Summary	4
Map Findings	8
Orphan Summary	191
Government Records Searched/Data Currency Tracking	GR-1

GEOCHECK ADDENDUM

Physical Setting Source Addendum	A-1
Physical Setting Source Summary	A-2
Physical Setting SSURGO Soil Map	A-5
Physical Setting Source Map	A-14
Physical Setting Source Map Findings	A-16
Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. **NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA) INFORMATION PROVIDED IN THIS REPORT.** Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2022 by Environmental Data Resources, LLC. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, LLC, or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.

EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc (EDR). The report was designed to assist parties seeking to meet the search requirements of EPA's Standards and Practices for All Appropriate Inquiries (40 CFR Part 312), the ASTM Standard Practice for Environmental Site Assessments (E1527-21), the ASTM Standard Practice for Environmental Site Assessments for Forestland or Rural Property (E 2247-16), the ASTM Standard Practice for Limited Environmental Due Diligence: Transaction Screen Process (E 1528-14) or custom requirements developed for the evaluation of environmental risk associated with a parcel of real estate.

TARGET PROPERTY INFORMATION

ADDRESS

97 NEW BOSTON ROAD
DUDLEY, MA 01571

COORDINATES

Latitude (North):	42.0292800 - 42ˆ 1' 45.40''
Longitude (West):	71.9041450 - 71ˆ 54' 14.92''
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	259578.5
UTM Y (Meters):	4656895.0
Elevation:	480 ft. above sea level

USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property Map:	11743651 WEBSTER, MA
Version Date:	2018

AERIAL PHOTOGRAPHY IN THIS REPORT

Portions of Photo from:	20140712
Source:	USDA

MAPPED SITES SUMMARY

Target Property Address:
97 NEW BOSTON ROAD
DUDLEY, MA 01571

Click on Map ID to see full detail.

MAP ID	SITE NAME	ADDRESS	DATABASE ACRONYMS	RELATIVE ELEVATION	DIST (ft. & mi.) DIRECTION
1	DUDLEY LANDFILL	11 INDIAN RD	MA SWF/LF	Higher	964, 0.183, NW
2	DUDLEY TRANSFER STAT	7 INDIAN RD	MA SHWS, MA SWF/LF, MA RELEASE, MA HW GEN	Higher	1609, 0.305, NW
3	DUDLEY LANDFILL	INDIAN RD	MA SWF/LF	Higher	1657, 0.314, NW
4	GENTEX OPTICS INC	183 WEST MAIN ST	MA SHWS, MA RELEASE, MA AIRS, MA HW GEN, MA TIER 2	Higher	1692, 0.320, NNW
5	TRI ST SUBARU FMR	191 WEST MAIN ST	MA SHWS, MA LUST, MA RELEASE, MA HW GEN	Higher	1822, 0.345, NNW
A6	CUMBERLAND FARMS GAS	186 WEST MAIN STREET	MA SHWS, MA LUST, MA RELEASE	Higher	1999, 0.379, NNW
A7	CUMBERLAND FARMS #21	180 W MAIN ST	MA LUST, MA UST, MA RELEASE, MA ASBESTOS	Higher	1999, 0.379, NNW
8	APARTMENTS	9 NELCO AVE	MA SHWS, MA RELEASE	Higher	2037, 0.386, NW
B9	GASOLINE SERVICE STA	251 W.MAIN STREET	MA SHWS, MA LUST, MA RELEASE, MA SPILLS	Higher	2188, 0.414, WNW
B10	DRAKE PETROLEUM COMP	251 WEST MAIN ST	MA SHWS, MA LUST, MA RELEASE	Higher	2188, 0.414, WNW
C11	CUMBERLAND FARMS	180 W. MAIN ST	MA SHWS, MA RELEASE	Higher	2204, 0.417, NNW
C12	AIRPORT RD	180 WEST MAIN ST	MA SHWS, MA LUST, MA RELEASE	Higher	2204, 0.417, NNW
13	PARK AND SHOP	10 AIRPORT RD	MA SHWS, MA RELEASE	Higher	2340, 0.443, NNW
14	RK CONSTRUCTION	157 WEST MAIN ST	MA SHWS, MA RELEASE	Higher	2679, 0.507, North
D15	DUDLEY WATER DEPT	WEST MAIN ST	MA SHWS, MA RELEASE	Higher	2867, 0.543, North
D16	GUIDA SEIBERT DAIRY	WEST MAIN ST	MA SHWS, MA RELEASE	Higher	2873, 0.544, North
E17	STATE LUST 15715	138 WEST MAIN ST	MA SHWS, MA LUST, MA RELEASE, MA HW GEN	Higher	3130, 0.593, North
E18	CORNER MASON RD. & W	136 WEST MAIN STREET	MA SHWS, MA RELEASE	Higher	3189, 0.604, North
19	STEVENS LINEN ASSOC	SCHOFIELD AVE	MA SHWS, MA RELEASE	Lower	3537, 0.670, East
20	MASON ST TO PROGRESS	WEST MAIN ST	MA SHWS, MA RELEASE	Higher	3543, 0.671, North
21	DEARY BROTHERS FMR	104-110 WEST MAIN ST	MA SHWS, MA LUST, MA BROWNFIELDS, MA RELEASE, MA...	Higher	3857, 0.730, North
22	CONSTRUCTION LOT	144 SCHOFIELD AVE	MA SHWS, MA RELEASE, MA ASBESTOS	Lower	3881, 0.735, NE
F23	ROADWAY	120 SCHOLFIELD RD	MA SHWS, MA RELEASE	Lower	4478, 0.848, NE
F24	DUDLEY GP WELL NO.3	75 SCHOFIELD AVENUE	MA SHWS, MA RELEASE, MA ENF	Lower	4484, 0.849, NE
25	PETROLEUM SERVICE OF	38 BRANDON ROAD	MA SHWS, MA RELEASE	Higher	4912, 0.930, NNE
26	ETHAN ALLEN INC	35 CHASE AVE	MA SHWS, MA INST CONTROL, MA BROWNFIELDS, MA...	Lower	5247, 0.994, NE

EXECUTIVE SUMMARY

TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ("reasonably ascertainable ") government records either on the target property or within the search radius around the target property for the following databases:

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL ---------- National Priority List
Proposed NPL ---------- Proposed National Priority List Sites
NPL LIENS ---------- Federal Superfund Liens

Lists of Federal Delisted NPL sites

Delisted NPL ---------- National Priority List Deletions

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY ---------- Federal Facility Site Information listing
SEMS ---------- Superfund Enterprise Management System

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE ---------- Superfund Enterprise Management System Archive

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS ---------- Corrective Action Report

Lists of Federal RCRA TSD facilities

RCRA-TSDF ---------- RCRA - Treatment, Storage and Disposal

Lists of Federal RCRA generators

RCRA-LQG ---------- RCRA - Large Quantity Generators
RCRA-SQG ---------- RCRA - Small Quantity Generators
RCRA-VSQG ---------- RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

Federal institutional controls / engineering controls registries

LUCIS ---------- Land Use Control Information System

US ENG CONTROLS ..... Engineering Controls Sites List
US INST CONTROLS ..... Institutional Controls Sites List

Federal ERNS list

ERNS ..... Emergency Response Notification System

Lists of state- and tribal hazardous waste facilities

CT SHWS ..... Inventory of Hazardous Disposal Sites

Lists of state and tribal landfills and solid waste disposal facilities

CT SWF/LF ..... List of Landfills/Transfer Stations

Lists of state and tribal leaking storage tanks

MA LAST ..... Leaking Aboveground Storage Tank Sites
CT LUST ..... Leaking Underground Storage Tank List
INDIAN LUST ..... Leaking Underground Storage Tanks on Indian Land

Lists of state and tribal registered storage tanks

FEMA UST ..... Underground Storage Tank Listing
CT UST ..... Underground Storage Tank Data
MA AST ..... Aboveground Storage Tank Database
CT AST ..... Marine Terminals and Tank Information
INDIAN UST ..... Underground Storage Tanks on Indian Land

Lists of state and tribal voluntary cleanup sites

INDIAN VCP ..... Voluntary Cleanup Priority Listing

Lists of state and tribal brownfield sites

CT BROWNFIELDS ..... Brownfields Inventory

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS ..... A Listing of Brownfields Sites

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI ..... Report on the Status of Open Dumps on Indian Lands
DEBRIS REGION 9 ..... Torres Martinez Reservation Illegal Dump Site Locations
ODI ..... Open Dump Inventory
IHS OPEN DUMPS ..... Open Dumps on Indian Land

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL ..... Delisted National Clandestine Laboratory Register
US CDL ..... National Clandestine Laboratory Register

EXECUTIVE SUMMARY

Local Land Records

MA LIENS	Liens Information Listing
CT LIENS	Environmental Liens Listing
LIENS 2	CERCLA Lien Information

Records of Emergency Release Reports

HMIRS	Hazardous Materials Information Reporting System
CT SPILLS	Oil & Chemical Spill Database
MA SPILLS 90	SPILLS 90 data from FirstSearch
CT SPILLS 90	SPILLS 90 data from FirstSearch
MA SPILLS 80	SPILLS 80 data from FirstSearch

Other Ascertainable Records

RCRA NonGen / NLR	RCRA - Non Generators / No Longer Regulated
FUDS	Formerly Used Defense Sites
DOD	Department of Defense Sites
SCRD DRYCLEANERS	State Coalition for Remediation of Drycleaners Listing
US FIN ASSUR	Financial Assurance Information
EPA WATCH LIST	EPA WATCH LIST
2020 COR ACTION	2020 Corrective Action Program List
TSCA	Toxic Substances Control Act
TRIS	Toxic Chemical Release Inventory System
SSTS	Section 7 Tracking Systems
ROD	Records Of Decision
RMP	Risk Management Plans
RAATS	RCRA Administrative Action Tracking System
PRP	Potentially Responsible Parties
PADS	PCB Activity Database System
ICIS	Integrated Compliance Information System
FTTS	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
MLTS	Material Licensing Tracking System
COAL ASH DOE	Steam-Electric Plant Operation Data
COAL ASH EPA	Coal Combustion Residues Surface Impoundments List
PCB TRANSFORMER	PCB Transformer Registration Database
RADINFO	Radiation Information Database
HIST FTTS	FIFRA/TSCA Tracking System Administrative Case Listing
DOT OPS	Incident and Accident Data
CONSENT	Superfund (CERCLA) Consent Decrees
INDIAN RESERV	Indian Reservations
FUSRAP	Formerly Utilized Sites Remedial Action Program
UMTRA	Uranium Mill Tailings Sites
LEAD SMELTERS	Lead Smelter Sites
US AIRS	Aerometric Information Retrieval System Facility Subsystem
US MINES	Mines Master Index File
ABANDONED MINES	Abandoned Mines
FINDS	Facility Index System/Facility Registry System
DOCKET HWC	Hazardous Waste Compliance Docket Listing
UXO	Unexploded Ordnance Sites
ECHO	Enforcement & Compliance History Information
FUELS PROGRAM	EPA Fuels Program Registered Listing

PFAS NPL ..... Superfund Sites with PFAS Detections Information
PFAS FEDERAL SITES ..... Federal Sites PFAS Information
PFAS TSCA ..... PFAS Manufacture and Imports Information
PFAS RCRA MANIFEST ..... PFAS Transfers Identified In the RCRA Database Listing
PFAS ATSDR ..... PFAS Contamination Site Location Listing
PFAS WQP ..... Ambient Environmental Sampling for PFAS
PFAS NPDES ..... Clean Water Act Discharge Monitoring Information
PFAS ECHO ..... Facilities in Industries that May Be Handling PFAS Listing
PFAS ECHO FIRE TRAINING ..... Facilities in Industries that May Be Handling PFAS Listing
PFAS PART 139 AIRPORT ..... All Certified Part 139 Airports PFAS Information Listing
AQUEOUS FOAM NRC ..... Aqueous Foam Related Incidents Listing
MA PFAS ..... PFAS Contaminated Sites Listing
CT PFAS ..... PFAS Contamination Site Listing
CT AIRS ..... Permitted Air Sources Listing
CT ASBESTOS ..... Asbestos Notification Listing
MA DRYCLEANERS ..... Regulated Drycleaning Facilities
CT DRYCLEANERS ..... Drycleaner Facilities
CT ENF ..... Enforcement Case Listing
MA Financial Assurance ..... Financial Assurance Information Listing
CT Financial Assurance ..... Financial Assurance Information Listing
MA GWDP ..... Ground Water Discharge Permits
CT MANIFEST ..... Hazardous Waste Manifest Data
MA MERCURY ..... Mercury Product Recyling Drop-Off Locations Listing
MA NPDES ..... NPDES Permit Listing
CT NPDES ..... Wastewater Permit Listing
MA TSD ..... TSD Facility
MA UIC ..... Underground Injection Control Listing
CT UIC ..... Underground Injection Control Listing
MINES MRDS ..... Mineral Resources Data System

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP ..... EDR Proprietary Manufactured Gas Plants
EDR Hist Auto ..... EDR Exclusive Historical Auto Stations
EDR Hist Cleaner ..... EDR Exclusive Historical Cleaners

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

MA RGA HWS ..... Recovered Government Archive State Hazardous Waste Facilities List
CT RGA HWS ..... Recovered Government Archive State Hazardous Waste Facilities List
MA RGA LUST ..... Recovered Government Archive Leaking Underground Storage Tank
CT RGA LUST ..... Recovered Government Archive Leaking Underground Storage Tank

SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified in the following databases.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.
Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in ***bold italics*** are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

EXECUTIVE SUMMARY

STANDARD ENVIRONMENTAL RECORDS

Lists of state- and tribal hazardous waste facilities

MA SHWS: Contains information on releases of oil and hazardous materials that have been reported to DEP.

A review of the MA SHWS list, as provided by EDR, and dated 07/22/2022 has revealed that there are 23 MA SHWS sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
DUDLEY TRANSFER STAT Release Tracking Number: 2-0021744 Current Status: UNCLSS	***7 INDIAN RD***	***NW 1/4 - 1/2 (0.305 mi.)***	***2***	***9***
GENTEX OPTICS INC Release Tracking Number: 2-0010514 Current Status: RAO	***183 WEST MAIN ST***	***NNW 1/4 - 1/2 (0.320 mi.)***	***4***	***12***
TRI ST SUBARU FMR Release Tracking Number: 2-0012155 Current Status: RAO	***191 WEST MAIN ST***	***NNW 1/4 - 1/2 (0.345 mi.)***	***5***	***70***
CUMBERLAND FARMS GAS Release Tracking Number: 2-0018354 Current Status: RAO	***186 WEST MAIN STREET***	***NNW 1/4 - 1/2 (0.379 mi.)***	***A6***	***76***
APARTMENTS Release Tracking Number: 2-0012842 Current Status: RAO	***9 NELCO AVE***	***NW 1/4 - 1/2 (0.386 mi.)***	***8***	***96***
GASOLINE SERVICE STA Release Tracking Number: 2-0019053 Current Status: PSNC	***251 W.MAIN STREET***	***WNW 1/4 - 1/2 (0.414 mi.)***	***B9***	***98***
DRAKE PETROLEUM COMP Release Tracking Number: 2-0015690 Release Tracking Number: 2-0015799 Release Tracking Number: 2-0016015 Current Status: RAO	***251 WEST MAIN ST***	***WNW 1/4 - 1/2 (0.414 mi.)***	***B10***	***105***
CUMBERLAND FARMS Release Tracking Number: 2-0019076 Release Tracking Number: 2-0020788 Current Status: RAO Current Status: PSNC	***180 W. MAIN ST***	***NNW 1/4 - 1/2 (0.417 mi.)***	***C11***	***112***
AIRPORT RD Release Tracking Number: 2-0010758 Current Status: RAO	***180 WEST MAIN ST***	***NNW 1/4 - 1/2 (0.417 mi.)***	***C12***	***115***
PARK AND SHOP Release Tracking Number: 2-0018853 Current Status: RAO	***10 AIRPORT RD***	***NNW 1/4 - 1/2 (0.443 mi.)***	***13***	***121***
RK CONSTRUCTION Release Tracking Number: 2-0013389 Current Status: RAO	***157 WEST MAIN ST***	***N 1/2 - 1 (0.507 mi.)***	***14***	***122***
DUDLEY WATER DEPT	***WEST MAIN ST***	***N 1/2 - 1 (0.543 mi.)***	***D15***	***125***

Release Tracking Number: 2-0000357
Current Status: RAO

GUIDA SEIBERT DAIRY	***WEST MAIN ST***	***N 1/2 - 1 (0.544 mi.)***	***D16***	***128***
Release Tracking Number: 2-0000645 Current Status: DPS				
STATE LUST 15715	***138 WEST MAIN ST***	***N 1/2 - 1 (0.593 mi.)***	***E17***	***130***
Release Tracking Number: 2-0013051 Current Status: RAO				
CORNER MASON RD. & W	***136 WEST MAIN STREET***	***N 1/2 - 1 (0.604 mi.)***	***E18***	***137***
Release Tracking Number: 2-0018858 Current Status: RAO				
MASON ST TO PROGRESS	***WEST MAIN ST***	***N 1/2 - 1 (0.671 mi.)***	***20***	***142***
Release Tracking Number: 2-0016299 Current Status: URAM				
DEARY BROTHERS FMR	***104-110 WEST MAIN ST***	***N 1/2 - 1 (0.730 mi.)***	***21***	***143***
Release Tracking Number: 2-0000359 Current Status: PSNC				
PETROLEUM SERVICE OF	***38 BRANDON ROAD***	***NNE 1/2 - 1 (0.930 mi.)***	***25***	***168***
Release Tracking Number: 2-0018108 Current Status: RAO				

Lower Elevation	Address	Direction / Distance	Map ID	Page
STEVENS LINEN ASSOC	***SCHOFIELD AVE***	***E 1/2 - 1 (0.670 mi.)***	***19***	***139***
Release Tracking Number: 2-0001011 Current Status: RAO				
CONSTRUCTION LOT	***144 SCHOFIELD AVE***	***NE 1/2 - 1 (0.735 mi.)***	***22***	***157***
Release Tracking Number: 2-0020957 Current Status: PSNC				
ROADWAY	***120 SCHOLFIELD RD***	***NE 1/2 - 1 (0.848 mi.)***	***F23***	***160***
Release Tracking Number: 2-0018751 Current Status: RAO				
DUDLEY GP WELL NO.3	***75 SCHOFIELD AVENUE***	***NE 1/2 - 1 (0.849 mi.)***	***F24***	***162***
Release Tracking Number: 2-0021551 Current Status: TIER1D				
ETHAN ALLEN INC	***35 CHASE AVE***	***NE 1/2 - 1 (0.994 mi.)***	***26***	***169***
Release Tracking Number: 2-0015663 Current Status: RAO				

Lists of state and tribal landfills and solid waste disposal facilities

MA SWF/LF: The Solid Waste Facilities/Landfill Sites records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. The data come from the Department of Environmental Protection's Solid Waste Facility Database/Transfer Stations.

A review of the MA SWF/LF list, as provided by EDR, has revealed that there are 3 MA SWF/LF sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
DUDLEY LANDFILL	11 INDIAN RD	NW 1/8 - 1/4 (0.183 mi.)	1	8
Database: SWF/LF, Date of Government Version: 05/02/2022				

Current Operational Status: Closed

DUDLEY TRANSFER STAT	***7 INDIAN RD***	***NW 1/4 - 1/2 (0.305 mi.)***	***2***	***9***
Database: SWF/LF, Date of Government Version: 05/02/2022 Current Operational Status: Active				
DUDLEY LANDFILL	INDIAN RD	NW 1/4 - 1/2 (0.314 mi.)	3	12
Database: LF PROFILES, Date of Government Version: 07/01/2015 Status: Closed				

Lists of state and tribal leaking storage tanks

MA LUST: Sites within the Releases Database that have a UST listed as its source.

A review of the MA LUST list, as provided by EDR, and dated 07/22/2022 has revealed that there are 6 MA LUST sites within approximately 0.5 miles of the target property.

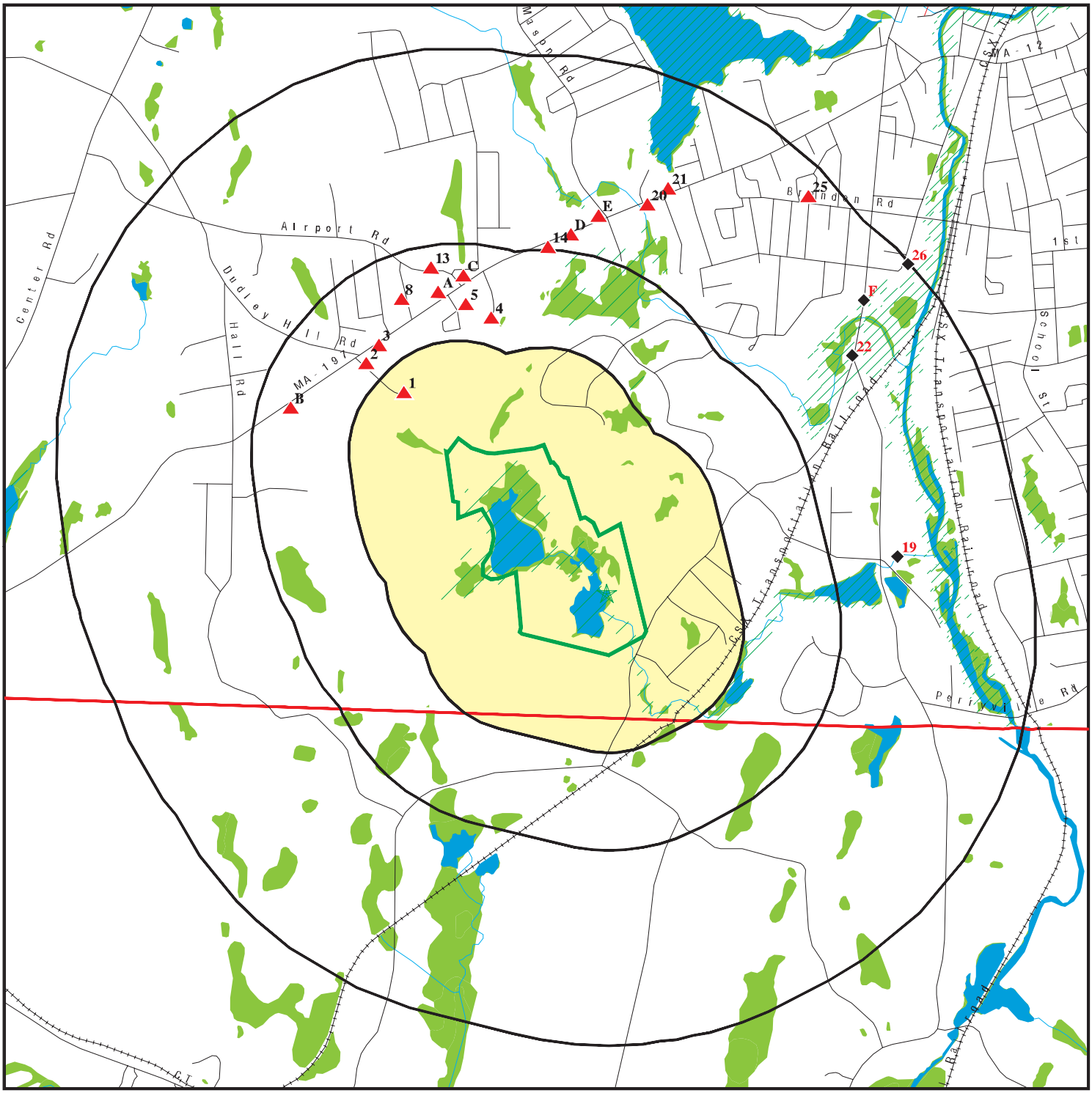
Equal/Higher Elevation	Address	Direction / Distance	Map ID	Page
TRI ST SUBARU FMR	***191 WEST MAIN ST***	***NNW 1/4 - 1/2 (0.345 mi.)***	***5***	***70***
Release Tracking Number / Current Status: 2-0011944 / RAO				
CUMBERLAND FARMS GAS	***186 WEST MAIN STREET***	***NNW 1/4 - 1/2 (0.379 mi.)***	***A6***	***76***
Release Tracking Number / Current Status: 2-0018354 / RAO				
CUMBERLAND FARMS #21	***180 W MAIN ST***	***NNW 1/4 - 1/2 (0.379 mi.)***	***A7***	***81***
Release Tracking Number / Current Status: 2-0018362 / RAO Release Tracking Number / Current Status: 2-0018365 / RAO				
GASOLINE SERVICE STA	***251 W.MAIN STREET***	***WNW 1/4 - 1/2 (0.414 mi.)***	***B9***	***98***
Release Tracking Number / Current Status: 2-0019053 / PSNC				
DRAKE PETROLEUM COMP	***251 WEST MAIN ST***	***WNW 1/4 - 1/2 (0.414 mi.)***	***B10***	***105***
Release Tracking Number / Current Status: 2-0000910 / RAO				
AIRPORT RD	***180 WEST MAIN ST***	***NNW 1/4 - 1/2 (0.417 mi.)***	***C12***	***115***
Release Tracking Number / Current Status: 2-0010758 / RAO				

EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped. Count: 3 records.

Site Name	Database(s)
POLE 138 ON RTE 31	MA SHWS, MA RELEASE
ROADWAY RELEASE	MA SHWS, MA RELEASE, MA SPILLS
HYDRAULIC OIL RELEASE	MA SHWS, MA RELEASE

OVERVIEW MAP - 7213211.2S



0 1/4 1/2 1 Miles

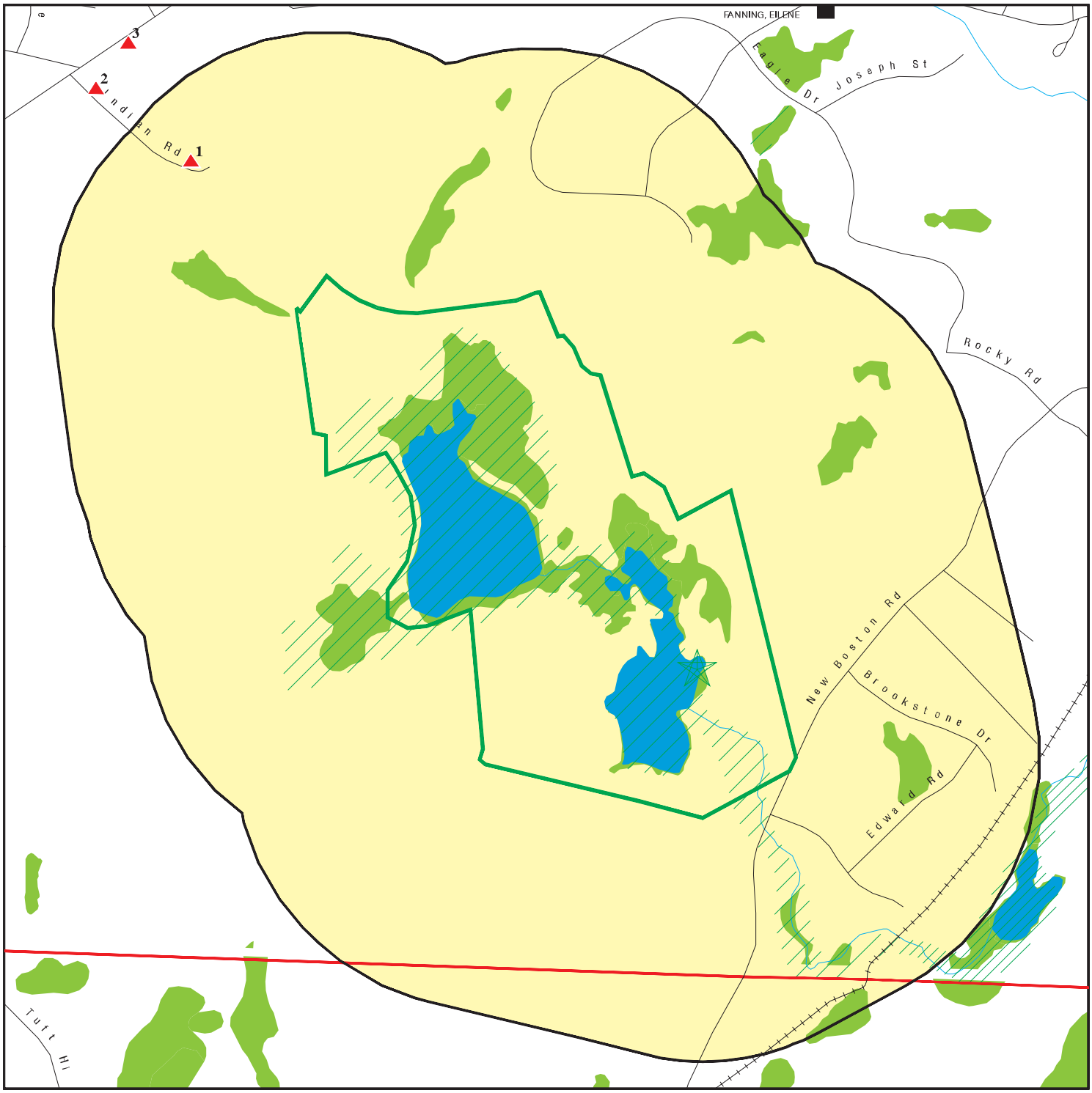
- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- County Boundary
- Power transmission lines
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Critical Environmental Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 22116.00	CLIENT: Pare Corporation
ADDRESS: 97 New Boston Road Dudley MA 01571	CONTACT: Arianne Barton INQUIRY #: 7213211.2s
LAT/LONG: 42.02928 / 71.904145	DATE: December 28, 2022 12:09 pm

Copyright © 2022 EDR, Inc. © 2015 TomTom Rel. 2015.

DETAIL MAP - 7213211.2S



- Target Property
- Sites at elevations higher than or equal to the target property
- Sites at elevations lower than the target property
- Manufactured Gas Plants
- Sensitive Receptors
- National Priority List Sites
- Dept. Defense Sites
- Indian Reservations BIA
- County Boundary
- Special Flood Hazard Area (1%)
- 0.2% Annual Chance Flood Hazard
- National Wetland Inventory
- State Wetlands
- Areas of Critical Environmental Concern

This report includes Interactive Map Layers to display and/or hide map information. The legend includes only those icons for the default map view.

SITE NAME: 22116.00	CLIENT: Pare Corporation
ADDRESS: 97 New Boston Road Dudley MA 01571	CONTACT: Arianne Barton
LAT/LONG: 42.02928 / 71.904145	INQUIRY #: 7213211.2s DATE: December 28, 2022 12:09 pm

Copyright © 2022 EDR, Inc. © 2015 TomTom Rel. 2015.

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
STANDARD ENVIRONMENTAL RECORDS								
Lists of Federal NPL (Superfund) sites								
NPL	1.000		0	0	0	0	NR	0
Proposed NPL	1.000		0	0	0	0	NR	0
NPL LIENS	1.000		0	0	0	0	NR	0
Lists of Federal Delisted NPL sites								
Delisted NPL	1.000		0	0	0	0	NR	0
Lists of Federal sites subject to CERCLA removals and CERCLA orders								
FEDERAL FACILITY	0.500		0	0	0	NR	NR	0
SEMS	0.500		0	0	0	NR	NR	0
Lists of Federal CERCLA sites with NFRAP								
SEMS-ARCHIVE	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA facilities undergoing Corrective Action								
CORRACTS	1.000		0	0	0	0	NR	0
Lists of Federal RCRA TSD facilities								
RCRA-TSDF	0.500		0	0	0	NR	NR	0
Lists of Federal RCRA generators								
RCRA-LQG	0.250		0	0	NR	NR	NR	0
RCRA-SQG	0.250		0	0	NR	NR	NR	0
RCRA-VSQG	0.250		0	0	NR	NR	NR	0
Federal institutional controls / engineering controls registries								
LUCIS	0.500		0	0	0	NR	NR	0
US ENG CONTROLS	0.500		0	0	0	NR	NR	0
US INST CONTROLS	0.500		0	0	0	NR	NR	0
Federal ERNS list								
ERNS	TP		NR	NR	NR	NR	NR	0
Lists of state- and tribal hazardous waste facilities								
MA SHWS	1.000		0	0	10	13	NR	23
CT SHWS	1.000		0	0	0	0	NR	0
Lists of state and tribal landfills and solid waste disposal facilities								
MA SWF/LF	0.500		0	1	2	NR	NR	3
CT SWF/LF	0.500		0	0	0	NR	NR	0
Lists of state and tribal leaking storage tanks								
MA LAST	0.500		0	0	0	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MA LUST	0.500		0	0	6	NR	NR	6
CT LUST	0.500		0	0	0	NR	NR	0
INDIAN LUST	0.500		0	0	0	NR	NR	0
Lists of state and tribal registered storage tanks								
FEMA UST	0.250		0	0	NR	NR	NR	0
MA UST	0.250		0	0	NR	NR	NR	0
CT UST	0.250		0	0	NR	NR	NR	0
MA AST	0.250		0	0	NR	NR	NR	0
CT AST	0.250		0	0	NR	NR	NR	0
INDIAN UST	0.250		0	0	NR	NR	NR	0
State and tribal institutional control / engineering control registries								
MA INST CONTROL	0.500		0	0	0	NR	NR	0
Lists of state and tribal voluntary cleanup sites								
INDIAN VCP	0.500		0	0	0	NR	NR	0
Lists of state and tribal brownfield sites								
MA BROWNFIELDS	0.500		0	0	0	NR	NR	0
CT BROWNFIELDS	0.500		0	0	0	NR	NR	0
ADDITIONAL ENVIRONMENTAL RECORDS								
Local Brownfield lists								
US BROWNFIELDS	0.500		0	0	0	NR	NR	0
Local Lists of Landfill / Solid Waste Disposal Sites								
INDIAN ODI	0.500		0	0	0	NR	NR	0
DEBRIS REGION 9	0.500		0	0	0	NR	NR	0
ODI	0.500		0	0	0	NR	NR	0
IHS OPEN DUMPS	0.500		0	0	0	NR	NR	0
Local Lists of Hazardous waste / Contaminated Sites								
US HIST CDL	TP		NR	NR	NR	NR	NR	0
US CDL	TP		NR	NR	NR	NR	NR	0
Local Land Records								
MA LIENS	TP		NR	NR	NR	NR	NR	0
CT LIENS	TP		NR	NR	NR	NR	NR	0
LIENS 2	TP		NR	NR	NR	NR	NR	0
Records of Emergency Release Reports								
HMIRS	TP		NR	NR	NR	NR	NR	0
MA SPILLS	TP		NR	NR	NR	NR	NR	0
MA RELEASE	TP		NR	NR	NR	NR	NR	0
CT SPILLS	TP		NR	NR	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
MA SPILLS 90	TP		NR	NR	NR	NR	NR	0
CT SPILLS 90	TP		NR	NR	NR	NR	NR	0
MA SPILLS 80	TP		NR	NR	NR	NR	NR	0
Other Ascertainable Records								
RCRA NonGen / NLR	0.250		0	0	NR	NR	NR	0
FUDS	1.000		0	0	0	0	NR	0
DOD	1.000		0	0	0	0	NR	0
SCRD DRYCLEANERS	0.500		0	0	0	NR	NR	0
US FIN ASSUR	TP		NR	NR	NR	NR	NR	0
EPA WATCH LIST	TP		NR	NR	NR	NR	NR	0
2020 COR ACTION	0.250		0	0	NR	NR	NR	0
TSCA	TP		NR	NR	NR	NR	NR	0
TRIS	TP		NR	NR	NR	NR	NR	0
SSTS	TP		NR	NR	NR	NR	NR	0
ROD	1.000		0	0	0	0	NR	0
RMP	TP		NR	NR	NR	NR	NR	0
RAATS	TP		NR	NR	NR	NR	NR	0
PRP	TP		NR	NR	NR	NR	NR	0
PADS	TP		NR	NR	NR	NR	NR	0
ICIS	TP		NR	NR	NR	NR	NR	0
FTTS	TP		NR	NR	NR	NR	NR	0
MLTS	TP		NR	NR	NR	NR	NR	0
COAL ASH DOE	TP		NR	NR	NR	NR	NR	0
COAL ASH EPA	0.500		0	0	0	NR	NR	0
PCB TRANSFORMER	TP		NR	NR	NR	NR	NR	0
RADINFO	TP		NR	NR	NR	NR	NR	0
HIST FTTS	TP		NR	NR	NR	NR	NR	0
DOT OPS	TP		NR	NR	NR	NR	NR	0
CONSENT	1.000		0	0	0	0	NR	0
INDIAN RESERV	1.000		0	0	0	0	NR	0
FUSRAP	1.000		0	0	0	0	NR	0
UMTRA	0.500		0	0	0	NR	NR	0
LEAD SMELTERS	TP		NR	NR	NR	NR	NR	0
US AIRS	TP		NR	NR	NR	NR	NR	0
US MINES	0.250		0	0	NR	NR	NR	0
ABANDONED MINES	0.250		0	0	NR	NR	NR	0
FINDS	TP		NR	NR	NR	NR	NR	0
DOCKET HWC	TP		NR	NR	NR	NR	NR	0
UXO	1.000		0	0	0	0	NR	0
ECHO	TP		NR	NR	NR	NR	NR	0
FUELS PROGRAM	0.250		0	0	NR	NR	NR	0
PFAS NPL	0.250		0	0	NR	NR	NR	0
PFAS FEDERAL SITES	0.250		0	0	NR	NR	NR	0
PFAS TSCA	0.250		0	0	NR	NR	NR	0
PFAS RCRA MANIFEST	0.250		0	0	NR	NR	NR	0
PFAS ATSDR	0.250		0	0	NR	NR	NR	0
PFAS WQP	0.250		0	0	NR	NR	NR	0
PFAS NPDES	0.250		0	0	NR	NR	NR	0
PFAS ECHO	0.250		0	0	NR	NR	NR	0
PFAS ECHO FIRE TRAINING	0.250		0	0	NR	NR	NR	0

MAP FINDINGS SUMMARY

Database	Search Distance (Miles)	Target Property	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
PFAS PART 139 AIRPORT	0.250		0	0	NR	NR	NR	0
AQUEOUS FOAM NRC	0.250		0	0	NR	NR	NR	0
MA PFAS	0.250		0	0	NR	NR	NR	0
CT PFAS	0.250		0	0	NR	NR	NR	0
MA AIRS	TP		NR	NR	NR	NR	NR	0
CT AIRS	TP		NR	NR	NR	NR	NR	0
MA ASBESTOS	TP		NR	NR	NR	NR	NR	0
CT ASBESTOS	TP		NR	NR	NR	NR	NR	0
MA DRYCLEANERS	0.250		0	0	NR	NR	NR	0
CT DRYCLEANERS	0.250		0	0	NR	NR	NR	0
MA ENF	TP		NR	NR	NR	NR	NR	0
CT ENF	TP		NR	NR	NR	NR	NR	0
MA Financial Assurance	TP		NR	NR	NR	NR	NR	0
CT Financial Assurance	TP		NR	NR	NR	NR	NR	0
MA GWDP	TP		NR	NR	NR	NR	NR	0
MA HW GEN	0.250		0	0	NR	NR	NR	0
CT MANIFEST	0.250		0	0	NR	NR	NR	0
MA MERCURY	0.500		0	0	0	NR	NR	0
MA NPDES	TP		NR	NR	NR	NR	NR	0
CT NPDES	TP		NR	NR	NR	NR	NR	0
MA TIER 2	TP		NR	NR	NR	NR	NR	0
MA TSD	0.500		0	0	0	NR	NR	0
MA UIC	TP		NR	NR	NR	NR	NR	0
CT UIC	TP		NR	NR	NR	NR	NR	0
MINES MRDS	TP		NR	NR	NR	NR	NR	0
EDR HIGH RISK HISTORICAL RECORDS								
EDR Exclusive Records								
EDR MGP	1.000		0	0	0	0	NR	0
EDR Hist Auto	0.125		0	NR	NR	NR	NR	0
EDR Hist Cleaner	0.125		0	NR	NR	NR	NR	0
EDR RECOVERED GOVERNMENT ARCHIVES								
Exclusive Recovered Govt. Archives								
MA RGA HWS	TP		NR	NR	NR	NR	NR	0
CT RGA HWS	TP		NR	NR	NR	NR	NR	0
MA RGA LUST	TP		NR	NR	NR	NR	NR	0
CT RGA LUST	TP		NR	NR	NR	NR	NR	0
- Totals --		0	0	1	18	13	0	32

NOTES:

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

1
NW
1/8-1/4
0.183 mi.
964 ft.

DUDLEY LANDFILL
11 INDIAN RD
DUDLEY, MA 01571

MA SWF/LF **S118485818**
N/A

Relative:
Higher

Actual:
542 ft.

LF:

Name:	DUDLEY LANDFILL
Address:	11 INDIAN RD
City,State,Zip:	DUDLEY, MA 01571
Facility Phone:	(508)949-6123
Annual Tons for 1995:	Not reported
Annual Tons for 1996:	Not reported
Annual Tons for 1997:	Not reported
Annual Tons for 1998:	Not reported
Annual Tons for 1999:	Not reported
Annual Tons for 2000:	Not reported
Annual Tons for 2001:	Not reported
Annual Tons for 2002:	Not reported
Annual Tons for 2003:	Not reported
Annual Tons for 2004:	Not reported
Annual Tons for 2005:	Not reported
Annual Tons for 2006:	Not reported
Annual Tons for 2007:	Not reported
Annual Tons for 2008:	Not reported
Annual Tons for 2009:	Not reported
Annual Tons for 2010:	Not reported
Annual Tons for 2011:	Not reported
Annual Tons for 2012:	Not reported
Annual Tons for 2013:	Not reported
Annual Tons for 2014:	Not reported
Annual Tons for 2015:	Not reported
Reg Obj Acct ID Num For Each Solid Waste Operation:	172469
Days of Operation:	Not reported
Note On The Physical Location Of The Site:	APPROX 11
Acres:	9
Active Year:	1980
Classification Group:	Land Disposal
Current Or Most Recent Closed Classification:	CLF
Description Of The Last Classification:	Closed Landfill with Env Monitoring Required
Close Year:	2001
Name Of The Organization:	TOWN OF DUDLEY
Contacts Organization Type:	Private
Contact Persons Name And Title:	SUZANNE HORNE, TOWN ADMIN
Contact Phone Including Extension:	(508)949-8017
Contact Mailing Street Address:	40 SCHOFIELD AVE
Contacts Mailing City, State, Zip:	DUDLEY, MA 01570
Inactive Year:	1992
Land Disposal Closure Status:	Capped
Land Disposal Only, Category Waste Disposed:	MSW
Landfills Liner:	Not Lined
Municipality That The Operation Is Located In:	DUDLEY
Alpha-Numeric Identification Code:	SL0080.001
Numeric-Only Portion Of The Identification Code:	0080.001
Region:	Central (Worcester)
Org That Pays Any Annual Compliance Fee And/Or Permittee:	DUDLEY HIGHWAY DEPT
Responsible Party Organization Type:	Municipal
Responsible Party Mailing Street Address Line 1:	71 WEST MAIN ST
Responsible Party Mailing Street Address Line 2:	Not reported

DUDLEY LANDFILL (Continued) **S118485818**

Responsible Party Mailing City, State, Zip: DUDLEY, MA 01571
Responsible Party Telephone Inc Extension: Not reported
Maximum Permitted Tons Per Day: 49
Current Operational Status: Closed

2
NW
1/4-1/2
0.305 mi.
1609 ft.

DUDLEY TRANSFER STATION
7 INDIAN RD
DUDLEY, MA 01571

MA SHWS **U003655378**
MA SWF/LF **N/A**
MA RELEASE
MA HW GEN

Relative:
Higher

Actual:
579 ft.

SHWS:
Name: DUDLEY SANITARY LANDFILL
Address: 7 INDIAN RD
City,State,Zip: DUDLEY, MA
Facility ID: 2-0021744
Source Type: SANITARY L
Release Town: DUDLEY
Notification Date: 10/27/2021
Category: 72 HR
Associated ID: Not reported
Current Status: UNCLSS
Status Date: 10/27/2021
Phase: Not reported
Response Action Outcome: Not reported
Oil Or Haz Material: Not reported

LF:
Name: DUDLEY TRANSFER STATION
Address: 7 INDIAN RD
City,State,Zip: DUDLEY, MA 01571
Facility Phone: (508)949-8022
Annual Tons for 1995: 1307
Annual Tons for 1996: Not reported
Annual Tons for 1997: Not reported
Annual Tons for 1998: 1550
Annual Tons for 1999: 1596
Annual Tons for 2000: 1620
Annual Tons for 2001: 1653
Annual Tons for 2002: 1688
Annual Tons for 2003: 1687
Annual Tons for 2004: 1623
Annual Tons for 2005: 1566
Annual Tons for 2006: 1554
Annual Tons for 2007: 1537
Annual Tons for 2008: 1508
Annual Tons for 2009: Not reported
Annual Tons for 2010: Not reported
Annual Tons for 2011: Not reported
Annual Tons for 2012: Not reported
Annual Tons for 2013: Not reported
Annual Tons for 2014: Not reported
Annual Tons for 2015: Not reported
Reg Obj Acct ID Num For Each Solid Waste Operation: 356818
Days of Operation: 258
Note On The Physical Location Of The Site: Not reported
Acres: Not reported

DUDLEY TRANSFER STATION (Continued) **U003655378**

Active Year:	1991
Classification Group:	Handling/Transfer
Current Or Most Recent Closed Classification:	SMTRAN
Description Of The Last Classification:	Small Transfer Station
Close Year:	Not reported
Name Of The Organization:	TOWN OF DUDLEY
Contacts Organization Type:	Municipal
Contact Persons Name And Title:	DANIEL GION, HIWAY SUPT
Contact Phone Including Extension:	(508)949-8020
Contact Mailing Street Address:	71 WEST MAIN ST
Contacts Mailing City, State, Zip:	DUDLEY, MA 01571
Inactive Year:	Not reported
Land Disposal Closure Status:	n/a
Land Disposal Only, Category Waste Disposed:	n/a
Landfills Liner:	n/a
Municipality That The Operation Is Located In:	DUDLEY
Alpha-Numeric Identification Code:	TR0080.003
Numeric-Only Portion Of The Identification Code:	0080.003
Region:	Central (Worcester)
Org That Pays Any Annual Compliance Fee And/Or Permittee:	DUDLEY HIGHWAY DEPT
Responsible Party Organization Type:	Municipal
Responsible Party Mailing Street Address Line 1:	71 WEST MAIN ST
Responsible Party Mailing Street Address Line 2:	Not reported
Responsible Party Mailing City, State, Zip:	DUDLEY, MA 01571
Responsible Party Telephone Inc Extension:	Not reported
Maximum Permitted Tons Per Day:	10
Current Operational Status:	Active

Release:

Name:	DUDLEY SANITARY LANDFILL
Address:	7 INDIAN RD
City,State,Zip:	DUDLEY, MA
Release Tracking Number/Current Status:	2-0021744 / UNCLSS
Primary ID:	Not reported
Official City:	DUDLEY
Notification:	10/27/2021
Category:	72 HR
Status Date:	10/27/2021
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Immediate Response Action
Action Status:	Level I - Technical Screen Audit
Action Date:	1/5/2022
Response Action Outcome:	Not reported
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	10/27/2021
Response Action Outcome:	Not reported
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)

DUDLEY TRANSFER STATION (Continued) **U003655378**

Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/12/2021
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 12/23/2021
Response Action Outcome: Not reported

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/23/2021
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 3/14/2022
Response Action Outcome: Not reported

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 3/3/2022
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: PRPMTG
Action Date: 6/15/2022
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 8/27/2021
Response Action Outcome: Not reported

Chemicals:
Chemical: Not reported
Quantity: Not reported
Location Type: MUNICIPAL
Source: SANITARY L

HW GEN:
Name: DUDLEY TRANSFER STATION
Address: 7 INDIAN RD
City,State,Zip: DUDLEY, MA 01571
EPA Id: MAV000012877
RCRA Generator Status: VSQG
State Generator Status: SQG-MA

3
NW
1/4-1/2
0.314 mi.
1657 ft.

DUDLEY LANDFILL
INDIAN RD
DUDLEY, MA

MA SWF/LF **S100039987**
N/A

Relative:
Higher

Actual:
582 ft.

LF PROFILES:

Site Type Code:	MSW
Site Type Desc:	Municipal Solid Waste
Status:	Closed
Owner Type:	Municipal
Stat Active Yr:	0:00
Stat Inactive Yr:	1992
Stat Close Yr:	12/28/2001
Lined?:	Not Lined
Cap Status:	Capped
Cap Cert Date:	12/28/2001
Post Closure Permit:	Not reported
Post Closure Use:	Not reported
LF Gas Energy:	Not reported
Acres:	12.32
Acres Doc:	EWA
Acres Doc Desc:	Extent of Waste (approximate/presumed)
Electrical Provider:	National Grid
Dist To Trans Miles:	6.59
Wind Speed 30m:	4.4022
Wind Speed 50m:	4.9872
Wind Speed 100m:	5.9992
Wind Speed 70m:	5.4492
Mass DEP FMF DB Id:	39220

4
NNW
1/4-1/2
0.320 mi.
1692 ft.

GENTEX OPTICS INC
183 WEST MAIN ST
DUDLEY, MA 01571

MA SHWS **S105810429**
MA RELEASE **N/A**
MA AIRS
MA HW GEN
MA TIER 2

Relative:
Higher

Actual:
523 ft.

SHWS:

Name:	GALAXY OPTICS
Address:	183 WEST MAIN ST
City,State,Zip:	DUDLEY, MA 01571
Facility ID:	2-0010514
Source Type:	AIR CHILL
Release Town:	DUDLEY
Notification Date:	10/13/1994
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	12/12/1994
Phase:	Not reported
Response Action Outcome:	A1
Oil Or Haz Material:	Hazardous Material

Release:

Name:	GALAXY OPTICS
Address:	183 WEST MAIN ST
City,State,Zip:	DUDLEY, MA 01571
Release Tracking Number/Current Status:	2-0010514 / RAO
Primary ID:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Official City:	DUDLEY
Notification:	10/13/1994
Category:	TWO HR
Status Date:	12/12/1994
Phase:	Not reported
Response Action Outcome:	A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type:	Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	10/13/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	10/13/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	10/13/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	10/13/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	RLFA
Action Status:	FOLFLD
Action Date:	10/14/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	10/25/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	12/12/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:

Chemical:	ETHANE, 1,2-DIETHOXY-

GENTEX OPTICS INC (Continued) **S105810429**

Quantity:	100 gallons
Chemical:	ETHYLENE GLYCOL DINITRATE
Quantity:	100 gallons
Location Type:	COMMERCIAL
Source:	AIR CHILL

AIRS:

AQID:	Not reported
Name:	GENTEX OPTICS INC
Address:	183 WEST MAIN ST
Address 2:	Not reported
City,State,Zip:	DUDLEY, MA 01571
Branch:	CE
Facility Status:	APPROV
Permit Code:	AQ01
Permit Name:	Plan Approval Limited
Owner Name:	Not reported
Region:	CE
Application Tracking Number:	W053430
Facility Account:	133113
Date Closed:	11/01/2004
Applicant Name:	GENTEX OPTICS
Applicant Address:	183 WEST MAIN ST
Applicant City:	DUDLEY
Applicant State:	MA
Applicant Zip:	01571
Applicant Telephone:	5089433860
Primary NAICS:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
Latitude:	Not reported
Longitude:	Not reported

AQID:	Not reported
Name:	GENTEX OPTICS INC
Address:	183 WEST MAIN ST
Address 2:	Not reported
City,State,Zip:	DUDLEY, MA 01571
Branch:	CE
Facility Status:	APPROV
Permit Code:	AQ02
Permit Name:	Plan Approval Non-Major Comprehensive
Owner Name:	Not reported
Region:	CE
Application Tracking Number:	W007954
Facility Account:	133113
Date Closed:	05/09/2000
Applicant Name:	GENTEX OPTICS
Applicant Address:	183 WEST MAIN ST
Applicant City:	DUDLEY
Applicant State:	MA
Applicant Zip:	01571
Applicant Telephone:	5089433860
Primary NAICS:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
Latitude:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Longitude:	Not reported
AQID:	Not reported
Name:	GENTEX OPTICS INC
Address:	183 WEST MAIN ST
Address 2:	Not reported
City,State,Zip:	DUDLEY, MA 01571
Branch:	CE
Facility Status:	WITHD
Permit Code:	AQ02
Permit Name:	Plan Approval Non-Major Comprehensive
Owner Name:	Not reported
Region:	CE
Application Tracking Number:	W002254
Facility Account:	133113
Date Closed:	02/03/2000
Applicant Name:	GENTEX OPTICS
Applicant Address:	183 WEST MAIN ST
Applicant City:	DUDLEY
Applicant State:	MA
Applicant Zip:	01571
Applicant Telephone:	5089433860
Primary NAICS:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
Latitude:	Not reported
Longitude:	Not reported
AQID:	Not reported
Name:	GENTEX OPTICS INC
Address:	183 WEST MAIN ST
Address 2:	Not reported
City,State,Zip:	DUDLEY, MA 01571
Branch:	CE
Facility Status:	APPROV
Permit Code:	AQ02
Permit Name:	Plan Approval Non-Major Comprehensive
Owner Name:	Not reported
Region:	CE
Application Tracking Number:	W116360
Facility Account:	133113
Date Closed:	10/03/2007
Applicant Name:	GENTEX OPTICS
Applicant Address:	183 WEST MAIN ST
Applicant City:	DUDLEY
Applicant State:	MA
Applicant Zip:	01571
Applicant Telephone:	5089433860
Primary NAICS:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
Latitude:	Not reported
Longitude:	Not reported
AQID:	1180207
Name:	GENTEX OPTICS
Address:	183 WEST MAIN ST

GENTEX OPTICS INC (Continued) **S105810429**

Address 2:	Not reported
City,State,Zip:	DUDLEY, MA 01571
Branch:	Not reported
Facility Status:	Not reported
Permit Code:	Not reported
Permit Name:	Not reported
Owner Name:	GENTEX OPTICS DUDLEY PLT
Region:	Not reported
Application Tracking Number:	Not reported
Facility Account:	Not reported
Date Closed:	Not reported
Applicant Name:	Not reported
Applicant Address:	Not reported
Applicant City:	Not reported
Applicant State:	Not reported
Applicant Zip:	Not reported
Applicant Telephone:	Not reported
Primary NAICS:	Y
NAICS Code:	339115
NAICS Description:	Ophthalmic Goods Manufacturing
Latitude:	42.039689
Longitude:	-71.910112

EMI:

AQID:	1180207
Pollutant:	AMMONIA
Actual Emission:	0.0102
Emission Year:	2015
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1180207
Pollutant:	CARBON MONOXIDE
Actual Emission:	0.0637
Emission Year:	2015
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1180207
Pollutant:	HALOGENATED ORGANIC COMPOUND
Actual Emission:	0
Emission Year:	2015
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1180207
Pollutant:	HYDROCARBON
Actual Emission:	0
Emission Year:	2015
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1180207
Pollutant:	METHYL ALCOHOL
Actual Emission:	0.6583
Emission Year:	2015
DEP Number:	Not reported
Facility Contact:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

AQID:	1180207
Pollutant:	NITROGEN OXIDES (NOx)
Actual Emission:	0.3186
Emission Year:	2015
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1180207
Pollutant:	PM10, FILTERABLE
Actual Emission:	0.0096
Emission Year:	2015
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1180207
Pollutant:	PM2.5, FILTERABLE
Actual Emission:	0.0096
Emission Year:	2015
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1180207
Pollutant:	SULFUR DIOXIDE
Actual Emission:	0.0019
Emission Year:	2015
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1180207
Pollutant:	TOTAL HAZARDOUS AIR POLLUTANTS
Actual Emission:	0.6583
Emission Year:	2015
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1180207
Pollutant:	VOLATILE ORGANIC COMPOUNDS (VOC)
Actual Emission:	2.7066
Emission Year:	2015
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1180207
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2018
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1180207
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2018
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1180207

GENTEX OPTICS INC (Continued) **S105810429**

Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2018
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1180207
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2018
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1180207
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2018
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1180207
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2015
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1180207
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2015
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1180207
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2015
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported
AQID:	1180207
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2015
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported
FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported
CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

AQID:	1180207
Pollutant:	Not reported
Actual Emission:	Not reported
Emission Year:	2015
DEP Number:	Not reported
Facility Contact:	Not reported
Contact Telephone:	Not reported
Contact Email:	Not reported
Region Code:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

FMF ID:	Not reported
ORIS Code:	Not reported
AQ Class:	Not reported
NAICS Code:	Not reported
NAICS Description:	Not reported
DEP Stack Number:	Not reported
Stack Height:	Not reported
Stack Diameter:	Not reported
Stack Liner:	Not reported
Stack Max Temp:	Not reported
Stack Max Velocity:	Not reported
Stack Flow:	Not reported
DEP EU Number:	Not reported
Segment Number:	Not reported
Is Exempt From 702:	Not reported
Equipment Type Name:	Not reported
Manufacturer:	Not reported
Model Number:	Not reported
Installed Date:	Not reported
EU Decom Date:	Not reported
Max Input Rating:	Not reported
Approval Number:	Not reported
Approval Date:	Not reported
Q1 Operation Percent:	Not reported
Q2 Operation Percent:	Not reported
Q3 Operation Percent:	Not reported
Q4 Operation Percent:	Not reported
Hours Daily:	Not reported
Days Weekly:	Not reported
Weeks Yearly:	Not reported
Type of Material:	Not reported
Case Number:	Not reported
Throughput Data:	Not reported
Sulfur Content Percent:	Not reported
Ash Content Percent:	Not reported
Operating Restrictions:	Not reported
SCC Code:	Not reported
SCC Description:	Not reported
Comments:	Not reported
P10 Act Amount:	Not reported
P10 Act UOM:	Not reported
P10 POT Amount:	Not reported
P10 POT UOM:	Not reported
P10 Per Amount:	Not reported
P10 Per UOM:	Not reported
SO2 Act Amount:	Not reported
SO2 Act UOM:	Not reported
S02 POT Amount:	Not reported
SO2 POT UOM:	Not reported
SO2 Per Amount:	Not reported
SO2 Per UOM:	Not reported
NO2 Act Amount:	Not reported
NO2 Act UOM:	Not reported
NO2 POT Amount:	Not reported
NO2 POT UOM:	Not reported
NO2 Per Amount:	Not reported
NO2 Per UOM:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

CO Act Amount:	Not reported
CO Act UOM:	Not reported
CO POT Amount:	Not reported
CO POT UOM:	Not reported
CO Per Amount:	Not reported
CO Per UOM:	Not reported
VOC Act Amount:	Not reported
VOC Act UOM:	Not reported
VOC POT Amount:	Not reported
VOC POT UOM:	Not reported
VOC Per Amount:	Not reported
VOC Per UOM:	Not reported
PB Act Amount:	Not reported
PB Act UOM:	Not reported
PB POT Amount:	Not reported
PB POT UOM:	Not reported
PB Per Amount:	Not reported
PB Per UOM:	Not reported
P25 Act Amount:	Not reported
P25 Act UOM:	Not reported
P25 POT Amount:	Not reported
P25 POT UOM:	Not reported
P25 Per Amount:	Not reported
P25 Per UOM:	Not reported
NH3 Act Amount:	Not reported
NH3 Act UOM:	Not reported
NH3 POT Amount:	Not reported
NH3 POT UOM:	Not reported
NH3 Per Amount:	Not reported
NH3 Per UOM:	Not reported
Object ID:	Not reported
NAICS Code Count:	Not reported
Primary NAICS:	Not reported
Release Point:	Not reported
Stack Combined Units:	Not reported
Stack Decom Date:	Not reported
DEP Segment Number:	Not reported
Category Type:	Not reported
Emergency Gen:	Not reported
EU Combined Units:	Not reported
Chemical Name:	Not reported
Max Hourly Fuel Rating:	Not reported
Max UOM:	Not reported
Segment Decom Date:	Not reported
Actual Material Used:	Not reported
Actual Material Used UOM:	Not reported
P10 Annual Emission Restrictions:	Not reported
P25 Annual Emission Restrictions:	Not reported
SO2 Annual Emission Restrictions:	Not reported
NO2 Annual Emission Restrictions:	Not reported
CO Annual Emission Restrictions:	Not reported
PB Annual Emission Restrictions:	Not reported
NH3 Annual Emission Restrictions:	Not reported
VOC Annual Emission Restrictions:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

HW GEN:

Name:	GENTEX OPTICS INC
Address:	183 WEST MAIN ST
City,State,Zip:	DUDLEY, MA 01571
EPA Id:	MAD052929635
RCRA Generator Status:	LQG
State Generator Status:	LQG-MA

TIER 2:

Name:	GENTEX OPTICS; INC
Address:	183 WEST MAIN STREET
City,State,Zip:	DUDLEY, MA 01571
Report Year:	2016
Facility Id:	FATR2016000000028915
Facility Dept:	Not reported
Latitude:	42.04050
Longitude:	-71.91185
Mailing Address:	183 WEST MAIN STREET
Mailing City/State/Zip:	01571
Mailing Country:	United States
Notes:	Not reported
All Chemicals Same As Last Yr:	Not reported
Date Signed:	02/28/2017
Dike Or Other Safeguard:	F
Failed Validation:	Not reported
Date Modified:	08/08/2017
Fees Total:	Not reported
Num Of Employees:	420
Site Coord Abbreviated?:	F
Site Map:	T
State Label Code:	Not reported
Submitted By:	Bill VanWieren
Validation Report:	Not reported
Fire District:	Not reported
Latlong Location Description:	Not reported
Latlong Method:	Not reported
Record Key:	FDTR2016000000004320
Id:	Not reported
Type:	RMP
Description:	RMP
Last Modified:	Not reported
Record Key:	FDTR2016000000004321
Id:	Not reported
Type:	State ID
Description:	State ID
Last Modified:	Not reported
Record Key:	FDTR2016000000004322
Id:	01570GNTXP183WE
Type:	TRI
Description:	TRI
Last Modified:	Not reported
Record Key:	FDTR2016000000004323

GENTEX OPTICS INC (Continued) **S105810429**

Id: 232537801
Type: EIN
Description: EIN
Last Modified: Not reported

Record Key: FDTR2016000000004324
Id: 339115
Type: NAICS
Description: Ophthalmic Goods Manufacturing
Last Modified: Not reported

Record Key: FDTR2016000000004325
Id: 3851
Type: SIC
Description: SIC
Last Modified: Not reported

Record Key: FDTR2016000000004326
Id: 555403690
Type: DUN & BradStreet
Description: DUN & BradStreet
Last Modified: Not reported

Contact:
Report Year: 2016
Contact Record Id: CTTR2016265744P28915
Title: EHS Engineer
Contact Name: Benjamin
Contact Email: cbenjamin@essilorusa.com
Contact Mail Address: Not reported
Contact Mail City: Not reported
Contact Mail State: Not reported
Contact Mail Zip: Not reported
Contact Mail Country: Not reported
Contact1 Type: Fac. Emergency Coordinator
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: Not reported

Contact:
Report Year: 2016
Contact Record Id: CTTR2016108343P28915
Title: Not reported
Contact Name: Corp (Tuzze Trucking); Myron Ednock
Contact Email: Not reported
Contact Mail Address: 324 Main Street
Contact Mail City: Simpson
Contact Mail State: PA
Contact Mail Zip: 18407-407-
Contact Mail Country: Not reported
Contact1 Type: Carrier Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Modification Date: Not reported

Contact:
Report Year: 2016
Contact Record Id: CTTR2016265739P28915
Title: Not reported
Contact Name: of America; Inc
Contact Email: Not reported
Contact Mail Address: 13515 N. Stemmons Freeway
Contact Mail City: Dallas
Contact Mail State: TX
Contact Mail Zip: 75234
Contact Mail Country: US
Contact1 Type: Parent Company
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: Not reported

Contact:
Report Year: 2016
Contact Record Id: CTTR2016265740P28915
Title: Not reported
Contact Name: VanWieren
Contact Email: bvanwieren@essilorusa.com
Contact Mail Address: 183 West Main Street
Contact Mail City: Dudley
Contact Mail State: MA
Contact Mail Zip: 01571
Contact Mail Country: US
Contact1 Type: Owner / Operator
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: Not reported

Contact:
Report Year: 2016
Contact Record Id: CTTR2016265743P28915
Title: Not reported
Contact Name: Not reported
Contact Email: cbenjamin@essilorusa.com
Contact Mail Address: 183 WEST MAIN STREET
Contact Mail City: DUDLEY
Contact Mail State: MA
Contact Mail Zip: 01571
Contact Mail Country: US
Contact1 Type: Other
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Contact:
Report Year: 2016
Contact Record Id: CTTR2016265746P28915
Title: EHS Engineer
Contact Name: Benjamin
Contact Email: cbenjamin@essilorusa.com
Contact Mail Address: Not reported
Contact Mail City: Not reported
Contact Mail State: Not reported
Contact Mail Zip: Not reported
Contact Mail Country: Not reported
Contact1 Type: Emergency Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: Not reported

Contact:
Report Year: 2016
Contact Record Id: CTTR2016265747P28915
Title: Facilities Engineer
Contact Name: Kelly
Contact Email: jkelly@essilorusa.com
Contact Mail Address: Not reported
Contact Mail City: Not reported
Contact Mail State: Not reported
Contact Mail Zip: Not reported
Contact Mail Country: Not reported
Contact1 Type: Emergency Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: Not reported

Contact:
Report Year: 2016
Contact Record Id: CTTR2016108339P28915
Title: Not reported
Contact Name: Pinoos XPO Logistics; and GH Berlin Windward Petroleum
Contact Email: Not reported
Contact Mail Address: 625 Hartford Turnpike
Contact Mail City: Shrewsbury
Contact Mail State: MA
Contact Mail Zip: 01545
Contact Mail Country: Not reported
Contact1 Type: Carrier Contact
Contact2 Type: Not reported
Contact3 Type: Not reported
Contact4 Type: Not reported
Modification Date: Not reported

Contact:

GENTEX OPTICS INC (Continued) **S105810429**

Report Year:	2016
Contact Record Id:	CTTR2016108341P28915
Title:	Not reported
Contact Name:	East; Dan Benoit
Contact Email:	Not reported
Contact Mail Address:	199 SW Cutoff (Rte 20)
Contact Mail City:	Worcester
Contact Mail State:	MA
Contact Mail Zip:	01604-604-
Contact Mail Country:	Not reported
Contact1 Type:	Carrier Contact
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	Not reported

Contact:

Report Year:	2016
Contact Record Id:	CTTR2016265741P28915
Title:	Not reported
Contact Name:	Not reported
Contact Email:	Not reported
Contact Mail Address:	Not reported
Contact Mail City:	Not reported
Contact Mail State:	Not reported
Contact Mail Zip:	Not reported
Contact Mail Country:	Not reported
Contact1 Type:	Billing
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	Not reported

Contact:

Report Year:	2016
Contact Record Id:	CTTR2016108340P28915
Title:	Not reported
Contact Name:	Northeast; Inc.
Contact Email:	Not reported
Contact Mail Address:	81 W Huller Lane
Contact Mail City:	Reading
Contact Mail State:	PA
Contact Mail Zip:	19605-605-
Contact Mail Country:	Not reported
Contact1 Type:	Carrier Contact
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	Not reported

Contact:

Report Year:	2016
Contact Record Id:	CTTR2016111417P28915

GENTEX OPTICS INC (Continued) **S105810429**

Title:	Not reported
Contact Name:	Industrial; Herbie Rego
Contact Email:	Not reported
Contact Mail Address:	120 Almgren Drive
Contact Mail City:	Agawam
Contact Mail State:	MA
Contact Mail Zip:	01001-001-
Contact Mail Country:	Not reported
Contact1 Type:	Carrier Contact
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	Not reported

Contact:

Report Year:	2016
Contact Record Id:	CTTR2016265745P28915
Title:	EHS Engineer
Contact Name:	Benjamin
Contact Email:	cbenjamin@essilorusa.com
Contact Mail Address:	Not reported
Contact Mail City:	Not reported
Contact Mail State:	Not reported
Contact Mail Zip:	Not reported
Contact Mail Country:	Not reported
Contact1 Type:	Tier II Information Contact
Contact2 Type:	Not reported
Contact3 Type:	Not reported
Contact4 Type:	Not reported
Modification Date:	Not reported

Chemicals:

Acute:	F
Ave Amount:	59750
Ave Amount Code:	8
Chem Inv Record Id:	CVTR2016000000108339
Chem Same As Last Yr:	Not reported
Chronic:	T
CICAS:	68919175
CI EHS Chemical:	No
CI Last Modified:	2017-02-16T08:54:26.
Days On Site:	365
Entered Chemical Name:	DTE-25 & DTE-26 OIL
Fire:	F
Gas:	F
Liquid:	T
Max Amount:	6.213400000000000e+004
Max Amount Code:	8
Max Amt Container:	1625
Mixture:	T
Pressure:	F
Pure:	F
Reactive:	F
Solid:	F

GENTEX OPTICS INC (Continued) **S105810429**

State01 Checkbox:	T
State01 Number:	44160
State01 Text:	N/A
State02 Checkbox:	F
State02 Number:	4
State02 Text:	Year
State03 Checkbox:	F
State03 Number:	794
State03 Text:	Not reported
State04 Checkbox:	F
State04 Number:	695
State04 Text:	Liquid
State05 Checkbox:	F
State05 Text:	Not reported
State06 Checkbox:	F
State06 Text:	Not reported
State07 Checkbox:	F
State07 Text:	XPO Logistics - Primary: Rt. 84 to Rt. 20 to Rt. 290 to Rt. 395 to Rt 197; Alternate: Rt. 84 to Rt 90 to Rt 395 tor Rt 197 GH Berlin Winward - Rt 495 to 290 to 395; Exit 2 toward Webster to West Main Street Dudley
State1 Contact Field:	Neal Pinoos XPO Logistics; and GH Berlin Windward Petroleum
State Label Code:	Not reported
Trade Secret:	F

Location:

Record Key:	CLTR201600000S277345
Chem Inv Record Id:	CVTR2016000000108339
Type Code:	Molding Machines
Pressure Code:	Ambient pressure
Temperature Code:	Greater than ambient temperature
Location:	MOLDING BUILDING 1
Amount:	51634
Amount Unit:	lbs
Last Modified:	Not reported

Record Key:	CLTR201600000S277346
Chem Inv Record Id:	CVTR2016000000108339
Type Code:	Steel drum
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	CHEMICAL BUILDING
Amount:	2781
Amount Unit:	lbs
Last Modified:	Not reported

Record Key:	CLTR201600000S277347
Chem Inv Record Id:	CVTR2016000000108339
Type Code:	Molding Machines
Pressure Code:	Ambient pressure
Temperature Code:	Greater than ambient temperature
Location:	MOLDING BUILDING 2
Amount:	7676
Amount Unit:	lbs
Last Modified:	Not reported

Record Key:	CLTR201600000S277344
Chem Inv Record Id:	CVTR2016000000108339

GENTEX OPTICS INC (Continued) **S105810429**

Type Code:	Steel drum
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	Molding Building 1
Amount:	794
Amount Unit:	lbs
Last Modified:	Not reported

Record Key:	CLTR201600000S277343
Chem Inv Record Id:	CVTR2016000000108339
Type Code:	Steel drum
Pressure Code:	Ambient pressure
Temperature Code:	Ambient temperature
Location:	Molding Building 2
Amount:	794
Amount Unit:	lbs
Last Modified:	Not reported

Acute:	T
Ave Amount:	54978
Ave Amount Code:	8
Chem Inv Record Id:	CVTR2016000000108343
Chem Same As Last Yr:	Not reported
Chronic:	F
CICAS:	25971635
CI EHS Chemical:	No
CI Last Modified:	2017-02-16T10:29:24.
Days On Site:	365
Entered Chemical Name:	Polycarbonate Resin
Fire:	F
Gas:	F
Liquid:	F
Max Amount:	8.613800000000000e+004
Max Amount Code:	9
Max Amt Container:	1763
Mixture:	T
Pressure:	F
Pure:	F
Reactive:	F
Solid:	T
State01 Checkbox:	T
State01 Number:	42312
State01 Text:	N/A
State02 Checkbox:	F
State02 Number:	3
State02 Text:	Week
State03 Checkbox:	F
State03 Number:	38786
State03 Text:	Not reported
State04 Checkbox:	F
State04 Number:	23205
State04 Text:	Solid
State05 Checkbox:	F
State05 Text:	Not reported
State06 Checkbox:	F
State06 Text:	Not reported

GENTEX OPTICS INC (Continued) **S105810429**

State07 Checkbox: F
State07 Text: Primary:From CT Rt 197 to West Main Street; Dudley. Alternate: Rt 84 to 131 to Rt 197 to West Main Street; Dudley
State1 Contact Field: Gentex Corp (Tuzze Trucking); Myron Ednock
State Label Code: Not reported
Trade Secret: F

Location:
Record Key: CLTR201600000S277370
Chem Inv Record Id: CVTR2016000000108343
Type Code: Bag
Pressure Code: Ambient pressure
Temperature Code: Ambient temperature
Location: Building 2 Platform
Amount: 20950
Amount Unit: lbs
Last Modified: Not reported

Record Key: CLTR201600000S277371
Chem Inv Record Id: CVTR2016000000108343
Type Code: Bag
Pressure Code: Ambient pressure
Temperature Code: Ambient temperature
Location: Shipping Storage Racks
Amount: 21156
Amount Unit: lbs
Last Modified: Not reported

Record Key: CLTR201600000S277372
Chem Inv Record Id: CVTR2016000000108343
Type Code: Steel drum
Pressure Code: Ambient pressure
Temperature Code: Ambient temperature
Location: Building 1 Polar Lid Resin Racks
Amount: 15000
Amount Unit: lbs
Last Modified: Not reported

Record Key: CLTR201600000S277373
Chem Inv Record Id: CVTR2016000000108343
Type Code: Bag
Pressure Code: Ambient pressure
Temperature Code: Ambient temperature
Location: Molding Floor Bag Stations
Amount: 24682
Amount Unit: lbs
Last Modified: Not reported

Record Key: CLTR201600000S277374
Chem Inv Record Id: CVTR2016000000108343
Type Code: In Process Dryer Units
Pressure Code: Ambient pressure
Temperature Code: Greater than ambient temperature
Location: In Dryer Units Pre-distribution
Amount: 4350
Amount Unit: lbs
Last Modified: Not reported

GENTEX OPTICS INC (Continued) **S105810429**

Chemical Mixture:

Record Key:	CLTR2016000000M96569
Chem Inv Rec Id:	CVTR2016000000108343
Mx Chem:	Polycarbonate Resin (95-100%)
Mx CAS:	25971635
Percentage:	100.00
Wt Vol:	Wt
Mx EHS:	Not reported
Mx Last Modified:	Not reported

---

5 NNW 1/4-1/2 0.345 mi. 1822 ft. **TRI ST SUBARU FMR**
191 WEST MAIN ST
DUDLEY, MA 01571

MA SHWS **S103249528**
MA LUST **N/A**
MA RELEASE
MA HW GEN

Relative: Higher

Actual: 544 ft.

SHWS:

Name:	FORMER TRI STATE SUBARU
Address:	191 WEST MAIN ST
City,State,Zip:	DUDLEY, MA 015710000
Facility ID:	2-0012155
Source Type:	Not reported
Release Town:	DUDLEY
Notification Date:	02/18/1998
Category:	120 DY
Associated ID:	Not reported
Current Status:	RAO
Status Date:	07/01/2005
Phase:	PHASE II
Response Action Outcome:	A2
Oil Or Haz Material:	Oil

LUST:

Facility:

Name:	TRI ST SUBARU FMR
Address:	191 WEST MAIN ST
City,State,Zip:	DUDLEY, MA 015710000
Current Status:	**Response Action Outcome**
Release Tracking Number/Current Status:	2-0011944 / RAO
Status Date:	10/28/1998
Source Type:	UST
Release Town:	DUDLEY
Notification Date:	10/21/1997
Category:	72 HR
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Oil
Location Type:	COMMERCIAL
Source:	UST

TRI ST SUBARU FMR (Continued) **S103249528**

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 200 parts per million

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/21/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/28/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 10/28/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 12/10/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/16/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 12/18/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/18/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 12/18/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

TRI ST SUBARU FMR (Continued) **S103249528**

Action Type: Compliance and Enforcement Action
Action Status: FNON
Action Date: 12/2/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 12/22/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/5/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 3/5/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 9/23/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Name: TRI ST SUBARU FMR
Address: 191 WEST MAIN ST
City,State,Zip: DUDLEY, MA 015710000
Release Tracking Number/Current Status: 2-0011944 / RAO
Primary ID: Not reported
Official City: DUDLEY
Notification: 10/21/1997
Category: 72 HR
Status Date: 10/28/1998
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/21/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO

TRI ST SUBARU FMR (Continued) **S103249528**

Action Status: RAO Statement Received
Action Date: 10/28/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 10/28/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 12/10/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/16/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 12/18/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 12/18/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 12/18/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: FNON
Action Date: 12/2/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 12/22/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 3/5/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

TRI ST SUBARU FMR (Continued) **S103249528**

reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 3/5/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 9/23/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 200 parts per million
Location Type: COMMERCIAL
Source: UST

Name: FORMER TRI STATE SUBARU
Address: 191 WEST MAIN ST
City,State,Zip: DUDLEY, MA 015710000
Release Tracking Number/Current Status: 2-0012155 / RAO
Primary ID: Not reported
Official City: DUDLEY
Notification: 02/18/1998
Category: 120 DY
Status Date: 07/01/2005
Phase: PHASE II
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 1/18/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 10/29/2004
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Legal Notice Published
Action Date: 11/16/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF

TRI ST SUBARU FMR (Continued) **S103249528**

Action Status: Reportable Release under MGL 21E
Action Date: 2/18/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 2/18/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 2/25/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/25/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 2/25/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Enforcement Conference
Action Date: 5/23/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/26/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 7/1/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 7/1/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 7/27/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

TRI ST SUBARU FMR (Continued) **S103249528**

reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level III - Comprehensive Audit
Action Date: 8/21/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: NAFVIO
Action Date: 8/21/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: ACOP
Action Date: 8/9/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: TPH
Quantity: 13000 milligrams per kilogram

HW GEN:
Name: MCGEE TOYOTA OF DUDLEY
Address: 191 WEST MAIN ST
City,State,Zip: DUDLEY, MA 01571
EPA Id: MAD112839329
RCRA Generator Status: VSQG
State Generator Status: LQG-MA

A6 **CUMBERLAND FARMS GAS STATION** **MA SHWS** **S111022476**
NNW **186 WEST MAIN STREET** **MA LUST** **N/A**
1/4-1/2 **DUDLEY, MA 01571** **MA RELEASE**
0.379 mi.
1999 ft. **Site 1 of 2 in cluster A**

Relative: Higher
Actual: 552 ft.

SHWS:
Name: CUMBERLAND FARMS GAS STATION
Address: 186 WEST MAIN STREET
City,State,Zip: DUDLEY, MA 015710000
Facility ID: 2-0018354
Source Type: UNKNOWN
Release Town: DUDLEY
Notification Date: 09/27/2011
Category: 120 DY
Associated ID: Not reported
Current Status: RAO
Status Date: 09/27/2012
Phase: Not reported
Response Action Outcome: A2
Oil Or Haz Material: Hazardous Material

LUST:

CUMBERLAND FARMS GAS STATION (Continued) **S111022476**

Facility:

Name:	CUMBERLAND FARMS GAS STATION
Address:	186 WEST MAIN STREET
City,State,Zip:	DUDLEY, MA 015710000
Current Status:	**Response Action Outcome**
Release Tracking Number/Current Status:	2-0018354 / RAO
Status Date:	09/27/2012
Source Type:	UST
Release Town:	DUDLEY
Notification Date:	09/27/2011
Category:	120 DY
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Hazardous Material
Location Type:	COMMERCIAL
Source:	UNKNOWN
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	ARSENIC
Quantity:	33.8 parts per million

Actions:

Action Type:	BOL
Action Status:	SHPFAC
Action Date:	1/17/2012
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	10/3/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Modified Revised or Updated Plan Received
Action Date:	10/5/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	10/5/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	10/5/2011

CUMBERLAND FARMS GAS STATION (Continued) **S111022476**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 10/6/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 11/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 2/1/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 2/13/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 2/24/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Level II - Audit Inspection
Action Date: 3/14/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 3/14/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDD1A
Action Date: 3/9/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 7/11/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

CUMBERLAND FARMS GAS STATION (Continued) **S111022476**

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/27/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/27/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/27/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 9/28/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Name: CUMBERLAND FARMS GAS STATION
Address: 186 WEST MAIN STREET
City,State,Zip: DUDLEY, MA 015710000
Release Tracking Number/Current Status: 2-0018354 / RAO
Primary ID: Not reported
Official City: DUDLEY
Notification: 09/27/2011
Category: 120 DY
Status Date: 09/27/2012
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: BOL
Action Status: SHPFAC
Action Date: 1/17/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 10/3/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure

CUMBERLAND FARMS GAS STATION (Continued) **S111022476**

Action Status: Modified Revised or Updated Plan Received
Action Date: 10/5/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/5/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/5/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 10/6/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 11/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 2/1/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 2/13/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 2/24/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Level II - Audit Inspection
Action Date: 3/14/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 3/14/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

CUMBERLAND FARMS GAS STATION (Continued) **S111022476**

reduced to background.

Action Type: RLFA
Action Status: FLDD1A
Action Date: 3/9/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 7/11/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 9/27/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/27/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/27/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 9/28/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: ARSENIC
Quantity: 33.8 parts per million
Location Type: COMMERCIAL
Source: UNKNOWN
Source: UST

A7
NNW
1/4-1/2
0.379 mi.
1999 ft.

CUMBERLAND FARMS #2140
180 W MAIN ST
DUDLEY, MA 01571

Site 2 of 2 in cluster A

MA LUST **U003655380**
MA UST **N/A**
MA RELEASE
MA ASBESTOS

Relative: Higher
Actual: 552 ft.

LUST:

Facility:
Name: CUMBERLAND FARMS STATION
Address: 186 W. MAIN ST
City,State,Zip: DUDLEY, MA
Current Status: **Response Action Outcome**

CUMBERLAND FARMS #2140 (Continued) **U003655380**

Release Tracking Number/Current Status: 2-0018362 / RAO
Status Date: 10/07/2013
Source Type: UST
Release Town: DUDLEY
Notification Date: 10/05/2011
Category: 72 HR
Associated ID: Not reported
Phase: PHASE III
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil

Location Type: COMMERCIAL
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: GASOLINE
Quantity: 917 parts per million

Actions:
Action Type: BOL
Action Status: SHPFAC
Action Date: 1/17/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Level I - Technical Screen Audit
Action Date: 1/2/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 1/9/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDD1U
Action Date: 10/12/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/19/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 10/20/2011

CUMBERLAND FARMS #2140 (Continued) **U003655380**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/24/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/5/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/5/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/5/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/5/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/5/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Level I - Technical Screen Audit
Action Date: 10/6/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 10/7/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/7/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

CUMBERLAND FARMS #2140 (Continued) **U003655380**

Action Type: RLFA
Action Status: FOLFLD
Action Date: 11/18/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 11/18/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 12/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 12/15/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/6/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 12/8/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 2/1/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 2/1/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 2/15/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 8/13/2012

CUMBERLAND FARMS #2140 (Continued) **U003655380**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Facility:
Name: CUMBERLAND FARMS STATION
Address: 186 W. MAIN STREET
City,State,Zip: DUDLEY, MA
Current Status: **Response Action Outcome**
Release Tracking Number/Current Status: 2-0018365 / RAO
Status Date: 09/27/2012
Source Type: UST
Release Town: DUDLEY
Notification Date: 10/06/2011
Category: 72 HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil

Location Type: COMMERCIAL
Source: UST

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 196 parts per million

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/6/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/23/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/6/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 12/7/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

CUMBERLAND FARMS #2140 (Continued) **U003655380**

Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	2/13/2013
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	8/13/2012
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	9/27/2012
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	9/28/2012
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

UST:

Facility:

Name:	CUMBERLAND FARMS #2140
Address:	180 W MAIN ST
City,State,Zip:	DUDLEY, MA 01571
Facility ID:	15713
Owner Id:	1602
Owner:	CUMBERLAND FARMS INC
Owner Address:	165 Flanders Road
Owner City,St,Zip:	Westborough, MA 01581
Telephone:	5089430693
Description:	Retail Motor Vehicle Fuel
Facility address 2:	Not reported
Owner address 2:	Not reported
Latitude:	42.04036
Longitude:	-71.91226
Contact name:	Martin Hilfinger
Contact address1:	165 Flanders Road
Contact address2:	Not reported
Contact city:	Westborough
Contact state:	MA
Contact zip:	01581
Contact email:	mhilfinger@cumberlandfarms.com
Update:	2020-05-01 00:00:00
Update by:	Martin Hilfinger
Fac status:	OPEN

Tank ID:	1
Tank Status:	**Tank Removed**
Status Date:	11/11/1997

CUMBERLAND FARMS #2140 (Continued) **U003655380**

Date Installed: 01/15/1982
Capacity: 8000.00000
Contents: Gasoline
Tank Usage: Motor Vehi
Tank Leak Detection: Manual Tank Gauging (1,000G or more capacity tank)
Pipe Leak Detection: Continuous Interstitial Space Monitoring
Latitude: Not reported
Longitude: Not reported
Tank construct: Single-walled metal tank (cathodic protection required)
Pipe construct: Single-walled metal (Corrosion protection required)
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 2
Tank Status: Tank Removed
Status Date: 11/11/1997
Date Installed: 01/15/1982
Capacity: 8000.00000
Contents: Gasoline
Tank Usage: Motor Vehi
Tank Leak Detection: Manual Tank Gauging (1,000G or more capacity tank)
Pipe Leak Detection: Continuous Interstitial Space Monitoring
Latitude: Not reported
Longitude: Not reported
Tank construct: Single-walled metal tank (cathodic protection required)
Pipe construct: Single-walled metal (Corrosion protection required)
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported

CUMBERLAND FARMS #2140 (Continued) **U003655380**

Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 3
Tank Status: Tank Removed
Status Date: 11/11/1997
Date Installed: 01/15/1982
Capacity: 8000.00000
Contents: Gasoline
Tank Usage: Motor Vehi
Tank Leak Detection: Manual Tank Gauging (1,000G or more capacity tank)
Pipe Leak Detection: Continuous Interstitial Space Monitoring
Latitude: Not reported
Longitude: Not reported
Tank construct: Single-walled metal tank (cathodic protection required)
Pipe construct: Single-walled metal (Corrosion protection required)
Ptype: Not reported
Number of compartment: Not reported
Pipe install date: Not reported
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: N
Turbine sump sensor: N
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Not reported
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 4
Tank Status: In Use
Status Date: Not reported
Date Installed: 11/12/1997
Capacity: 8000.00000
Contents: Gasoline
Tank Usage: Motor Vehi
Tank Leak Detection: Continuous Interstitial Monitoring
Pipe Leak Detection: Continuous Interstitial Space Monitoring
Latitude: 42.04120
Longitude: -71.91091
Tank construct: Double-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct: Double-walled non-corrodible material (No corrosion protection required)
Ptype: European suction system
Number of compartment: Not reported
Pipe install date: 11/12/1997
Pipe leak install date: Not reported
Submersible sump: N
Submersible sump install date: Not reported
Turbine sump: Y
Turbine sump sensor: Y

CUMBERLAND FARMS #2140 (Continued) **U003655380**

Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Automatic shut-off valve
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 5
Tank Status: In Use
Status Date: Not reported
Date Installed: 11/12/1997
Capacity: 8000.00000
Contents: Gasoline
Tank Usage: Motor Vehi
Tank Leak Detection: Continuous Interstitial Monitoring
Pipe Leak Detection: Continuous Interstitial Space Monitoring
Latitude: 42.04122
Longitude: -71.91094
Tank construct: Double-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct: Double-walled non-corrodible material (No corrosion protection required)
Ptype: Pressurized piping system with mechanical automatic line leak detection
Number of compartment: Not reported
Pipe install date: 11/12/1997
Pipe leak install date: Not reported
Submersible sump: Y
Submersible sump install date: Not reported
Turbine sump: Y
Turbine sump sensor: Y
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Automatic shut-off valve
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Tank ID: 6
Tank Status: In Use
Status Date: Not reported
Date Installed: 11/12/1997
Capacity: 8000.00000
Contents: Gasoline
Tank Usage: Motor Vehi
Tank Leak Detection: Continuous Interstitial Monitoring
Pipe Leak Detection: Continuous Interstitial Space Monitoring
Latitude: 42.04124
Longitude: -71.91097
Tank construct: Double-walled non-corrodible (including "composite") material (cathodic protection not required)
Pipe construct: Double-walled non-corrodible material (No corrosion protection required)
Ptype: Pressurized piping system with mechanical automatic line leak detection

CUMBERLAND FARMS #2140 (Continued) **U003655380**

Number of compartment: Not reported
Pipe install date: 11/12/1997
Pipe leak install date: Not reported
Submersible sump: Y
Submersible sump install date: Not reported
Turbine sump: Y
Turbine sump sensor: Y
Intermediate sump: N
Intermediate sump sensor: N
Spill bucket installed date: Not reported
Spill bucket sensor: N
Overfill protect install: Not reported
Overfill protect type: Automatic shut-off valve
Automatic line leak detect: Not reported
Tank corrosion type: Not reported
Leak corrosion type: Not reported

Release:

Name:	CUMBERLAND FARMS STATION
Address:	186 W. MAIN ST
City,State,Zip:	DUDLEY, MA
Release Tracking Number/Current Status:	2-0018362 / RAO
Primary ID:	Not reported
Official City:	DUDLEY
Notification:	10/05/2011
Category:	72 HR
Status Date:	10/07/2013
Phase:	PHASE III
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	BOL
Action Status:	SHPFAC
Action Date:	1/17/2012
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 2
Action Status:	Level I - Technical Screen Audit
Action Date:	1/2/2014
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	1/9/2014
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FLDD1U
Action Date:	10/12/2011

CUMBERLAND FARMS #2140 (Continued) **U003655380**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 10/19/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 10/20/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/24/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/5/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/5/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 10/5/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 10/5/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 10/5/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Level I - Technical Screen Audit
Action Date: 10/6/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

CUMBERLAND FARMS #2140 (Continued) **U003655380**

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 10/7/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 10/7/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLFLD
Action Date: 11/18/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 11/18/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 12/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 12/15/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/6/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 12/8/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 2/1/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 2/1/2012

CUMBERLAND FARMS #2140 (Continued) **U003655380**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 2/15/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 8/13/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: GASOLINE
Quantity: 917 parts per million
Location Type: COMMERCIAL
Source: UST

Name: CUMBERLAND FARMS STATION
Address: 186 W. MAIN STREET
City,State,Zip: DUDLEY, MA
Release Tracking Number/Current Status: 2-0018365 / RAO
Primary ID: Not reported
Official City: DUDLEY
Notification: 10/06/2011
Category: 72 HR
Status Date: 09/27/2012
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/6/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 11/23/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 12/6/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

CUMBERLAND FARMS #2140 (Continued) **U003655380**

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 12/7/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 2/13/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 8/13/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/27/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 9/28/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 196 parts per million
Location Type: COMMERCIAL
Source: UST

ASBESTOS:
Name: CUMBERLAND FARMS
Address: 186 WEST MAIN ST.
City,State,Zip: DUDLEY, MA
Notification: Not reported
DEP Region: Not reported
Notifiers Name: Not reported
Start Date: 11/22/2011
End Date: 11/22/2011
Date Entered: Not reported
Entry Date: 11/21/2011
Quantity Materical Removed SF: .00
Quantity Material Removed LF: 8.00
Project Description: Spr
AR Tracking ID: 150833
Super Lic Number: AS032025
Monitor Lic Number: AA000144
Lab Lic Number: AA000156
Year: 2011
Sticker Number: 100138481

CUMBERLAND FARMS #2140 (Continued) **U003655380**

Form Type:	ANF-001
Fee Status:	Exempt
Facility Phone:	5082704436
Sub Town:	Not reported
Worksite:	THROUGHOUT
Occupied:	-1
Contractor:	AC000407
Contract Type:	VERBAL
Hours:	Week days: 7-3:30PM Week end:
Project Type:	Oth:ASBESTOS ABATEMENT
Abatement Process:	Glv,Clnp
Location:	Indoors
Decon Process:	DOUBLE SUIT & WASH BUCKET
Disposal Methods:	DOUBLE LINED 6 MIL BAGS PROPERLY SEALED & LABELED
Facility Usage:	GAS STATION/CONVENIENCE STORE
Waiver Given:	Not reported
DEP Waiver Number:	C-AW-11-470
DLWD Waiver Number:	1725-2011
Small Owner Occ:	4
Owner Name:	CUMBERLAND GULF GROUP
Owner Address:	100 CROSSING BLVD.
Owner City:	FRAMINGHAM, MA
Owner State:	MA
On Site Manager Name:	TONY BURTON
On Site Manager Phone:	SAME
Ins Comp:	TD INSURANCE
Policy Number:	WC006590445
EXP Date:	3/20/2012
Facility Size:	1,500
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	39
Certified Name:	JUSTIN WRIGHT
Cert Sign Date:	11/21/2011
Certified Company:	ECSI
Certified Phone:	6036429200
Entered_by:	Not reported
Name:	CUMBERLAND FARMS
Address:	186 WEST MAIN ST.
City,State,Zip:	DUDLEY, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	09/30/2011
End Date:	10/03/2011
Date Entered:	Not reported
Entry Date:	09/16/2011
Quantity Materical Removed SF:	1260.00
Quantity Material Removed LF:	180.00
Project Description:	Trns
AR Tracking ID:	147966
Super Lic Number:	AS032025
Monitor Lic Number:	AA000144
Lab Lic Number:	AA000156

CUMBERLAND FARMS #2140 (Continued) **U003655380**

Year:	2011
Sticker Number:	100134449
Form Type:	ANF-001
Fee Status:	Exempt
Facility Phone:	5082704436
Sub Town:	Not reported
Worksite:	THROUGHOUT
Occupied:	-1
Contractor:	AC000407
Contract Type:	WRITTEN
Hours:	Week days: 7-3:30PM Week end:
Project Type:	Renv,Oth:ASBESTOS ABATEMENT
Abatement Process:	Fcontain
Location:	Indoors
Decon Process:	3 CHAMBER
Disposal Methods:	DOUBLE LINED FIBRE DRUMS PROPERLY SEALED & LABELED
Facility Usage:	GAS STATION/CONVENIENCE STORE
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	4
Owner Name:	CUMBERLAND GULF GROUP
Owner Address:	100 CROSSING BLVD.
Owner City:	FRAMINGHAM, MA
Owner State:	MA
On Site Manager Name:	TONY BURTON
On Site Manager Phone:	SAME
Ins Comp:	TD INSURANCE
Policy Number:	WC006590445
EXP Date:	3/20/2012
Facility Size:	1,500
Transporter Name:	Not reported
Transporter Address:	Not reported
Transporter City:	Not reported
Transporter State:	Not reported
Final Site:	39
Certified Name:	JUSTIN WRIGHT
Cert Sign Date:	09/16/2011
Certified Company:	ECSI
Certified Phone:	6036429200
Entered_by:	Not reported

---

8 **APARTMENTS** **MA SHWS** **S104179724**
NW **9 NELCO AVE** **MA RELEASE** **N/A**
1/4-1/2 **DUDLEY, MA 01571**
0.386 mi.
2037 ft.

Relative:
Higher

Actual:
565 ft.

SHWS:

Name:	APARTMENTS
Address:	9 NELCO AVE
City,State,Zip:	DUDLEY, MA 015710000
Facility ID:	2-0012842
Source Type:	BOILER
Release Town:	DUDLEY
Notification Date:	06/23/1999
Category:	TWO HR
Associated ID:	Not reported

APARTMENTS (Continued) **S104179724**

Current Status:	RAO
Status Date:	10/19/1999
Phase:	Not reported
Response Action Outcome:	A2
Oil Or Haz Material:	Oil

Release:

Name:	APARTMENTS
Address:	9 NELCO AVE
City,State,Zip:	DUDLEY, MA 015710000
Release Tracking Number/Current Status:	2-0012842 / RAO
Primary ID:	Not reported
Official City:	DUDLEY
Notification:	06/23/1999
Category:	TWO HR
Status Date:	10/19/1999
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/19/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	10/19/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	10/19/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	6/23/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	6/23/1999
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	RLFA
Action Status:	FLDD1U

APARTMENTS (Continued) **S104179724**

Action Date: 6/25/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 6/25/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/19/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: FUEL OIL #2
Quantity: 20 gallons
Location Type: RESIDNTIAL
Source: BOILER

B9 **GASOLINE SERVICE STATION** **MA SHWS S101040266**
WNW **251 W.MAIN STREET** **MA LUST N/A**
1/4-1/2 **DUDLEY, MA 01571** **MA RELEASE**
0.414 mi. **MA SPILLS**
2188 ft. **Site 1 of 2 in cluster B**

Relative: Higher
Actual: 604 ft.

SHWS:
Name: GASOLINE SERVICE STATION
Address: 251 W.MAIN STREET
City,State,Zip: DUDLEY, MA 015710000
Facility ID: 2-0019053
Source Type: TANK
Release Town: DUDLEY
Notification Date: 11/26/2013
Category: 72 HR
Associated ID: Not reported
Current Status: PSNC
Status Date: 11/26/2014
Phase: Not reported
Response Action Outcome: PN
Oil Or Haz Material: Oil

LUST:

Facility:
Name: GASOLINE SERVICE STATION
Address: 251 W.MAIN STREET
City,State,Zip: DUDLEY, MA 015710000
Current Status: **Permanent Solution with No Conditions**
Release Tracking Number/Current Status: 2-0019053 / PSNC
Status Date: 11/26/2014
Source Type: USTOTHER
Release Town: DUDLEY
Notification Date: 11/26/2013
Category: 72 HR

GASOLINE SERVICE STATION (Continued) **S101040266**

Associated ID: Not reported
Phase: Not reported
Response Action Outcome: PN - PN
Oil Or Haz Material: Oil

Location Type: COMMERCIAL
Source: UST
Source: USTOTHER
Source: TANK

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: GASOLINE
Quantity: 3080 parts per million

Actions:
Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 1/10/2014
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/20/2014
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 1/24/2014
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/24/2014
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/7/2014
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/26/2013
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 11/26/2013
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 11/26/2014

GASOLINE SERVICE STATION (Continued) **S101040266**

Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 11/26/2014
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 12/3/2014
Response Action Outcome: PN

Action Type: BOL
Action Status: SHPFAC
Action Date: 2/20/2014
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 3/28/2014
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 5/13/2015
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 5/20/2014
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 9/25/2014
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 9/5/2014
Response Action Outcome: PN

Facility:
Name: GASOLINE SERVICE STATION
Address: 251 W.MAIN STREET
City,State,Zip: DUDLEY, MA 015710000
Current Status: **Permanent Solution with No Conditions**
Release Tracking Number/Current Status: 2-0019053 / PSNC
Status Date: 11/26/2014
Source Type: UST
Release Town: DUDLEY
Notification Date: 11/26/2013
Category: 72 HR
Associated ID: Not reported
Phase: Not reported
Response Action Outcome: PN - PN

GASOLINE SERVICE STATION (Continued) **S101040266**

Oil Or Haz Material: Oil

Location Type: COMMERCIAL
Source: UST
Source: USTOTHER
Source: TANK

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: GASOLINE
Quantity: 3080 parts per million

Actions:
Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 1/10/2014
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/20/2014
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 1/24/2014
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/24/2014
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 1/7/2014
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/26/2013
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 11/26/2013
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 11/26/2014
Response Action Outcome: PN

Action Type: Immediate Response Action

GASOLINE SERVICE STATION (Continued) **S101040266**

Action Status: Completion Statement Received
Action Date: 11/26/2014
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 12/3/2014
Response Action Outcome: PN

Action Type: BOL
Action Status: SHPFAC
Action Date: 2/20/2014
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 3/28/2014
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 5/13/2015
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 5/20/2014
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 9/25/2014
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 9/5/2014
Response Action Outcome: PN

Release:
Name: GASOLINE SERVICE STATION
Address: 251 W.MAIN STREET
City,State,Zip: DUDLEY, MA 015710000
Release Tracking Number/Current Status: 2-0019053 / PSNC
Primary ID: Not reported
Official City: DUDLEY
Notification: 11/26/2013
Category: 72 HR
Status Date: 11/26/2014
Phase: Not reported
Response Action Outcome: PN - PN
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

GASOLINE SERVICE STATION (Continued) **S101040266**

Actions:

Action Type:	Immediate Response Action
Action Status:	Oral Approval of a Modified Plan
Action Date:	1/10/2014
Response Action Outcome:	PN
Action Type:	BOL
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	1/20/2014
Response Action Outcome:	PN
Action Type:	Immediate Response Action
Action Status:	Written Plan Received
Action Date:	1/24/2014
Response Action Outcome:	PN
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	1/24/2014
Response Action Outcome:	PN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	1/7/2014
Response Action Outcome:	PN
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	11/26/2013
Response Action Outcome:	PN
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	11/26/2013
Response Action Outcome:	PN
Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	11/26/2014
Response Action Outcome:	PN
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	11/26/2014
Response Action Outcome:	PN
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	12/3/2014
Response Action Outcome:	PN
Action Type:	BOL
Action Status:	SHPFAC
Action Date:	2/20/2014
Response Action Outcome:	PN
Action Type:	Immediate Response Action

GASOLINE SERVICE STATION (Continued) **S101040266**

Action Status: Status or Interim Report Received
Action Date: 3/28/2014
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 5/13/2015
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Level I - Technical Screen Audit
Action Date: 5/20/2014
Response Action Outcome: PN

Action Type: Immediate Response Action
Action Status: Status or Interim Report Received
Action Date: 9/25/2014
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 9/5/2014
Response Action Outcome: PN

Chemicals:
Chemical: GASOLINE
Quantity: 3080 parts per million
Location Type: COMMERCIAL
Source: UST
Source: USTOTHER
Source: TANK

MA Spills:

Facility ID:	2-0910	Spill ID:	C91-0571
Staff Lead:	COOPERMAN, S	Date Entered:	19921028
Last Entered:	19921028	First Response:	19911029
Spill Date:	19911029	Spill Time:	10:00AM
Report Date:	19911029	Report Time:	10:35AM
Case Closed:	YES	Mat Type:	PETROLEUM
Virgin Waste:	VIRGIN	Contam Soil:	Not reported
Env Impact:	SOIL	Other Impact:	Not reported
Material:	DIESEL FUEL	Other Material:	Not reported
Qty Reported:	UNKNOWN	Qty Actual:	UNKNOWN
Qty Reported:	GALLONS	Qty Actual:	GALLONS
CAS No:	Not reported	PCB Lev (ppm):	NONE
Source:	U.S.T.	Other Source:	Not reported
Incident:	TANK REMOVAL	Other Incdnt:	Not reported
Cleanup Type:	---	Contractor:	NOT USED
Referral:	SA	LUST Elig:	NO
Report Prep:	Not reported	Category:	Not reported
Notifier:	KENYON OIL		
Notif Tel:	Not reported		
Days/Close:	233		

B10
WNW
1/4-1/2
0.414 mi.
2188 ft.

DRAKE PETROLEUM COMPANY, INC
251 WEST MAIN ST
DUDLEY, MA 01571

Site 2 of 2 in cluster B

MA SHWS **S100537348**
MA LUST **N/A**
MA RELEASE

Relative:
Higher

Actual:
604 ft.

SHWS:

Name:	DRAKE PETROLEUM COMPANY, INC
Address:	251 WEST MAIN ST
City,State,Zip:	DUDLEY, MA 015710000
Facility ID:	2-0015690
Source Type:	Not reported
Release Town:	DUDLEY
Notification Date:	04/07/2005
Category:	120 DY
Associated ID:	Not reported
Current Status:	RAO
Status Date:	04/07/2006
Phase:	Not reported
Response Action Outcome:	A2
Oil Or Haz Material:	Oil

Name:	DRAKE PETROLEUM COMPANY, INC
Address:	251 WEST MAIN ST
City,State,Zip:	DUDLEY, MA 015710000
Facility ID:	2-0015799
Source Type:	Not reported
Release Town:	DUDLEY
Notification Date:	06/28/2005
Category:	120 DY
Associated ID:	Not reported
Current Status:	RAO
Status Date:	04/07/2006
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

Name:	X-TRA MART
Address:	251 WEST MAIN ST
City,State,Zip:	DUDLEY, MA 015710000
Facility ID:	2-0016015
Source Type:	Not reported
Release Town:	DUDLEY
Notification Date:	11/30/2005
Category:	120 DY
Associated ID:	Not reported
Current Status:	RAO
Status Date:	04/07/2006
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Hazardous Material

LUST:

Facility:

Name:	DUDLEY XTRA MART
Address:	251 WEST MAIN ST
City,State,Zip:	DUDLEY, MA 015710000
Current Status:	**Response Action Outcome**

DRAKE PETROLEUM COMPANY, INC (Continued) **S100537348**

Release Tracking Number/Current Status:	2-0000910 / RAO
Status Date:	12/05/1996
Source Type:	UST
Release Town:	DUDLEY
Notification Date:	07/02/1992
Category:	NONE
Associated ID:	Not reported
Phase:	PHASE III
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material:	Not reported
Location Type:	GASSTATION
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	UNKNOWN
Quantity:	Not reported

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	12/5/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	TREGS
Action Status:	LSPFA
Action Date:	5/15/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	5/16/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	5/16/1994
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	6/26/1996
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	7/2/1992

DRAKE PETROLEUM COMPANY, INC (Continued) **S100537348**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 7/2/1992
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 8/19/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 9/12/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Name: DUDLEY XTRA MART
Address: 251 WEST MAIN ST
City,State,Zip: DUDLEY, MA 015710000
Release Tracking Number/Current Status: 2-0000910 / RAO
Primary ID: Not reported
Official City: DUDLEY
Notification: 07/02/1992
Category: NONE
Status Date: 12/05/1996
Phase: PHASE III
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/5/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: TREGS
Action Status: LSPFA
Action Date: 5/15/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 5/16/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

DRAKE PETROLEUM COMPANY, INC (Continued) **S100537348**

reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/16/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 6/26/1996
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/2/1992
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 7/2/1992
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 8/19/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRUN
Action Date: 9/12/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported
Location Type: GASSTATION
Source: UST

Name: DRAKE PETROLEUM COMPANY, INC
Address: 251 WEST MAIN ST
City,State,Zip: DUDLEY, MA 015710000
Release Tracking Number/Current Status: 2-0015690 / RAO
Primary ID: Not reported
Official City: DUDLEY
Notification: 04/07/2005
Category: 120 DY
Status Date: 04/07/2006
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

DRAKE PETROLEUM COMPANY, INC (Continued) **S100537348**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	2/13/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	2/24/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	3/13/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	4/21/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	4/7/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	4/7/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	4/7/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	5/1/2006
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	9/26/2005
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

DRAKE PETROLEUM COMPANY, INC (Continued) **S100537348**

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 9/27/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 9/27/2005
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: C11 THRU C22 AROMATIC HYDROCARBONS
Quantity: 246 milligrams per kilogram
Chemical: C5 THRU C8 ALIPHATIC HYDROCARBONS
Quantity: 1.77 milligrams per liter
Chemical: C9 THRU C10 AROMATIC HYDROCARBONS
Quantity: 4.98 milligrams per kilogram
Chemical: NAPTHALENE
Quantity: 361 milligrams per kilogram

Name: DRAKE PETROLEUM COMPANY, INC
Address: 251 WEST MAIN ST
City,State,Zip: DUDLEY, MA 015710000
Release Tracking Number/Current Status: 2-0015799 / RAO
Primary ID: Not reported
Official City: DUDLEY
Notification: 06/28/2005
Category: 120 DY
Status Date: 04/07/2006
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: ALSENT
Action Date: 4/11/2006
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 4/7/2006
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 5/1/2006
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 6/28/2005

DRAKE PETROLEUM COMPANY, INC (Continued) **S100537348**

Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/28/2005
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/17/2005
Response Action Outcome: Not reported

Chemicals:
Chemical: LEAD
Quantity: 584 milligrams per kilogram
Chemical: PCB
Quantity: 25.9 milligrams per kilogram

Name: X-TRA MART
Address: 251 WEST MAIN ST
City,State,Zip: DUDLEY, MA 015710000
Release Tracking Number/Current Status: 2-0016015 / RAO
Primary ID: Not reported
Official City: DUDLEY
Notification: 11/30/2005
Category: 120 DY
Status Date: 04/07/2006
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/30/2005
Response Action Outcome: Not reported

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/30/2005
Response Action Outcome: Not reported

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/9/2005
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 4/7/2006
Response Action Outcome: Not reported

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit

DRAKE PETROLEUM COMPANY, INC (Continued) **S100537348**

Action Date: 5/1/2006
Response Action Outcome: Not reported

Chemicals:
Chemical: ARSENIC
Quantity: 36.7 milligrams per kilogram

C11 **CUMBERLAND FARMS** **MA SHWS S114965489**
NNW **180 W. MAIN ST** **MA RELEASE N/A**
1/4-1/2 **DUDLEY, MA**
0.417 mi.
2204 ft. **Site 1 of 2 in cluster C**

Relative: Higher

Actual: 547 ft.

SHWS:
Name: CUMBERLAND FARMS
Address: 180 W. MAIN ST
City,State,Zip: DUDLEY, MA
Facility ID: 2-0019076
Source Type: HOSE
Release Town: DUDLEY
Notification Date: 12/21/2013
Category: TWO HR
Associated ID: Not reported
Current Status: RAO
Status Date: 02/11/2014
Phase: Not reported
Response Action Outcome: A1
Oil Or Haz Material: Oil

Name: CUMBERLAND FARMS
Address: 180 W. MAIN ST
City,State,Zip: DUDLEY, MA
Facility ID: 2-0019076
Source Type: OHMDELIVER
Release Town: DUDLEY
Notification Date: 12/21/2013
Category: TWO HR
Associated ID: Not reported
Current Status: RAO
Status Date: 02/11/2014
Phase: Not reported
Response Action Outcome: A1
Oil Or Haz Material: Oil

Name: CUMBERLAND FARMS STORE
Address: 180 W. MAIN ST
City,State,Zip: DUDLEY, MA
Facility ID: 2-0020788
Source Type: HOSE
Release Town: DUDLEY
Notification Date: 01/26/2019
Category: TWO HR
Associated ID: Not reported
Current Status: PSNC
Status Date: 03/21/2019
Phase: Not reported
Response Action Outcome: PN

CUMBERLAND FARMS (Continued) **S114965489**

Oil Or Haz Material: Not reported

Release:
Name: CUMBERLAND FARMS
Address: 180 W. MAIN ST
City,State,Zip: DUDLEY, MA
Release Tracking Number/Current Status: 2-0019076 / RAO
Primary ID: Not reported
Official City: DUDLEY
Notification: 12/21/2013
Category: TWO HR
Status Date: 02/11/2014
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 12/21/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 12/21/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/30/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 2/11/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/12/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 5/14/2014
Response Action Outcome: A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

CUMBERLAND FARMS (Continued) **S114965489**

Chemicals:

Chemical:	GASOLINE
Quantity:	10 gallons
Location Type:	COMMERCIAL
Source:	HOSE
Source:	OHMDELIVER

Name:	CUMBERLAND FARMS STORE
Address:	180 W. MAIN ST
City,State,Zip:	DUDLEY, MA
Release Tracking Number/Current Status:	2-0020788 / PSNC
Primary ID:	Not reported
Official City:	DUDLEY
Notification:	01/26/2019
Category:	TWO HR
Status Date:	03/21/2019
Phase:	Not reported
Response Action Outcome:	PN - PN
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	1/26/2019
Response Action Outcome:	PN

Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	1/26/2019
Response Action Outcome:	PN

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	2/13/2019
Response Action Outcome:	PN

Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	3/21/2019
Response Action Outcome:	PN

Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	3/21/2019
Response Action Outcome:	PN

Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	4/9/2019
Response Action Outcome:	PN

Chemicals:

Chemical:	Not reported
Quantity:	Not reported

CUMBERLAND FARMS (Continued) **S114965489**

Location Type: COMMERCIAL
Source: HOSE

C12 **AIRPORT RD** **MA SHWS** **S102084433**
NNW **180 WEST MAIN ST** **MA LUST** **N/A**
1/4-1/2 **DUDLEY, MA 01571** **MA RELEASE**
0.417 mi.
2204 ft. **Site 2 of 2 in cluster C**

Relative:
Higher

Actual:
547 ft.

SHWS:
Name: AIRPORT RD
Address: 180 WEST MAIN ST
City,State,Zip: DUDLEY, MA 015710000
Facility ID: 2-0010758
Source Type: DRUMS
Release Town: DUDLEY
Notification Date: 05/04/1995
Category: TWO HR
Associated ID: Not reported
Current Status: RAO
Status Date: 03/17/2000
Phase: PHASE V
Response Action Outcome: A2
Oil Or Haz Material: Oil

LUST:

Facility:
Name: AIRPORT RD
Address: 180 WEST MAIN ST
City,State,Zip: DUDLEY, MA 015710000
Current Status: **Response Action Outcome**
Release Tracking Number/Current Status: 2-0010758 / RAO
Status Date: 03/17/2000
Source Type: UST
Release Town: DUDLEY
Notification Date: 05/04/1995
Category: TWO HR
Associated ID: Not reported
Phase: PHASE V
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil Or Haz Material: Oil

Location Type: COMMERCIAL
Source: UST
Source: DRUMS

Click here to access the MA DEP site for this facility:

Chemicals:
Chemical: GASOLINE
Quantity: 370 gallons
Chemical: DIESEL FUEL
Quantity: 370 gallons

AIRPORT RD (Continued) **S102084433**

Actions:

Action Type:	Release Abatement Measure
Action Status:	Completion Statement Received
Action Date:	1/26/1998
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 5
Action Status:	Inspection and Monitoring Report Received
Action Date:	10/20/2003
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	10/3/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Modified Revised or Updated Plan Received
Action Date:	10/5/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only
Action Date:	10/6/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	11/14/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	11/6/1997
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Immediate Response Action
Action Status:	Completion Statement Received
Action Date:	11/7/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Tier 2 Classification
Action Date:	11/7/1995
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received

AIRPORT RD (Continued) **S102084433**

Action Date: 11/7/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 12/7/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 2/1/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 2/11/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 2/24/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Level II - Audit Inspection
Action Date: 3/14/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 3/17/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/18/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/4/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 5/5/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

AIRPORT RD (Continued) **S102084433**

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 5/5/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/15/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 7/15/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 7/3/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Name: AIRPORT RD
Address: 180 WEST MAIN ST
City,State,Zip: DUDLEY, MA 015710000
Release Tracking Number/Current Status: 2-0010758 / RAO
Primary ID: Not reported
Official City: DUDLEY
Notification: 05/04/1995
Category: TWO HR
Status Date: 03/17/2000
Phase: PHASE V
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 1/26/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 5
Action Status: Inspection and Monitoring Report Received
Action Date: 10/20/2003
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure

AIRPORT RD (Continued) **S102084433**

Action Status: Written Plan Received
Action Date: 10/3/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Modified Revised or Updated Plan Received
Action Date: 10/5/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 10/6/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 11/14/2011
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 11/6/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 11/7/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 2 Classification
Action Date: 11/7/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 11/7/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 12/7/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 2/1/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

AIRPORT RD (Continued) **S102084433**

reduced to background.

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 2/11/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 2/24/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Level II - Audit Inspection
Action Date: 3/14/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 3/17/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/18/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 5/4/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 5/5/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 5/5/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 6/15/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2

AIRPORT RD (Continued) **S102084433**

Action Status: Completion Statement Received
Action Date: 7/15/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Written Plan Received
Action Date: 7/3/1995
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: GASOLINE
Quantity: 370 gallons
Chemical: DIESEL FUEL
Quantity: 370 gallons
Location Type: COMMERCIAL
Source: UST
Source: DRUMS

13
NNW
1/4-1/2
0.443 mi.
2340 ft.

Relative: Higher

Actual: 556 ft.

PARK AND SHOP **MA SHWS S113805001**
10 AIRPORT RD **MA RELEASE N/A**
DUDLEY, MA

SHWS:
Name: PARK AND SHOP
Address: 10 AIRPORT RD
City,State,Zip: DUDLEY, MA
Facility ID: 2-0018853
Source Type: LINE
Release Town: DUDLEY
Notification Date: 03/27/2013
Category: TWO HR
Associated ID: Not reported
Current Status: RAO
Status Date: 04/25/2013
Phase: Not reported
Response Action Outcome: A1
Oil Or Haz Material: Oil

Release:
Name: PARK AND SHOP
Address: 10 AIRPORT RD
City,State,Zip: DUDLEY, MA
Release Tracking Number/Current Status: 2-0018853 / RAO
Primary ID: Not reported
Official City: DUDLEY
Notification: 03/27/2013
Category: TWO HR
Status Date: 04/25/2013
Phase: Not reported
Response Action Outcome: A1 - A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Oil / Haz Material Type: Oil

PARK AND SHOP (Continued) **S113805001**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	10/21/2013
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	3/27/2013
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	3/27/2013
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	4/25/2013
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	4/25/2013
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	4/5/2013
Response Action Outcome:	A permanent solution has been achieved. Contamination has been reduced to background or a threat of release has been eliminated.

Chemicals:

Chemical:	HYDRAULIC FLUID
Quantity:	15 gallons
Location Type:	COMMERCIAL
Source:	LINE

14
North
1/2-1
0.507 mi.
2679 ft.

RK CONSTRUCTION
157 WEST MAIN ST
DUDLEY, MA 01571

MA SHWS **S104774050**
MA RELEASE **N/A**

Relative:
Higher

Actual:
505 ft.

SHWS:

Name:	RK CONSTRUCTION
Address:	157 WEST MAIN ST
City,State,Zip:	DUDLEY, MA 015710000
Facility ID:	2-0013389
Source Type:	PIPE

RK CONSTRUCTION (Continued) **S104774050**

Release Town:	DUDLEY
Notification Date:	07/27/2000
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	09/21/2001
Phase:	Not reported
Response Action Outcome:	A2
Oil Or Haz Material:	Oil

Release:

Name:	RK CONSTRUCTION
Address:	157 WEST MAIN ST
City,State,Zip:	DUDLEY, MA 015710000
Release Tracking Number/Current Status:	2-0013389 / RAO
Primary ID:	Not reported
Official City:	DUDLEY
Notification:	07/27/2000
Category:	TWO HR
Status Date:	09/21/2001
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	10/5/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	12/4/2000
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	Response Action Outcome - RAO
Action Status:	Level II - Audit Inspection
Action Date:	3/19/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	An activity type that is related to an Audit
Action Status:	NOA
Action Date:	3/19/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	RLFA
Action Status:	FLDRAN
Action Date:	4/4/2002
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been

RK CONSTRUCTION (Continued) **S104774050**

reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 5/14/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Level III - Comprehensive Audit
Action Date: 5/14/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/19/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 7/27/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of a Modified Plan
Action Date: 7/27/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/27/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/27/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/28/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDD1U
Action Date: 7/28/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA

RK CONSTRUCTION (Continued) **S104774050**

Action Status: FOLOFF
Action Date: 7/6/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/23/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 9/21/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 9/21/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Fee Received - FMCRA Use Only
Action Date: 9/25/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 9/29/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 9/29/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 150 gallons
Location Type: COMMERCIAL
Source: PIPE

D15 **DUDLEY WATER DEPT** **MA SHWS U000225767**
North **WEST MAIN ST** **MA RELEASE N/A**
1/2-1 **DUDLEY, MA 01571**
0.543 mi.
2867 ft. **Site 1 of 2 in cluster D**

Relative: Higher
Actual: 499 ft.

SHWS:
Name: DUDLEY WATER DEPT
Address: WEST MAIN ST
City,State,Zip: DUDLEY, MA 015710000

DUDLEY WATER DEPT (Continued) **U000225767**

Facility ID:	2-0000357
Source Type:	Not reported
Release Town:	DUDLEY
Notification Date:	04/15/1988
Category:	NONE
Associated ID:	Not reported
Current Status:	RAO
Status Date:	12/03/2007
Phase:	Not reported
Response Action Outcome:	A2
Oil Or Haz Material:	Oil

Release:

Name:	DUDLEY WATER DEPT
Address:	WEST MAIN ST
City,State,Zip:	DUDLEY, MA 015710000
Release Tracking Number/Current Status:	2-0000357 / RAO
Primary ID:	Not reported
Official City:	DUDLEY
Notification:	04/15/1988
Category:	NONE
Status Date:	12/03/2007
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	1/3/2008
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Submittal Determined to be Invalid by DEP
Action Date:	10/1/1993
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	10/1/1993
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	12/3/2007
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Phase 4
Action Status:	Completion Statement Received

DUDLEY WATER DEPT (Continued) **U000225767**

Action Date: 12/3/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 2/28/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 1A Classification
Action Date: 2/28/1994
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: ACO
Action Date: 3/14/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Interim Deadline Letter Issued
Action Date: 3/14/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 4/15/1988
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 4/2/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 4/2/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 3
Action Status: Level I - Technical Screen Audit
Action Date: 4/24/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 1B Classification
Action Date: 5/30/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

DUDLEY WATER DEPT (Continued) **U000225767**

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 6/1/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/7/1988
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 7/31/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 4
Action Status: Level II - Audit Inspection
Action Date: 7/31/2007
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: PETROLEUM
Quantity: Not reported
Location Type: UTILITY
Location Type: MUNICIPAL

D16 **GUIDA SEIBERT DAIRY PROP** **MA SHWS S100361138**
North **WEST MAIN ST** **MA RELEASE N/A**
1/2-1 **DUDLEY, MA 01571**
0.544 mi.
2873 ft. **Site 2 of 2 in cluster D**

Relative: Higher
Actual: 499 ft.

SHWS:
Name: GUIDA SEIBERT DAIRY PROP
Address: WEST MAIN ST
City,State,Zip: DUDLEY, MA 01571
Facility ID: 2-0000645
Source Type: DRUMS
Release Town: DUDLEY
Notification Date: 10/25/1989
Category: NONE
Associated ID: Not reported
Current Status: DPS
Status Date: 02/21/1996
Phase: Not reported
Response Action Outcome: Not reported
Oil Or Haz Material: Oil

Release:
Name: GUIDA SEIBERT DAIRY PROP
Address: WEST MAIN ST
City,State,Zip: DUDLEY, MA 01571
Release Tracking Number/Current Status: 2-0000645 / DPS

GUIDA SEIBERT DAIRY PROP (Continued) **S100361138**

Primary ID:	Not reported
Official City:	DUDLEY
Notification:	10/25/1989
Category:	NONE
Status Date:	02/21/1996
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	10/25/1989
Response Action Outcome:	Not reported

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	10/25/1989
Response Action Outcome:	Not reported

Action Type:	TREGS
Action Status:	WAVSIG
Action Date:	10/25/1989
Response Action Outcome:	Not reported

Action Type:	TREGS
Action Status:	WAVACC
Action Date:	11/14/1989
Response Action Outcome:	Not reported

Action Type:	TREGS
Action Status:	LSPFA
Action Date:	2/21/1996
Response Action Outcome:	Not reported

Action Type:	Downgradient Property Status
Action Status:	Fee Received - FMCRA Use Only
Action Date:	2/21/1996
Response Action Outcome:	Not reported

Action Type:	Downgradient Property Status
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	2/21/1996
Response Action Outcome:	Not reported

Action Type:	Compliance and Enforcement Action
Action Status:	FLDREQ
Action Date:	6/24/1994
Response Action Outcome:	Not reported

Action Type:	TREGS
Action Status:	WAVREC
Action Date:	8/15/1989
Response Action Outcome:	Not reported

GUIDA SEIBERT DAIRY PROP (Continued) **S100361138**

Chemicals:
- Chemical: WASTE OIL
- Quantity: Not reported
- Location Type: FORMER
- Location Type: COMMERCIAL
- Location Type: OPENSPACE
- Source: DRUMS

E17 **STATE LUST 15715** **MA SHWS S104482184**
North **138 WEST MAIN ST** **MA LUST N/A**
1/2-1 **DUDLEY, MA 01571** **MA RELEASE**
0.593 mi. **MA HW GEN**
3130 ft. **Site 1 of 2 in cluster E**

Relative: Higher
Actual: 495 ft.

SHWS:
- Name: GEOTIS PROPERTY
- Address: 138 WEST MAIN ST
- City,State,Zip: DUDLEY, MA 015710000
- Facility ID: 2-0013051
- Source Type: Not reported
- Release Town: DUDLEY
- Notification Date: 11/22/1999
- Category: 120 DY
- Associated ID: Not reported
- Current Status: RAO
- Status Date: 05/25/2000
- Phase: Not reported
- Response Action Outcome: A2
- Oil Or Haz Material: Not reported

LUST:

Facility:
- Name: STATE LUST 15715
- Address: 138 WEST MAIN ST
- City,State,Zip: DUDLEY, MA 015710000
- **Current Status:** **Response Action Outcome**
- Release Tracking Number/Current Status: 2-0014060 / RAO
- Status Date: 12/18/2001
- Source Type: UST
- Release Town: DUDLEY
- Notification Date: 10/24/2001
- Category: 72 HR
- Associated ID: Not reported
- Phase: Not reported
- Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
- Oil Or Haz Material: Oil

- Location Type: COMMERCIAL
- Source: UST

Click here to access the MA DEP site for this facility:

STATE LUST 15715 (Continued) **S104482184**

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 600 parts per million

Actions:
Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 1/18/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level III - Comprehensive Audit
Action Date: 1/18/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/24/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/24/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/12/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/18/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 12/20/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 2/11/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: NAFVIO
Action Date: 2/27/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been

STATE LUST 15715 (Continued) **S104482184**

reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level II - Audit Inspection
Action Date: 2/27/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level III - Comprehensive Audit
Action Date: 2/27/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 2/27/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 5/6/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 6/29/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Release:
Name: GEOTIS PROPERTY
Address: 138 WEST MAIN ST
City,State,Zip: DUDLEY, MA 015710000
Release Tracking Number/Current Status: 2-0013051 / RAO
Primary ID: Not reported
Official City: DUDLEY
Notification: 11/22/1999
Category: 120 DY
Status Date: 05/25/2000
Phase: Not reported
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 1/18/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

STATE LUST 15715 (Continued) **S104482184**

Action Type: Response Action Outcome - RAO
Action Status: Level III - Comprehensive Audit
Action Date: 1/18/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 11/22/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNF
Action Status: Reportable Release under MGL 21E
Action Date: 11/22/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/22/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 11/23/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 12/10/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Revised Statement or Transmittal Received
Action Date: 12/10/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/14/1999
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 12/30/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 2/11/2002

STATE LUST 15715 (Continued) **S104482184**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level III - Comprehensive Audit
Action Date: 2/25/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 2/25/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 4/18/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FOLOFF
Action Date: 5/10/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 5/25/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 6/29/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: THP
Quantity: 4.2 milligrams per liter
Chemical: MOTOR OIL - THP
Quantity: 2700 milligrams per kilogram
Chemical: DISSOLVED LEAD
Quantity: 280 micrograms per liter

Name: STATE LUST 15715
Address: 138 WEST MAIN ST
City,State,Zip: DUDLEY, MA 015710000
Release Tracking Number/Current Status: 2-0014060 / RAO
Primary ID: Not reported
Official City: DUDLEY
Notification: 10/24/2001
Category: 72 HR
Status Date: 12/18/2001
Phase: Not reported

STATE LUST 15715 (Continued) **S104482184**

Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type: An activity type that is related to an Audit
Action Status: NOA
Action Date: 1/18/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level III - Comprehensive Audit
Action Date: 1/18/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 10/24/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 10/24/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/12/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/18/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 12/20/2001
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RLFA
Action Status: FLDRAN
Action Date: 2/11/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: NAFVIO

STATE LUST 15715 (Continued) **S104482184**

Action Date: 2/27/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level II - Audit Inspection
Action Date: 2/27/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level III - Comprehensive Audit
Action Date: 2/27/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: Notice of Non-compliance related to an Audit
Action Date: 2/27/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: Audit Follow-up Completion Statement Received
Action Date: 5/6/2002
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 6/29/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: #2 FUEL OIL
Quantity: 600 parts per million
Location Type: COMMERCIAL
Source: UST

HW GEN:
Name: ROBS AUTO
Address: 138 WEST MAIN ST
City,State,Zip: DUDLEY, MA 01571
EPA Id: MV5089430009
RCRA Generator Status: VSQG
State Generator Status: VQG-MA

E18 **CORNER MASON RD. & W. MAIN ST.** **MA SHWS** **S113411663**
North **136 WEST MAIN STREET** **MA RELEASE** **N/A**
1/2-1 **DUDLEY, MA 01571**
0.604 mi.
3189 ft. **Site 2 of 2 in cluster E**

Relative:
Higher

Actual:
493 ft.

SHWS:

Name:	CORNER MASON RD. & W. MAIN ST.
Address:	136 WEST MAIN STREET
City,State,Zip:	DUDLEY, MA 015710000
Facility ID:	2-0018858
Source Type:	UNKNOWN
Release Town:	DUDLEY
Notification Date:	04/02/2013
Category:	120 DY
Associated ID:	Not reported
Current Status:	RAO
Status Date:	03/12/2014
Phase:	Not reported
Response Action Outcome:	A2
Oil Or Haz Material:	Not reported

Release:

Name:	CORNER MASON RD. & W. MAIN ST.
Address:	136 WEST MAIN STREET
City,State,Zip:	DUDLEY, MA 015710000
Release Tracking Number/Current Status:	2-0018858 / RAO
Primary ID:	Not reported
Official City:	DUDLEY
Notification:	04/02/2013
Category:	120 DY
Status Date:	03/12/2014
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	10/7/2013
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	RLFA
Action Status:	FLDRAN
Action Date:	11/4/2013
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type:	An activity type that is related to an Audit
Action Status:	NAFNVD
Action Date:	12/4/2013
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

CORNER MASON RD. & W. MAIN ST. (Continued) **S113411663**

Action Type:	Release Abatement Measure
Action Status:	Level II - Audit Inspection
Action Date:	12/4/2013
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	2/10/2014
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	3/12/2014
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	3/14/2014
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Fee Received - FMCRA Use Only
Action Date:	3/28/2014
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	4/15/2013
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	4/2/2013
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	4/2/2013
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	4/24/2013
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Abatement Measure
Action Status:	Fee Received - FMCRA Use Only
Action Date:	4/25/2013

CORNER MASON RD. & W. MAIN ST. (Continued) **S113411663**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 5/15/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: SHPFAC
Action Date: 6/19/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 9/19/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: TOTAL PETROLEUM HYDROCARBONS
Quantity: 1300 milligrams per kilogram
Location Type: INDUSTRIAL
Source: UNKNOWN

---

19 **STEVENS LINEN ASSOC INC** **MA SHWS S105199038**
East **SCHOFIELD AVE** **MA RELEASE N/A**
1/2-1 **DUDLEY, MA 01571**
0.670 mi.
3537 ft.

Relative: **Lower**
Actual: **409 ft.**

SHWS:
Name: STEVENS LINEN ASSOC INC
Address: SCHOFIELD AVE
City,State,Zip: DUDLEY, MA 015710000
Facility ID: 2-0001011
Source Type: LAGOON
Release Town: DUDLEY
Notification Date: 06/22/1993
Category: NONE
Associated ID: Not reported
Current Status: RAO
Status Date: 12/22/2000
Phase: PHASE II
Response Action Outcome: A2
Oil Or Haz Material: Oil

Release:
Name: STEVENS LINEN ASSOC INC
Address: SCHOFIELD AVE
City,State,Zip: DUDLEY, MA 015710000
Release Tracking Number/Current Status: 2-0001011 / RAO
Primary ID: Not reported
Official City: DUDLEY
Notification: 06/22/1993

STEVENS LINEN ASSOC INC (Continued) **S105199038**

Category: NONE
Status Date: 12/22/2000
Phase: PHASE II
Response Action Outcome: A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type: Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type: Release Abatement Measure
Action Status: Status or Interim Report Received
Action Date: 1/5/1998
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Permit Effective Date
Action Date: 11/20/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 12/22/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 12/22/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 12/6/2000
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 4/3/2006
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 6/17/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: TREGS
Action Status: LSPFA
Action Date: 6/2/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

STEVENS LINEN ASSOC INC (Continued) **S105199038**

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 6/22/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 6/22/1993
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Fee Received - FMCRA Use Only
Action Date: 6/3/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 7/3/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Tier 1B Classification
Action Date: 8/1/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/1/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 8/1/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: TREGS
Action Status: LSPFA
Action Date: 8/1/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: PIP
Action Status: Public Comment Period Initiated on Submittal
Action Date: 8/12/1997
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BWS02
Action Status: APPROV
Action Date: Not reported

STEVENS LINEN ASSOC INC (Continued) **S105199038**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: WASTE OIL
Quantity: Not reported
Chemical: CHLORINATED SOLVENTS
Quantity: Not reported
Source: LAGOON

---

20 North 1/2-1 0.671 mi. 3543 ft. **MASON ST TO PROGRESS ST** **MA SHWS S108117367**
WEST MAIN ST **MA RELEASE N/A**
DUDLEY, MA 01571

Relative: Higher

Actual: 487 ft.

SHWS:
Name: MASON ST TO PROGRESS ST
Address: WEST MAIN ST
City,State,Zip: DUDLEY, MA 015710000
Facility ID: 2-0016299
Source Type: UNKNOWN
Release Town: DUDLEY
Notification Date: 07/07/2006
Category: 120 DY
Associated ID: Not reported
Current Status: URAM
Status Date: 07/14/2006
Phase: Not reported
Response Action Outcome: Not reported
Oil Or Haz Material: Not reported

Release:
Name: MASON ST TO PROGRESS ST
Address: WEST MAIN ST
City,State,Zip: DUDLEY, MA 015710000
Release Tracking Number/Current Status: 2-0016299 / URAM
Primary ID: Not reported
Official City: DUDLEY
Notification: 07/07/2006
Category: 120 DY
Status Date: 07/14/2006
Phase: Not reported
Response Action Outcome: -
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Utility-related Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 10/17/2006
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Completion Statement Received

MASON ST TO PROGRESS ST (Continued) **S108117367**

Action Date: 10/6/2006
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Notice of Intent to Conduct a URAM
Action Date: 7/14/2006
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Work Started
Action Date: 7/14/2006
Response Action Outcome: Not reported

Action Type: Utility-related Abatement Measure
Action Status: Notice of Intent to Conduct a URAM
Action Date: 7/7/2006
Response Action Outcome: Not reported

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/7/2006
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/22/2006
Response Action Outcome: Not reported

Chemicals:
Chemical: UNKNOWN CHEMICAL OF UNKNOWN TYPE
Quantity: 1400 parts per million
Location Type: RIGHTOFWAY
Location Type: ROADWAY
Source: UNKNOWN

21
North
1/2-1
0.730 mi.
3857 ft.

DEARY BROTHERS FMR
104-110 WEST MAIN ST
DUDLEY, MA 01571

MA SHWS **S104905195**
MA LUST **N/A**
MA BROWNFIELDS
MA RELEASE
MA ENF

Relative: Higher

Actual: 493 ft.

SHWS:
Name: DEARY BROTHERS FMR
Address: 104-110 WEST MAIN ST
City,State,Zip: DUDLEY, MA 01571
Facility ID: 2-0000359
Source Type: UNCONTAIN
Release Town: DUDLEY
Notification Date: 07/12/1994
Category: NONE
Associated ID: Not reported
Current Status: PSNC
Status Date: 08/03/2015
Phase: Not reported
Response Action Outcome: PN
Oil Or Haz Material: Not reported

DEARY BROTHERS FMR (Continued) **S104905195**

LUST:

Facility:

Name:	DEARY BROTHERS FMR
Address:	104-110 WEST MAIN ST
City,State,Zip:	DUDLEY, MA 01571
Current Status:	**Permanent Solution with No Conditions**
Release Tracking Number/Current Status:	2-0000359 / PSNC
Status Date:	08/03/2015
Source Type:	UST
Release Town:	DUDLEY
Notification Date:	07/12/1994
Category:	NONE
Associated ID:	Not reported
Phase:	Not reported
Response Action Outcome:	PN - PN
Oil Or Haz Material:	Not reported
Location Type:	FORMER
Location Type:	COMMERCIAL
Source:	UNCONTAIN
Source:	UST

Click here to access the MA DEP site for this facility:

Chemicals:

Chemical:	UNKNOWN
Quantity:	Not reported

Actions:

Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	1/15/2007
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	Remedy Operation Status Submittal Received
Action Date:	1/15/2015
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	1/15/2015
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	Remedy Operation Status Submittal Received
Action Date:	1/22/2014
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	1/22/2014
Response Action Outcome:	PN

DEARY BROTHERS FMR (Continued) **S104905195**

Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	1/24/2013
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	RMRINI
Action Date:	1/24/2013
Response Action Outcome:	PN
Action Type:	Phase 4
Action Status:	Completion Statement Received
Action Date:	1/24/2013
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	Remedy Operation Status Submittal Received
Action Date:	1/24/2013
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	Work Started
Action Date:	1/24/2013
Response Action Outcome:	PN
Action Type:	BOL
Action Status:	SHPFAC
Action Date:	10/15/2012
Response Action Outcome:	PN
Action Type:	RLFA
Action Status:	FLDRUN
Action Date:	10/9/1996
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	Level I - Technical Screen Audit
Action Date:	11/12/2014
Response Action Outcome:	PN
Action Type:	RLFA
Action Status:	FLDRUN
Action Date:	11/15/2012
Response Action Outcome:	PN
Action Type:	Tier Classification
Action Status:	Public Comment Period Initiated on Submittal
Action Date:	11/20/2007
Response Action Outcome:	PN
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	11/26/1996
Response Action Outcome:	PN
Action Type:	Phase 4
Action Status:	Level II - Audit Inspection

DEARY BROTHERS FMR (Continued) **S104905195**

Action Date: 11/27/2012
Response Action Outcome: PN

Action Type: An activity type that is related to an Audit
Action Status: NAFVIO
Action Date: 11/27/2012
Response Action Outcome: PN

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 11/30/2012
Response Action Outcome: PN

Action Type: Phase 4
Action Status: Level II - Audit Inspection
Action Date: 11/30/2012
Response Action Outcome: PN

Action Type: An activity type that is related to an Audit
Action Status: DEPRET
Action Date: 11/30/2012
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/1/2004
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Permit or Tier 2 Extension Denied
Action Date: 12/21/2007
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Written Approval of Plan
Action Date: 2/10/1995
Response Action Outcome: PN

Action Type: Compliance and Enforcement Action
Action Status: ACO
Action Date: 2/29/2008
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 2/3/1995
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/14/1994
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Tier 1A Classification
Action Date: 3/14/1994
Response Action Outcome: PN

DEARY BROTHERS FMR (Continued) **S104905195**

Action Type:	Release Disposition
Action Status:	Valid Transition Site
Action Date:	4/15/1988
Response Action Outcome:	PN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	5/12/1988
Response Action Outcome:	PN
Action Type:	Phase 2
Action Status:	Tier 1A or Priority Submittal Approved
Action Date:	5/21/1991
Response Action Outcome:	PN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	5/29/2001
Response Action Outcome:	PN
Action Type:	Phase 4
Action Status:	Written Plan Received
Action Date:	5/29/2009
Response Action Outcome:	PN
Action Type:	Tier Classification
Action Status:	Tier 1B Classification
Action Date:	6/10/2002
Response Action Outcome:	PN
Action Type:	Phase 2
Action Status:	Delay in Meeting RA Deadline Ordered or Approved
Action Date:	6/16/2008
Response Action Outcome:	PN
Action Type:	Compliance and Enforcement Action
Action Status:	Amendment Received or Issued
Action Date:	6/16/2008
Response Action Outcome:	PN
Action Type:	Phase 3
Action Status:	Delay in Meeting RA Deadline Ordered or Approved
Action Date:	6/16/2008
Response Action Outcome:	PN
Action Type:	TREGS
Action Status:	WAVDN
Action Date:	7/1/1992
Response Action Outcome:	PN
Action Type:	TREGS
Action Status:	WAVREC
Action Date:	7/1/1992
Response Action Outcome:	PN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.

DEARY BROTHERS FMR (Continued) **S104905195**

Action Date: 7/11/1988
Response Action Outcome: PN

Action Type: Phase 5
Action Status: RMRINT
Action Date: 7/16/2014
Response Action Outcome: PN

Action Type: Phase 5
Action Status: Remedy Operation Status Submittal Received
Action Date: 7/16/2014
Response Action Outcome: PN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 7/2/2007
Response Action Outcome: PN

Action Type: Phase 4
Action Status: Level I - Technical Screen Audit
Action Date: 7/20/2009
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Written Approval of Plan
Action Date: 7/22/1996
Response Action Outcome: PN

Action Type: Phase 5
Action Status: RMRINT
Action Date: 7/24/2013
Response Action Outcome: PN

Action Type: Phase 5
Action Status: Remedy Operation Status Submittal Received
Action Date: 7/24/2013
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/25/2012
Response Action Outcome: PN

Action Type: Phase 3
Action Status: Revised Statement or Transmittal Received
Action Date: 7/25/2012
Response Action Outcome: PN

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 7/25/2012
Response Action Outcome: PN

Action Type: Phase 2
Action Status: Revised Statement or Transmittal Received
Action Date: 7/25/2012
Response Action Outcome: PN

DEARY BROTHERS FMR (Continued) **S104905195**

Action Type:	Tier Classification
Action Status:	Tier 1C Classification
Action Date:	8/11/2011
Response Action Outcome:	PN
Action Type:	Tier Classification
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	8/11/2011
Response Action Outcome:	PN
Action Type:	Tier Classification
Action Status:	EPETOP
Action Date:	8/11/2011
Response Action Outcome:	PN
Action Type:	TREGS
Action Status:	TPNOT
Action Date:	8/15/1994
Response Action Outcome:	PN
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	8/28/2008
Response Action Outcome:	PN
Action Type:	Phase 3
Action Status:	Completion Statement Received
Action Date:	8/28/2008
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	RMRFIN
Action Date:	8/3/2015
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	Completion Statement Received
Action Date:	8/3/2015
Response Action Outcome:	PN
Action Type:	Response Action Outcome - RAO
Action Status:	PSNRCD
Action Date:	8/3/2015
Response Action Outcome:	PN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	8/6/2007
Response Action Outcome:	PN
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	8/8/2007
Response Action Outcome:	PN
Action Type:	Phase 3
Action Status:	Level I - Technical Screen Audit

DEARY BROTHERS FMR (Continued) **S104905195**

Action Date: 9/25/2008
Response Action Outcome: PN

Action Type: Phase 2
Action Status: Level I - Technical Screen Audit
Action Date: 9/25/2008
Response Action Outcome: PN

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 9/26/1994
Response Action Outcome: PN

Action Type: BWS20
Action Status: DENY
Action Date: Not reported
Response Action Outcome: PN

Action Type: BWS03
Action Status: APPROV
Action Date: Not reported
Response Action Outcome: PN

BROWNFIELDS 2:
Name: DEARY BROTHERS
Address: 104-110 WEST MAIN ST
City,State,Zip: DUDLEY, MA
RTN: 2-0000359
RAO Class: Not reported
Other RTNs: Not reported
Current Owner: Lazo, Michael D / Cape Haze Realty Llc
MCP Status: PSNC
AUL: Not reported
COCs: Unknown
Former Use: Commercial, Former
Current Use: office Building / Service Shop
Total Acreage: 2.89
Fact Sheet: http://massdep.org/CERO/2-0000359.pdf

Release:
Name: DEARY BROTHERS FMR
Address: 104-110 WEST MAIN ST
City,State,Zip: DUDLEY, MA 01571
Release Tracking Number/Current Status: 2-0000359 / PSNC
Primary ID: Not reported
Official City: DUDLEY
Notification: 07/12/1994
Category: NONE
Status Date: 08/03/2015
Phase: Not reported
Response Action Outcome: PN - PN
Oil / Haz Material Type: Not reported

DEARY BROTHERS FMR (Continued) **S104905195**

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	1/15/2007
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	Remedy Operation Status Submittal Received
Action Date:	1/15/2015
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	1/15/2015
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	Remedy Operation Status Submittal Received
Action Date:	1/22/2014
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	1/22/2014
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	Status or Interim Report Received
Action Date:	1/24/2013
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	RMRINI
Action Date:	1/24/2013
Response Action Outcome:	PN
Action Type:	Phase 4
Action Status:	Completion Statement Received
Action Date:	1/24/2013
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	Remedy Operation Status Submittal Received
Action Date:	1/24/2013
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	Work Started
Action Date:	1/24/2013
Response Action Outcome:	PN
Action Type:	BOL
Action Status:	SHPFAC
Action Date:	10/15/2012
Response Action Outcome:	PN

DEARY BROTHERS FMR (Continued) **S104905195**

Action Type:	RLFA
Action Status:	FLDRUN
Action Date:	10/9/1996
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	Level I - Technical Screen Audit
Action Date:	11/12/2014
Response Action Outcome:	PN
Action Type:	RLFA
Action Status:	FLDRUN
Action Date:	11/15/2012
Response Action Outcome:	PN
Action Type:	Tier Classification
Action Status:	Public Comment Period Initiated on Submittal
Action Date:	11/20/2007
Response Action Outcome:	PN
Action Type:	Release Abatement Measure
Action Status:	Status or Interim Report Received
Action Date:	11/26/1996
Response Action Outcome:	PN
Action Type:	Phase 4
Action Status:	Level II - Audit Inspection
Action Date:	11/27/2012
Response Action Outcome:	PN
Action Type:	An activity type that is related to an Audit
Action Status:	NAFVIO
Action Date:	11/27/2012
Response Action Outcome:	PN
Action Type:	An activity type that is related to an Audit
Action Status:	NAFNVD
Action Date:	11/30/2012
Response Action Outcome:	PN
Action Type:	Phase 4
Action Status:	Level II - Audit Inspection
Action Date:	11/30/2012
Response Action Outcome:	PN
Action Type:	An activity type that is related to an Audit
Action Status:	DEPRET
Action Date:	11/30/2012
Response Action Outcome:	PN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	12/1/2004
Response Action Outcome:	PN
Action Type:	Tier Classification
Action Status:	Permit or Tier 2 Extension Denied

DEARY BROTHERS FMR (Continued) **S104905195**

Action Date: 12/21/2007
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Written Approval of Plan
Action Date: 2/10/1995
Response Action Outcome: PN

Action Type: Compliance and Enforcement Action
Action Status: ACO
Action Date: 2/29/2008
Response Action Outcome: PN

Action Type: Release Abatement Measure
Action Status: Written Plan Received
Action Date: 2/3/1995
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/14/1994
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Tier 1A Classification
Action Date: 3/14/1994
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Valid Transition Site
Action Date: 4/15/1988
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/12/1988
Response Action Outcome: PN

Action Type: Phase 2
Action Status: Tier 1A or Priority Submittal Approved
Action Date: 5/21/1991
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 5/29/2001
Response Action Outcome: PN

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 5/29/2009
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Tier 1B Classification
Action Date: 6/10/2002
Response Action Outcome: PN

DEARY BROTHERS FMR (Continued) **S104905195**

Action Type:	Phase 2
Action Status:	Delay in Meeting RA Deadline Ordered or Approved
Action Date:	6/16/2008
Response Action Outcome:	PN
Action Type:	Compliance and Enforcement Action
Action Status:	Amendment Received or Issued
Action Date:	6/16/2008
Response Action Outcome:	PN
Action Type:	Phase 3
Action Status:	Delay in Meeting RA Deadline Ordered or Approved
Action Date:	6/16/2008
Response Action Outcome:	PN
Action Type:	TREGS
Action Status:	WAVDN
Action Date:	7/1/1992
Response Action Outcome:	PN
Action Type:	TREGS
Action Status:	WAVREC
Action Date:	7/1/1992
Response Action Outcome:	PN
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	7/11/1988
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	RMRINT
Action Date:	7/16/2014
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	Remedy Operation Status Submittal Received
Action Date:	7/16/2014
Response Action Outcome:	PN
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	7/2/2007
Response Action Outcome:	PN
Action Type:	Phase 4
Action Status:	Level I - Technical Screen Audit
Action Date:	7/20/2009
Response Action Outcome:	PN
Action Type:	Release Abatement Measure
Action Status:	Written Approval of Plan
Action Date:	7/22/1996
Response Action Outcome:	PN
Action Type:	Phase 5
Action Status:	RMRINT

DEARY BROTHERS FMR (Continued) **S104905195**

Action Date: 7/24/2013
Response Action Outcome: PN

Action Type: Phase 5
Action Status: Remedy Operation Status Submittal Received
Action Date: 7/24/2013
Response Action Outcome: PN

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 7/25/2012
Response Action Outcome: PN

Action Type: Phase 3
Action Status: Revised Statement or Transmittal Received
Action Date: 7/25/2012
Response Action Outcome: PN

Action Type: Phase 4
Action Status: Written Plan Received
Action Date: 7/25/2012
Response Action Outcome: PN

Action Type: Phase 2
Action Status: Revised Statement or Transmittal Received
Action Date: 7/25/2012
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Tier 1C Classification
Action Date: 8/11/2011
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 8/11/2011
Response Action Outcome: PN

Action Type: Tier Classification
Action Status: EPETOP
Action Date: 8/11/2011
Response Action Outcome: PN

Action Type: TREGS
Action Status: TPNOT
Action Date: 8/15/1994
Response Action Outcome: PN

Action Type: Phase 2
Action Status: Completion Statement Received
Action Date: 8/28/2008
Response Action Outcome: PN

Action Type: Phase 3
Action Status: Completion Statement Received
Action Date: 8/28/2008
Response Action Outcome: PN

DEARY BROTHERS FMR (Continued) **S104905195**

Action Type: Phase 5
Action Status: RMRFIN
Action Date: 8/3/2015
Response Action Outcome: PN

Action Type: Phase 5
Action Status: Completion Statement Received
Action Date: 8/3/2015
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD
Action Date: 8/3/2015
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 8/6/2007
Response Action Outcome: PN

Action Type: RLFA
Action Status: FOLOFF
Action Date: 8/8/2007
Response Action Outcome: PN

Action Type: Phase 3
Action Status: Level I - Technical Screen Audit
Action Date: 9/25/2008
Response Action Outcome: PN

Action Type: Phase 2
Action Status: Level I - Technical Screen Audit
Action Date: 9/25/2008
Response Action Outcome: PN

Action Type: Compliance and Enforcement Action
Action Status: Notice of Non-Compliance Issued
Action Date: 9/26/1994
Response Action Outcome: PN

Action Type: BWS20
Action Status: DENY
Action Date: Not reported
Response Action Outcome: PN

Action Type: BWS03
Action Status: APPROV
Action Date: Not reported
Response Action Outcome: PN

Chemicals:
Chemical: UNKNOWN
Quantity: Not reported
Location Type: FORMER
Location Type: COMMERCIAL
Source: UNCONTAIN
Source: UST

DEARY BROTHERS FMR (Continued) **S104905195**

ENFORCEMENT:

Name:	0104B WEST MAIN STREET, LLC
Address:	104-110 WEST MAIN ST
City,State,Zip:	DUDLEY, MA 01571
Region:	CERO
DEP Region:	CERO
DEP Program:	3a
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	2-0000359
High Or Low Level Enforcement:	LLE
FMF #:	0
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	DUDLEY
Date Executed:	11/27/2012
ENF #:	NON-CE-12-3A081
Document Type:	NON
AG Ref (Y/N):	NO
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	NO
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

---

22 **CONSTRUCTION LOT** **MA SHWS** **S123651100**
NE **144 SCHOFIELD AVE** **MA RELEASE** **N/A**
1/2-1 **DUDLEY, MA** **MA ASBESTOS**
0.735 mi.
3881 ft.

Relative:
Lower

Actual:
410 ft.

SHWS:

Name:	CONSTRUCTION LOT
Address:	144 SCHOFIELD AVE
City,State,Zip:	DUDLEY, MA
Facility ID:	2-0020957
Source Type:	FUELTANK
Release Town:	DUDLEY
Notification Date:	07/13/2019
Category:	TWO HR
Associated ID:	Not reported
Current Status:	PSNC
Status Date:	09/08/2019
Phase:	Not reported
Response Action Outcome:	PN
Oil Or Haz Material:	Not reported

Name:	CONSTRUCTION LOT
Address:	144 SCHOFIELD AVE
City,State,Zip:	DUDLEY, MA

CONSTRUCTION LOT (Continued) **S123651100**

Facility ID: 2-0020957
Source Type: HOSE
Release Town: DUDLEY
Notification Date: 07/13/2019
Category: TWO HR
Associated ID: Not reported
Current Status: PSNC
Status Date: 09/08/2019
Phase: Not reported
Response Action Outcome: PN
Oil Or Haz Material: Not reported

Release:
Name: CONSTRUCTION LOT
Address: 144 SCHOFIELD AVE
City,State,Zip: DUDLEY, MA
Release Tracking Number/Current Status: 2-0020957 / PSNC
Primary ID: Not reported
Official City: DUDLEY
Notification: 07/13/2019
Category: TWO HR
Status Date: 09/08/2019
Phase: Not reported
Response Action Outcome: PN - PN
Oil / Haz Material Type: Not reported

Click here to access the MA DEP site for this facility:

Actions:
Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 7/13/2019
Response Action Outcome: PN

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 7/13/2019
Response Action Outcome: PN

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 7/22/2019
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 9/20/2019
Response Action Outcome: PN

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 9/8/2019
Response Action Outcome: PN

Action Type: Response Action Outcome - RAO
Action Status: PSNRCD

CONSTRUCTION LOT (Continued) **S123651100**

Action Date: 9/8/2019
Response Action Outcome: PN

Chemicals:
Chemical: Not reported
Quantity: Not reported
Location Type: RESIDNTIAL
Source: FUELTANK
Source: HOSE

ASBESTOS:
Name: COMMERCIAL
Address: 144 SCHOFIELD AVE
City,State,Zip: DUDLEY, MA
Notification: Not reported
DEP Region: Not reported
Notifiers Name: Not reported
Start Date: 04/04/2019
End Date: 04/05/2019
Date Entered: Not reported
Entry Date: 04/03/2019
Quantity Materical Removed SF: 2
Quantity Material Removed LF: Not reported
Project Description: OTHER SINK MASTIC
AR Tracking ID: 316749
Super Lic Number: AS000278
Monitor Lic Number: AM060919
Lab Lic Number: AA000152
Year: 2019
Sticker Number: 100305728
Form Type: ANF-001
Fee Status: HUNDRED
Facility Phone: 7742301669
Sub Town: Not reported
Worksite: KITCHEN
Occupied: 0
Contractor: AC000921
Contract Type: WRITTEN
Hours: 6AM 6PM
Project Type: Dem
Abatement Process: Disp
Location: INDOORS
Decon Process: 2 CHAMBER WASH BUCKET
Disposal Methods: 6 MILLD OUBLE BAG
Facility Usage: COMMERCIAL
Waiver Given: Not reported
DEP Waiver Number: C-AW-19-04
DLWD Waiver Number: 25392-2019
Small Owner Occ: 0
Owner Name: WESLEY PETTIT
Owner Address: 8 ERIC WAY
Owner City: DUDLEY
Owner State: MA
On Site Manager Name: NA
On Site Manager Phone: 0000000000
Ins Comp: ACE

CONSTRUCTION LOT (Continued) **S123651100**

Policy Number:	65620B
EXP Date:	5/17/2019
Facility Size:	2200
Transporter Name:	AERO TEC
Transporter Address:	163 RICE AVE
Transporter City:	NORTHBOROUGH
Transporter State:	MA
Final Site:	Not reported
Certified Name:	GREG HARDING
Cert Sign Date:	04/03/2019
Certified Company:	AERO TEC
Certified Phone:	9783759534
Entered_by:	LOWBLOW

F23 **ROADWAY** **MA SHWS S112288280**
NE **120 SCHOLFIELD RD** **MA RELEASE N/A**
1/2-1 **DUDLEY, MA 01571**
0.848 mi.
4478 ft. **Site 1 of 2 in cluster F**

Relative: **Lower**
Actual: **416 ft.**

SHWS:

Name:	ROADWAY
Address:	120 SCHOLFIELD RD
City,State,Zip:	DUDLEY, MA 015710000
Facility ID:	2-0018751
Source Type:	FUELTANK
Release Town:	DUDLEY
Notification Date:	11/19/2012
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	01/16/2013
Phase:	Not reported
Response Action Outcome:	A2
Oil Or Haz Material:	Oil

Release:

Name:	ROADWAY
Address:	120 SCHOLFIELD RD
City,State,Zip:	DUDLEY, MA 015710000
Release Tracking Number/Current Status:	2-0018751 / RAO
Primary ID:	Not reported
Official City:	DUDLEY
Notification:	11/19/2012
Category:	TWO HR
Status Date:	01/16/2013
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	BOL
Action Status:	SHPFAC
Action Date:	1/10/2013

ROADWAY (Continued) **S112288280**

Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: RNFE
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/15/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 1/16/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Completion Statement Received
Action Date: 1/16/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: BOL
Action Status: Transmittal, Notice, or Notification Received
Action Date: 1/4/2013
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Immediate Response Action
Action Status: Oral Approval of Plan or Action
Action Date: 11/19/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 11/19/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Action Type: A Notice sent to a Potentially Responsible Party (PRP)
Action Status: A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date: 12/11/2012
Response Action Outcome: A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:
Chemical: DIESEL FUEL
Quantity: 15 gallons
Location Type: ROADWAY
Source: FUELTANK

F24
NE
1/2-1
0.849 mi.
4484 ft.

DUDLEY GP WELL NO.3
75 SCHOFIELD AVENUE
DUDLEY, MA 01571

Site 2 of 2 in cluster F

MA SHWS **S127590198**
MA RELEASE **N/A**
MA ENF

Relative:
Lower

Actual:
412 ft.

SHWS:

Name:	DUDLEY GP WELL NO.3
Address:	75 SCHOFIELD AVENUE
City,State,Zip:	DUDLEY, MA 015710000
Facility ID:	2-0021551
Source Type:	UNKNOWN
Release Town:	DUDLEY
Notification Date:	12/01/2020
Category:	72 HR
Associated ID:	Not reported
Current Status:	TIER1D
Status Date:	12/08/2021
Phase:	Not reported
Response Action Outcome:	Not reported
Oil Or Haz Material:	Not reported

Release:

Name:	DUDLEY GP WELL NO.3
Address:	75 SCHOFIELD AVENUE
City,State,Zip:	DUDLEY, MA 015710000
Release Tracking Number/Current Status:	2-0021551 / TIER1D
Primary ID:	Not reported
Official City:	DUDLEY
Notification:	12/01/2020
Category:	72 HR
Status Date:	12/08/2021
Phase:	Not reported
Response Action Outcome:	-
Oil / Haz Material Type:	Not reported

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Compliance and Enforcement Action
Action Status:	RFI
Action Date:	10/22/2021
Response Action Outcome:	Not reported
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	12/1/2020
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	RFI
Action Date:	2/16/2021
Response Action Outcome:	Not reported
Action Type:	Compliance and Enforcement Action
Action Status:	RFI
Action Date:	2/8/2022
Response Action Outcome:	Not reported

DUDLEY GP WELL NO.3 (Continued) **S127590198**

Action Type: Compliance and Enforcement Action
Action Status: RFI
Action Date: 4/7/2021
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 5/12/2022
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: RFI
Action Date: 6/24/2021
Response Action Outcome: Not reported

Action Type: Compliance and Enforcement Action
Action Status: RFI
Action Date: 6/9/2021
Response Action Outcome: Not reported

Action Type: RLFA
Action Status: FOLOFF
Action Date: 6/9/2022
Response Action Outcome: Not reported

Chemicals:
Chemical: Not reported
Quantity: Not reported
Location Type: MUNICIPAL
Source: UNKNOWN

ENFORCEMENT:
Name: GENTEX OPTICS, INC.
Address: 75 SCHOFIELD AVENUE
City,State,Zip: DUDLEY, MA 015710000
Region: CERO
DEP Region: CERO
DEP Program: 3
DEP Bureau: BWSC
Program: BWSC
Program Id: 2-0021551
High Or Low Level Enforcement: LLE
FMF #: Not reported
Comptroller Billing Name: Not reported
Town Where Violation Occurred: DUDLEY
Date Executed: 10/22/2021
ENF #: 00012146
Document Type: IDL
AG Ref (Y/N): NO
Doc Archived (Y/N): Not reported
EJ Community (Y/N): NO
Regional Comment: Not reported
Final Payment Due Date: Not reported
ACOP $: Not reported
PAN $: Not reported
EMS (Y/N): Not reported

DUDLEY GP WELL NO.3 (Continued) **S127590198**

EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

Name:	INTERFACEFABRIC FINISHING, INC
Address:	75 SCHOFIELD AVENUE
City,State,Zip:	DUDLEY, MA 015710000
Region:	CERO
DEP Region:	CERO
DEP Program:	3
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	2-0021551
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	DUDLEY
Date Executed:	06/24/2021
ENF #:	00011470
Document Type:	IDL
AG Ref (Y/N):	NO
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	YES
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

Name:	SHIELD PACKAGING CO., INC.
Address:	75 SCHOFIELD AVENUE
City,State,Zip:	DUDLEY, MA 015710000
Region:	CERO
DEP Region:	CERO
DEP Program:	3
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	2-0021551
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	DUDLEY
Date Executed:	06/24/2021
ENF #:	00011473
Document Type:	IDL
AG Ref (Y/N):	NO
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	YES

DUDLEY GP WELL NO.3 (Continued) **S127590198**

Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

Name:	STEVENS MILL OWNER, LLC
Address:	75 SCHOFIELD AVENUE
City,State,Zip:	DUDLEY, MA 015710000
Region:	CERO
DEP Region:	CERO
DEP Program:	3
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	2-0021551
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	DUDLEY
Date Executed:	06/09/2021
ENF #:	00011443
Document Type:	IDL
AG Ref (Y/N):	NO
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	YES
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

Name:	DUDLEY MILL REALTY, LLC, ELISABETH PRINCE, MANAGER
Address:	75 SCHOFIELD AVENUE
City,State,Zip:	DUDLEY, MA 015710000
Region:	CERO
DEP Region:	CERO
DEP Program:	3
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	2-0021551
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	DUDLEY
Date Executed:	06/09/2021

DUDLEY GP WELL NO.3 (Continued) **S127590198**

ENF #:	00011444
Document Type:	IDL
AG Ref (Y/N):	NO
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	YES
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned
Name:	DUDLEY MILL REALTY, LLC, BARBARA O'BRIEN, MANAGER
Address:	75 SCHOFIELD AVENUE
City,State,Zip:	DUDLEY, MA 015710000
Region:	CERO
DEP Region:	CERO
DEP Program:	3
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	2-0021551
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	DUDLEY
Date Executed:	06/09/2021
ENF #:	00011466
Document Type:	IDL
AG Ref (Y/N):	NO
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	YES
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned
Name:	DUDLEY MILL REALTY, LLC, BRIAN PERRY, MANAGER
Address:	75 SCHOFIELD AVENUE
City,State,Zip:	DUDLEY, MA 015710000
Region:	CERO
DEP Region:	CERO
DEP Program:	3
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	2-0021551

DUDLEY GP WELL NO.3 (Continued) **S127590198**

High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	DUDLEY
Date Executed:	06/09/2021
ENF #:	00011467
Document Type:	IDL
AG Ref (Y/N):	NO
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	YES
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

Name:	VERDE ORGANICA, LLC
Address:	75 SCHOFIELD AVENUE
City,State,Zip:	DUDLEY, MA 015710000
Region:	CERO
DEP Region:	CERO
DEP Program:	3s
DEP Bureau:	BWSC
Program:	BWSC
Program Id:	2-0021551
High Or Low Level Enforcement:	LLE
FMF #:	Not reported
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	DUDLEY
Date Executed:	02/08/2022
ENF #:	00010620
Document Type:	IDL
AG Ref (Y/N):	NO
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	NO
Regional Comment:	Not reported
Final Payment Due Date:	Not reported
ACOP $:	Not reported
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	Not reported
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

25 NNE 1/2-1 0.930 mi. 4912 ft. **PETROLEUM SERVICE OF WORCESTER, INC.** **MA SHWS S110822146**
38 BRANDON ROAD **MA RELEASE N/A**
DUDLEY, MA

Relative: Higher

Actual: 492 ft.

SHWS:

Name:	PETROLEUM SERVICE OF WORCESTER, INC.
Address:	38 BRANDON ROAD
City,State,Zip:	DUDLEY, MA
Facility ID:	2-0018108
Source Type:	HOSE
Release Town:	DUDLEY
Notification Date:	02/18/2011
Category:	TWO HR
Associated ID:	Not reported
Current Status:	RAO
Status Date:	04/26/2011
Phase:	Not reported
Response Action Outcome:	A2
Oil Or Haz Material:	Oil

Release:

Name:	PETROLEUM SERVICE OF WORCESTER, INC.
Address:	38 BRANDON ROAD
City,State,Zip:	DUDLEY, MA
Release Tracking Number/Current Status:	2-0018108 / RAO
Primary ID:	Not reported
Official City:	DUDLEY
Notification:	02/18/2011
Category:	TWO HR
Status Date:	04/26/2011
Phase:	Not reported
Response Action Outcome:	A2 - A permanent solution has been achieved. Contamination has not been reduced to background.
Oil / Haz Material Type:	Oil

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	Immediate Response Action
Action Status:	Oral Approval of Plan or Action
Action Date:	2/18/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Release Disposition
Action Status:	Reportable Release under MGL 21E
Action Date:	2/18/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	2/22/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

PETROLEUM SERVICE OF WORCESTER, INC. (Continued) **S110822146**

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	3/10/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	RNFE
Action Status:	Transmittal, Notice, or Notification Received
Action Date:	4/19/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	RAO Statement Received
Action Date:	4/26/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.
Action Type:	Response Action Outcome - RAO
Action Status:	Level I - Technical Screen Audit
Action Date:	5/18/2011
Response Action Outcome:	A permanent solution has been achieved. Contamination has not been reduced to background.

Chemicals:

Chemical:	#2 FUEL OIL
Quantity:	20 gallons
Location Type:	ROADWAY
Location Type:	RESIDNTIAL
Source:	HOSE

---

26 **ETHAN ALLEN INC** **MA SHWS** **S106863442**
NE **35 CHASE AVE** **MA INST CONTROL** **N/A**
1/2-1 **DUDLEY, MA 01571** **MA BROWNFIELDS**
0.994 mi. **MA RELEASE**
5247 ft. **MA ASBESTOS**
MA ENF
Relative: **MA HW GEN**
Lower

Actual: SHWS:
414 ft.

Name:	ETHAN ALLEN INC
Address:	35 CHASE AVE
City,State,Zip:	DUDLEY, MA 015710000
Facility ID:	2-0015663
Source Type:	Not reported
Release Town:	DUDLEY
Notification Date:	03/28/2005
Category:	120 DY
Associated ID:	Not reported
Current Status:	RAO
Status Date:	08/06/2007
Phase:	PHASE III
Response Action Outcome:	PA
Oil Or Haz Material:	Oil and Hazardous Material

INST CONTROL:

Name:	ETHAN ALLEN INC

ETHAN ALLEN INC (Continued) **S106863442**

Address: 35 CHASE AVE
City,State,Zip: DUDLEY, MA 015710000
Release Tracking Number: 2-0015663
Action Type: AUL
Action Stat: AMEND
Action Date: 08/05/2015
Response Action Outcome: PA - PA

Name: ETHAN ALLEN INC
Address: 35 CHASE AVE
City,State,Zip: DUDLEY, MA 015710000
Release Tracking Number: 2-0015663
Action Type: AUL
Action Stat: LEGNOT
Action Date: 08/14/2015
Response Action Outcome: PA - PA

Name: ETHAN ALLEN INC
Address: 35 CHASE AVE
City,State,Zip: DUDLEY, MA 015710000
Release Tracking Number: 2-0015663
Action Type: AUL
Action Stat: RECPT
Action Date: 07/20/2007
Response Action Outcome: PA - PA

Name: ETHAN ALLEN INC
Address: 35 CHASE AVE
City,State,Zip: DUDLEY, MA 015710000
Release Tracking Number: 2-0015663
Action Type: AUL
Action Stat: SNAUDI
Action Date: 08/16/2017
Response Action Outcome: PA - PA

Name: ETHAN ALLEN INC
Address: 35 CHASE AVE
City,State,Zip: DUDLEY, MA 015710000
Release Tracking Number: 2-0015663
Action Type: AUL
Action Stat: SNAUDI
Action Date: 11/12/2014
Response Action Outcome: PA - PA

Name: ETHAN ALLEN INC
Address: 35 CHASE AVE
City,State,Zip: DUDLEY, MA 015710000
Release Tracking Number: 2-0015663
Action Type: AUL
Action Stat: TSAUD
Action Date: 08/10/2017
Response Action Outcome: PA - PA

BROWNFIELDS 2:
Name: ETHAN ALLEN INC
Address: 35 CHASE AVE
City,State,Zip: DUDLEY, MA

ETHAN ALLEN INC (Continued) **S106863442**

RTN:	2-0015663
RAO Class:	PA
Other RTNs:	Not reported
Current Owner:	Chase Mill Realty, Llc
MCP Status:	RAO
AUL:	Yes
COCs:	Arsenic, Benzene, Chrysene, Lead, Hydrocarbons
Former Use:	Industrial
Current Use:	Industrial
Total Acreage:	14.93
Fact Sheet:	http://massdep.org/CERO/2-0015663.pdf

Release:

Name:	ETHAN ALLEN INC
Address:	35 CHASE AVE
City,State,Zip:	DUDLEY, MA 015710000
Release Tracking Number/Current Status:	2-0015663 / RAO
Primary ID:	Not reported
Official City:	DUDLEY
Notification:	03/28/2005
Category:	120 DY
Status Date:	08/06/2007
Phase:	PHASE III
Response Action Outcome:	PA - PA
Oil / Haz Material Type:	Oil and Hazardous Material

Click here to access the MA DEP site for this facility:

Actions:

Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	ALSENT
Action Date:	1/26/2006
Response Action Outcome:	PA
Action Type:	RLFA
Action Status:	PRPMTG
Action Date:	10/15/2014
Response Action Outcome:	PA
Action Type:	Release Abatement Measure
Action Status:	Written Plan Received
Action Date:	10/2/2006
Response Action Outcome:	PA
Action Type:	Release Abatement Measure
Action Status:	Level I - Technical Screen Audit
Action Date:	10/20/2006
Response Action Outcome:	PA
Action Type:	Phase 1
Action Status:	Completion Statement Received
Action Date:	10/31/2005
Response Action Outcome:	PA
Action Type:	Activity and Use Limitation
Action Status:	Level II - Audit Inspection

ETHAN ALLEN INC (Continued) **S106863442**

Action Date: 11/12/2014
Response Action Outcome: PA

Action Type: Compliance and Enforcement Action
Action Status: ACOP
Action Date: 11/12/2014
Response Action Outcome: PA

Action Type: Phase 1
Action Status: Level I - Technical Screen Audit
Action Date: 11/3/2005
Response Action Outcome: PA

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 11/6/2007
Response Action Outcome: PA

Action Type: Phase 1
Action Status: Level I - Technical Screen Audit
Action Date: 11/8/2005
Response Action Outcome: PA

Action Type: Release Abatement Measure
Action Status: Completion Statement Received
Action Date: 12/4/2006
Response Action Outcome: PA

Action Type: Release Abatement Measure
Action Status: Level I - Technical Screen Audit
Action Date: 12/7/2006
Response Action Outcome: PA

Action Type: Phase 2
Action Status: Scope of Work Received
Action Date: 3/22/2006
Response Action Outcome: PA

Action Type: Tier Classification
Action Status: Transmittal, Notice, or Notification Received
Action Date: 3/22/2006
Response Action Outcome: PA

Action Type: Phase 1
Action Status: Completion Statement Received
Action Date: 3/22/2006
Response Action Outcome: PA

Action Type: Tier Classification
Action Status: Tier 1C Classification
Action Date: 3/22/2006
Response Action Outcome: PA

Action Type: Release Disposition
Action Status: Reportable Release under MGL 21E
Action Date: 3/28/2005
Response Action Outcome: PA

ETHAN ALLEN INC (Continued) **S106863442**

Action Type:	RNF
Action Status:	Reportable Release under MGL 21E
Action Date:	3/28/2005
Response Action Outcome:	PA
Action Type:	An activity type that is related to an Audit
Action Status:	NAFNVD
Action Date:	4/27/2006
Response Action Outcome:	PA
Action Type:	Tier Classification
Action Status:	Level II - Audit Inspection
Action Date:	4/27/2006
Response Action Outcome:	PA
Action Type:	RLFA
Action Status:	FOLOFF
Action Date:	4/4/2005
Response Action Outcome:	PA
Action Type:	Tier Classification
Action Status:	Public Comment Period Initiated on Submittal
Action Date:	4/4/2006
Response Action Outcome:	PA
Action Type:	RLFA
Action Status:	FLDRUN
Action Date:	5/1/2014
Response Action Outcome:	PA
Action Type:	Tier Classification
Action Status:	Permit Effective Date
Action Date:	5/11/2006
Response Action Outcome:	PA
Action Type:	A Notice sent to a Potentially Responsible Party (PRP)
Action Status:	A MassDEP piece of correspondence was issued (approvals, NORs, etc.
Action Date:	5/13/2005
Response Action Outcome:	PA
Action Type:	Immediate Response Action
Action Status:	Imminent Hazard Evaluation Received
Action Date:	5/16/2014
Response Action Outcome:	PA
Action Type:	RLFA
Action Status:	FOLFLD
Action Date:	5/23/2014
Response Action Outcome:	PA
Action Type:	Phase 2
Action Status:	Completion Statement Received
Action Date:	7/11/2006
Response Action Outcome:	PA
Action Type:	Activity and Use Limitation
Action Status:	Transmittal, Notice, or Notification Received

ETHAN ALLEN INC (Continued) **S106863442**

Action Date: 7/20/2007
Response Action Outcome: PA

Action Type: RLFA
Action Status: FLDRUN
Action Date: 7/26/2017
Response Action Outcome: PA

Action Type: Activity and Use Limitation
Action Status: Level I - Technical Screen Audit
Action Date: 8/10/2017
Response Action Outcome: PA

Action Type: Response Action Outcome - RAO
Action Status: Level I - Technical Screen Audit
Action Date: 8/11/2017
Response Action Outcome: PA

Action Type: Activity and Use Limitation
Action Status: Legal Notice Published
Action Date: 8/14/2015
Response Action Outcome: PA

Action Type: Activity and Use Limitation
Action Status: Level II - Audit Inspection
Action Date: 8/16/2017
Response Action Outcome: PA

Action Type: An activity type that is related to an Audit
Action Status: NAFNVD
Action Date: 8/16/2017
Response Action Outcome: PA

Action Type: Activity and Use Limitation
Action Status: Amendment Received or Issued
Action Date: 8/5/2015
Response Action Outcome: PA

Action Type: Response Action Outcome - RAO
Action Status: RAO Statement Received
Action Date: 8/6/2007
Response Action Outcome: PA

Action Type: Response Action Outcome - RAO
Action Status: PSAREV
Action Date: 8/6/2015
Response Action Outcome: PA

Action Type: Phase 2
Action Status: Level I - Technical Screen Audit
Action Date: 8/7/2006
Response Action Outcome: PA

Action Type: BWS03
Action Status: APPROV
Action Date: Not reported
Response Action Outcome: PA

ETHAN ALLEN INC (Continued) **S106863442**

Chemicals:

Chemical:	C11 THRU C22 AROMATIC HYDROCARBONS
Quantity:	451 milligrams per kilogram
Chemical:	INDENO(1,2,3-CD)PYRENE
Quantity:	7.61 milligrams per kilogram
Chemical:	CHRYSENE
Quantity:	12.2 milligrams per kilogram
Chemical:	LEAD
Quantity:	879 milligrams per kilogram
Chemical:	BENZO[A]ANTHRACENE
Quantity:	9.51 milligrams per kilogram
Chemical:	BENZO[B]FLUORANTHENE
Quantity:	12.1 milligrams per kilogram
Chemical:	ARSENIC
Quantity:	85.3 milligrams per kilogram
Chemical:	BENZO[A]PYRENE
Quantity:	13.5 milligrams per kilogram
Chemical:	DIBENZO[A,H]ANTHRACENE
Quantity:	1.1 milligrams per kilogram

ASBESTOS:

Name:	35 CHASE AVENUE
Address:	35 CHASE AVENUE
City,State,Zip:	DUDLEY, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	05/01/2021
End Date:	05/09/2021
Date Entered:	Not reported
Entry Date:	04/19/2021
Quantity Materical Removed SF:	2400
Quantity Material Removed LF:	Not reported
Project Description:	OTHER ADHESIVETILE
AR Tracking ID:	362944
Super Lic Number:	AS031082
Monitor Lic Number:	AM001760
Lab Lic Number:	AA000225
Year:	2021
Sticker Number:	100337462
Form Type:	ANF-001
Fee Status:	HUNDRED
Facility Phone:	5084502720
Sub Town:	Not reported
Worksite:	BUILDING 6 THROUGHOUT
Occupied:	0
Contractor:	AC000459
Contract Type:	WRITTEN
Hours:	7A-5P
Project Type:	Renv
Abatement Process:	Encl
Location:	INDOORS
Decon Process:	3 CHAMBER
Disposal Methods:	(2) 6-MIL BAGS WETTED
Facility Usage:	COMMERCIAL
Waiver Given:	Not reported

ETHAN ALLEN INC (Continued) **S106863442**

DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	VERDU ORGANICA LLC
Owner Address:	35 CHASE AVENUE
Owner City:	DUDLEY
Owner State:	MA
On Site Manager Name:	JOE VILLATICO
On Site Manager Phone:	5084502720
Ins Comp:	STATE NATIONAL INSURANCE
Policy Number:	WC0868369
EXP Date:	9/15/2021
Facility Size:	6000
Transporter Name:	ECONOMIC ENVIRO TECHS, INC.
Transporter Address:	38 INTERVALE ROAD
Transporter City:	FITCHBURG
Transporter State:	MA
Final Site:	Not reported
Certified Name:	HENRY MOSES
Cert Sign Date:	04/19/2021
Certified Company:	ECONOMIC ENVIRO TECHS, INC.
Certified Phone:	9784233999
Entered_by:	HENRYMOSES

Name:	35 CHASE AVENUE
Address:	35 CHASE AVENUE
City,State,Zip:	DUDLEY, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	05/01/2021
End Date:	05/09/2021
Date Entered:	Not reported
Entry Date:	04/19/2021
Quantity Materical Removed SF:	2400
Quantity Material Removed LF:	Not reported
Project Description:	OTHER ADHESIVE TILE
AR Tracking ID:	362967
Super Lic Number:	AS902445
Monitor Lic Number:	AM001760
Lab Lic Number:	AA000225
Year:	2021
Sticker Number:	100344643
Form Type:	ANF-001
Fee Status:	HUNDRED
Facility Phone:	5084502720
Sub Town:	Not reported
Worksite:	BUILDING 6 THROUGHOUT
Occupied:	0
Contractor:	AC000737
Contract Type:	WRITTEN
Hours:	7A-5P
Project Type:	Renv
Abatement Process:	Encl
Location:	INDOORS
Decon Process:	3 CHAMBER
Disposal Methods:	(2) 6-MIL BAGS WETTED

ETHAN ALLEN INC (Continued) **S106863442**

Facility Usage:	COMMERCIAL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	VERDU ORGANICA LLC
Owner Address:	35 CHASE AVENUE
Owner City:	DUDLEY
Owner State:	MA
On Site Manager Name:	JOE VILLATICO
On Site Manager Phone:	5084502720
Ins Comp:	GREAT DIVINE INSURANCE
Policy Number:	WCA2029799-10
EXP Date:	8/15/2021
Facility Size:	6000
Transporter Name:	ECONOMIC ENVIRO TECHS, INC
Transporter Address:	38 INTERVALE ROAD
Transporter City:	FITCHBURG
Transporter State:	MA
Final Site:	Not reported
Certified Name:	WASCAR VARGAS
Cert Sign Date:	04/19/2021
Certified Company:	ENVIROSTAFFING SOLUTIONS
Certified Phone:	9787947800
Entered_by:	ENVIROSTAFFING28

Name:	35 CHASE AVENUE
Address:	35 CHASE AVENUE
City,State,Zip:	DUDLEY, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	11/06/2021
End Date:	11/10/2021
Date Entered:	Not reported
Entry Date:	11/05/2021
Quantity Materical Removed SF:	1500
Quantity Material Removed LF:	Not reported
Project Description:	OTHER ROOFINGTRANSITE SIDING
AR Tracking ID:	376273
Super Lic Number:	AS031082
Monitor Lic Number:	AM001760
Lab Lic Number:	AA000225
Year:	2021
Sticker Number:	100349181
Form Type:	ANF-001
Fee Status:	Not reported
Facility Phone:	5084502720
Sub Town:	Not reported
Worksite:	ELEVATOR SHAFT
Occupied:	0
Contractor:	AC000459
Contract Type:	WRITTEN
Hours:	7A-5P
Project Type:	Dem
Abatement Process:	oth:RED BARRIER TAPE
Location:	INOUTDOORS

ETHAN ALLEN INC (Continued) **S106863442**

Decon Process:	WASHBUCKET
Disposal Methods:	(2) 6-MIL BAGS WETTED
Facility Usage:	COMMERCIAL
Waiver Given:	Not reported
DEP Waiver Number:	C-AW-21-11-482
DLWD Waiver Number:	33295-2021
Small Owner Occ:	0
Owner Name:	VERDE ORGANICA LLC
Owner Address:	35 CHASE AVENUE
Owner City:	DUDLEY
Owner State:	MA
On Site Manager Name:	JOE VILLATICO
On Site Manager Phone:	5084502720
Ins Comp:	STATE NATIONAL INSURANCE
Policy Number:	WC0868369
EXP Date:	9/15/2022
Facility Size:	28000
Transporter Name:	ECONOMIC ENVIRO TECHS, INC.
Transporter Address:	38 INTERVALE ROAD
Transporter City:	FITCHBURG
Transporter State:	MA
Final Site:	Not reported
Certified Name:	HENRY MOSES
Cert Sign Date:	11/05/2021
Certified Company:	ECONOMIC ENVIRO TECHS, INC.
Certified Phone:	9784233999
Entered_by:	HENRYMOSES

Name:	35 CHASE AVENUE
Address:	35 CHASE AVENUE
City,State,Zip:	DUDLEY, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	11/18/2021
End Date:	11/18/2021
Date Entered:	Not reported
Entry Date:	11/18/2021
Quantity Materical Removed SF:	200
Quantity Material Removed LF:	0
Project Description:	OTHER BLACK TAR PAPER
AR Tracking ID:	377132
Super Lic Number:	AS031082
Monitor Lic Number:	AM001760
Lab Lic Number:	AA000225
Year:	2021
Sticker Number:	100349189
Form Type:	ANF-001
Fee Status:	Not reported
Facility Phone:	5084502720
Sub Town:	Not reported
Worksite:	ROOF-BUILDING 2
Occupied:	0
Contractor:	AC000459
Contract Type:	WRITTEN
Hours:	7A-5P
Project Type:	Dem

ETHAN ALLEN INC (Continued) **S106863442**

Abatement Process:	oth:RED BARRIER TAPE
Location:	OUTDOORS
Decon Process:	WASHBUCKET
Disposal Methods:	(2) 6-MIL BAGS WETTED
Facility Usage:	COMMERCIAL
Waiver Given:	Not reported
DEP Waiver Number:	C-AW-21-11-524
DLWD Waiver Number:	33408-2021
Small Owner Occ:	0
Owner Name:	VERDU ORGANICA LLC
Owner Address:	35 CHASE AVENUE
Owner City:	DUDLEY
Owner State:	MA
On Site Manager Name:	JOE VILLATICO
On Site Manager Phone:	5084502720
Ins Comp:	STATE NATIONAL INSURANCE
Policy Number:	WC0868369
EXP Date:	9/15/2022
Facility Size:	28000
Transporter Name:	ECONOMIC ENVIRO TECHS, INC.
Transporter Address:	38 INTERVALE ROAD
Transporter City:	FITCHBURG
Transporter State:	MA
Final Site:	Not reported
Certified Name:	HENRY MOSES
Cert Sign Date:	11/18/2021
Certified Company:	ECONOMIC ENVIRO TECHS, INC.
Certified Phone:	9784233999
Entered_by:	HENRYMOSES

Name:	35 CHASE AVENUE
Address:	35 CHASE AVENUE
City,State,Zip:	DUDLEY, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	10/19/2021
End Date:	11/19/2021
Date Entered:	Not reported
Entry Date:	10/18/2021
Quantity Materical Removed SF:	5000
Quantity Material Removed LF:	0
Project Description:	TRANSHINGLE
AR Tracking ID:	375073
Super Lic Number:	AS061855
Monitor Lic Number:	AM034533
Lab Lic Number:	AA000188
Year:	2021
Sticker Number:	100354733
Form Type:	ANF-001
Fee Status:	Not reported
Facility Phone:	5084502720
Sub Town:	Not reported
Worksite:	35 CHASE AVENUE
Occupied:	0
Contractor:	AC000749
Contract Type:	WRITTEN

ETHAN ALLEN INC (Continued) **S106863442**

Hours:	0730-1530
Project Type:	Renv
Abatement Process:	oth:WHOLE COMPONENT
Location:	OUTDOORS
Decon Process:	REMOTE 3 STAGE DECONTAMINATION UNIT
Disposal Methods:	6 MIL LEAK-TIGHT DOUBLE BAGGED, WETTED, AND LABELED FOR TRANSPORT
Facility Usage:	COMMERCIAL
Waiver Given:	Not reported
DEP Waiver Number:	C-AW-21-10-536
DLWD Waiver Number:	0000-0000
Small Owner Occ:	0
Owner Name:	DMA HOLDINGS
Owner Address:	35 CHASE AVENUE
Owner City:	DUDLEY
Owner State:	MA
On Site Manager Name:	N/A
On Site Manager Phone:	0000000000
Ins Comp:	FEDERAL INSURANCE CO.
Policy Number:	0044727918
EXP Date:	3/2/2022
Facility Size:	75000
Transporter Name:	ENVIROGREEN LLC
Transporter Address:	81 CHESTNUT AVENUE
Transporter City:	JAMAICA PLAIN
Transporter State:	MA
Final Site:	Not reported
Certified Name:	LUIS JAVIER
Cert Sign Date:	10/18/2021
Certified Company:	ENVIROGREEN LLC
Certified Phone:	8578913842
Entered_by:	LJAVIER

Name:	35 CHASE AVENUE
Address:	35 CHASE AVENUE
City,State,Zip:	DUDLEY, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	06/22/2021
End Date:	07/23/2021
Date Entered:	Not reported
Entry Date:	06/09/2021
Quantity Materical Removed SF:	18000
Quantity Material Removed LF:	Not reported
Project Description:	OTHER ROOFWINDOWNSTRANSINDING
AR Tracking ID:	366384
Super Lic Number:	AS902445
Monitor Lic Number:	AM001760
Lab Lic Number:	AA000225
Year:	2021
Sticker Number:	100347568
Form Type:	ANF-001
Fee Status:	HUNDRED
Facility Phone:	5084502720
Sub Town:	Not reported
Worksite:	BLDGS2,3,4,5,ROOF,UPPER LEVEL
Occupied:	0

ETHAN ALLEN INC (Continued) **S106863442**

Contractor:	AC000737
Contract Type:	WRITTEN
Hours:	7A-5P
Project Type:	Dem
Abatement Process:	oth:RED DANGER TAPE
Location:	OUTDOORS
Decon Process:	WAHSBUCKET
Disposal Methods:	(2) 6-MIL BAGS WETTED
Facility Usage:	COMMERCIAL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	VERDU ORGANICA LLC
Owner Address:	35 CHASE AVENUE
Owner City:	DUDLEY
Owner State:	MA
On Site Manager Name:	JOE VILLATICO
On Site Manager Phone:	5084502720
Ins Comp:	GREAT DIVINE INSURANCE
Policy Number:	WCA2029799-10
EXP Date:	8/15/2021
Facility Size:	28000
Transporter Name:	ECONOMIC ENVIRO TECHS, INC
Transporter Address:	38 INTERVALE ROAD
Transporter City:	FITCHBURG
Transporter State:	MA
Final Site:	Not reported
Certified Name:	WASCAR VARGAS
Cert Sign Date:	06/09/2021
Certified Company:	ENVIROSTAFFING SOLUTIONS
Certified Phone:	9787947800
Entered_by:	ENVIROSTAFFING28

Name:	35 CHASE AVENUE
Address:	35 CHASE AVENUE
City,State,Zip:	DUDLEY, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	06/22/2021
End Date:	08/06/2021
Date Entered:	Not reported
Entry Date:	07/21/2021
Quantity Materical Removed SF:	18000
Quantity Material Removed LF:	Not reported
Project Description:	OTHER ROOFWINDOWNSTRANSINDING
AR Tracking ID:	369163
Super Lic Number:	AS902445
Monitor Lic Number:	AM001760
Lab Lic Number:	AA000225
Year:	2021
Sticker Number:	100347568R1
Form Type:	ANF-001
Fee Status:	THIRTY FIVE
Facility Phone:	5084502720
Sub Town:	Not reported

ETHAN ALLEN INC (Continued) **S106863442**

Worksite:	BLDGS2,3,4,5,ROOF,UPPER LEVEL
Occupied:	0
Contractor:	AC000737
Contract Type:	WRITTEN
Hours:	7A-5P
Project Type:	Dem
Abatement Process:	oth:RED DANGER TAPE
Location:	OUTDOORS
Decon Process:	WAHSBUCKET
Disposal Methods:	(2) 6-MIL BAGS WETTED
Facility Usage:	COMMERCIAL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	VERDU ORGANICA LLC
Owner Address:	35 CHASE AVENUE
Owner City:	DUDLEY
Owner State:	MA
On Site Manager Name:	JOE VILLATICO
On Site Manager Phone:	5084502720
Ins Comp:	GREAT DIVINE INSURANCE
Policy Number:	WCA2029799-10
EXP Date:	8/15/2021
Facility Size:	28000
Transporter Name:	ECONOMIC ENVIRO TECHS, INC
Transporter Address:	38 INTERVALE ROAD
Transporter City:	FITCHBURG
Transporter State:	MA
Final Site:	Not reported
Certified Name:	WASCAR VARGAS
Cert Sign Date:	07/21/2021
Certified Company:	ENVIROSTAFFING SOLUTIONS
Certified Phone:	9787947800
Entered_by:	ENVIROSTAFFING28

Name:	35 CHASE AVENUE
Address:	35 CHASE AVENUE
City,State,Zip:	DUDLEY, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	06/22/2021
End Date:	08/31/2021
Date Entered:	Not reported
Entry Date:	08/03/2021
Quantity Materical Removed SF:	18000
Quantity Material Removed LF:	Not reported
Project Description:	OTHER ROOFWINDOWNSTRANSINDING
AR Tracking ID:	370084
Super Lic Number:	AS902445
Monitor Lic Number:	AM001760
Lab Lic Number:	AA000225
Year:	2021
Sticker Number:	100347568R2
Form Type:	ANF-001
Fee Status:	THIRTY FIVE

ETHAN ALLEN INC (Continued) **S106863442**

Facility Phone:	5084502720
Sub Town:	Not reported
Worksite:	BLDGS2,3,4,5,ROOF,UPPER LEVEL
Occupied:	0
Contractor:	AC000737
Contract Type:	WRITTEN
Hours:	7A-5P
Project Type:	Dem
Abatement Process:	oth:RED DANGER TAPE
Location:	OUTDOORS
Decon Process:	WAHSBUCKET
Disposal Methods:	(2) 6-MIL BAGS WETTED
Facility Usage:	COMMERCIAL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	VERDU ORGANICA LLC
Owner Address:	35 CHASE AVENUE
Owner City:	DUDLEY
Owner State:	MA
On Site Manager Name:	JOE VILLATICO
On Site Manager Phone:	5084502720
Ins Comp:	GREAT DIVINE INSURANCE
Policy Number:	WCA2029799-10
EXP Date:	8/15/2021
Facility Size:	28000
Transporter Name:	ECONOMIC ENVIRO TECHS, INC
Transporter Address:	38 INTERVALE ROAD
Transporter City:	FITCHBURG
Transporter State:	MA
Final Site:	Not reported
Certified Name:	WASCAR VARGAS
Cert Sign Date:	08/03/2021
Certified Company:	ENVIROSTAFFING SOLUTIONS
Certified Phone:	9787947800
Entered_by:	ENVIROSTAFFING28
Name:	35 CHASE AVENUE
Address:	35 CHASE AVENUE
City,State,Zip:	DUDLEY, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	06/22/2021
End Date:	07/23/2021
Date Entered:	Not reported
Entry Date:	06/09/2021
Quantity Materical Removed SF:	18000
Quantity Material Removed LF:	Not reported
Project Description:	OTHER ROOFWINDOWSTRANSSIDING
AR Tracking ID:	366368
Super Lic Number:	AS031082
Monitor Lic Number:	AM001760
Lab Lic Number:	AA000225
Year:	2021
Sticker Number:	100340740

ETHAN ALLEN INC (Continued) **S106863442**

Form Type:	ANF-001
Fee Status:	HUNDRED
Facility Phone:	5084502720
Sub Town:	Not reported
Worksite:	BLDGS 2,3,4,5,ROOF, UPPER LEVEL
Occupied:	0
Contractor:	AC000459
Contract Type:	WRITTEN
Hours:	7A-5P
Project Type:	Dem
Abatement Process:	oth:RED BARRIER TAPE
Location:	OUTDOORS
Decon Process:	WASHBUCKET
Disposal Methods:	(2) 6-MIL BAGS WETTED
Facility Usage:	COMMERCIAL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	VERDU ORGANICA LLC
Owner Address:	35 CHASE AVENUE
Owner City:	DUDLEY
Owner State:	MA
On Site Manager Name:	JOE VILLATICO
On Site Manager Phone:	5084502720
Ins Comp:	STATE NATIONAL INSURANCE
Policy Number:	WC0868369
EXP Date:	9/15/2021
Facility Size:	28000
Transporter Name:	ECONOMIC ENVIRO TECHS, INC.
Transporter Address:	38 INTERVALE ROAD
Transporter City:	FITCHBURG
Transporter State:	MA
Final Site:	Not reported
Certified Name:	HENRY MOSES
Cert Sign Date:	06/09/2021
Certified Company:	ECONOMIC ENVIRO TECHS, INC.
Certified Phone:	9784233999
Entered_by:	HENRYMOSES
Name:	35 CHASE AVENUE
Address:	35 CHASE AVENUE
City,State,Zip:	DUDLEY, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	06/22/2021
End Date:	08/06/2021
Date Entered:	Not reported
Entry Date:	07/21/2021
Quantity Materical Removed SF:	18000
Quantity Material Removed LF:	Not reported
Project Description:	OTHER ROOFWINDOWSTRANSSIDING
AR Tracking ID:	369138
Super Lic Number:	AS031082
Monitor Lic Number:	AM001760
Lab Lic Number:	AA000225

ETHAN ALLEN INC (Continued) **S106863442**

Year:	2021
Sticker Number:	100340740R1
Form Type:	ANF-001
Fee Status:	THIRTY FIVE
Facility Phone:	5084502720
Sub Town:	Not reported
Worksite:	BLDGS 2,3,4,5,ROOF, UPPER LEVEL
Occupied:	0
Contractor:	AC000459
Contract Type:	WRITTEN
Hours:	7A-5P
Project Type:	Dem
Abatement Process:	oth:RED BARRIER TAPE
Location:	OUTDOORS
Decon Process:	WASHBUCKET
Disposal Methods:	(2) 6-MIL BAGS WETTED
Facility Usage:	COMMERCIAL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	VERDU ORGANICA LLC
Owner Address:	35 CHASE AVENUE
Owner City:	DUDLEY
Owner State:	MA
On Site Manager Name:	JOE VILLATICO
On Site Manager Phone:	5084502720
Ins Comp:	STATE NATIONAL INSURANCE
Policy Number:	WC0868369
EXP Date:	9/15/2021
Facility Size:	28000
Transporter Name:	ECONOMIC ENVIRO TECHS, INC.
Transporter Address:	38 INTERVALE ROAD
Transporter City:	FITCHBURG
Transporter State:	MA
Final Site:	Not reported
Certified Name:	HENRY MOSES
Cert Sign Date:	07/21/2021
Certified Company:	ECONOMIC ENVIRO TECHS, INC.
Certified Phone:	9784233999
Entered_by:	HENRYMOSES
Name:	35 CHASE AVENUE
Address:	35 CHASE AVENUE
City,State,Zip:	DUDLEY, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	06/22/2021
End Date:	08/31/2021
Date Entered:	Not reported
Entry Date:	08/03/2021
Quantity Materical Removed SF:	18000
Quantity Material Removed LF:	Not reported
Project Description:	OTHER ROOFWINDOWSTRANSSIDING
AR Tracking ID:	370060
Super Lic Number:	AS031082

ETHAN ALLEN INC (Continued) **S106863442**

Monitor Lic Number:	AM001760
Lab Lic Number:	AA000225
Year:	2021
Sticker Number:	100340740R2
Form Type:	ANF-001
Fee Status:	THIRTY FIVE
Facility Phone:	5084502720
Sub Town:	Not reported
Worksite:	BLDGS 2,3,4,5,ROOF, UPPER LEVEL
Occupied:	0
Contractor:	AC000459
Contract Type:	WRITTEN
Hours:	7A-5P
Project Type:	Dem
Abatement Process:	oth:RED BARRIER TAPE
Location:	OUTDOORS
Decon Process:	WASHBUCKET
Disposal Methods:	(2) 6-MIL BAGS WETTED
Facility Usage:	COMMERCIAL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	VERDU ORGANICA LLC
Owner Address:	35 CHASE AVENUE
Owner City:	DUDLEY
Owner State:	MA
On Site Manager Name:	JOE VILLATICO
On Site Manager Phone:	5084502720
Ins Comp:	STATE NATIONAL INSURANCE
Policy Number:	WC0868369
EXP Date:	9/15/2021
Facility Size:	28000
Transporter Name:	ECONOMIC ENVIRO TECHS, INC.
Transporter Address:	38 INTERVALE ROAD
Transporter City:	FITCHBURG
Transporter State:	MA
Final Site:	Not reported
Certified Name:	HENRY MOSES
Cert Sign Date:	08/03/2021
Certified Company:	ECONOMIC ENVIRO TECHS, INC.
Certified Phone:	9784233999
Entered_by:	HENRYMOSES

Name:	35 CHASE AVENUE
Address:	35 CHASE AVENUE
City,State,Zip:	DUDLEY, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	06/22/2021
End Date:	09/10/2021
Date Entered:	Not reported
Entry Date:	08/30/2021
Quantity Materical Removed SF:	18000
Quantity Material Removed LF:	Not reported
Project Description:	OTHER ROOFWINDOWSTRANSSIDING

ETHAN ALLEN INC (Continued) **S106863442**

AR Tracking ID:	371922
Super Lic Number:	AS031082
Monitor Lic Number:	AM001760
Lab Lic Number:	AA000225
Year:	2021
Sticker Number:	100340740R3
Form Type:	ANF-001
Fee Status:	THIRTY FIVE
Facility Phone:	5084502720
Sub Town:	Not reported
Worksite:	BLDGS 2,3,4,5,ROOF, UPPER LEVEL
Occupied:	0
Contractor:	AC000459
Contract Type:	WRITTEN
Hours:	7A-5P
Project Type:	Dem
Abatement Process:	oth:RED BARRIER TAPE
Location:	OUTDOORS
Decon Process:	WASHBUCKET
Disposal Methods:	(2) 6-MIL BAGS WETTED
Facility Usage:	COMMERCIAL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	VERDU ORGANICA LLC
Owner Address:	35 CHASE AVENUE
Owner City:	DUDLEY
Owner State:	MA
On Site Manager Name:	JOE VILLATICO
On Site Manager Phone:	5084502720
Ins Comp:	STATE NATIONAL INSURANCE
Policy Number:	WC0868369
EXP Date:	9/15/2021
Facility Size:	28000
Transporter Name:	ECONOMIC ENVIRO TECHS, INC.
Transporter Address:	38 INTERVALE ROAD
Transporter City:	FITCHBURG
Transporter State:	MA
Final Site:	Not reported
Certified Name:	HENRY MOSES
Cert Sign Date:	08/30/2021
Certified Company:	ECONOMIC ENVIRO TECHS, INC.
Certified Phone:	9784233999
Entered_by:	HENRYMOSES
Name:	35 CHASE AVENUE
Address:	35 CHASE AVENUE
City,State,Zip:	DUDLEY, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	06/22/2021
End Date:	09/24/2021
Date Entered:	Not reported
Entry Date:	09/10/2021
Quantity Materical Removed SF:	18000

ETHAN ALLEN INC (Continued) **S106863442**

Quantity Material Removed LF:	Not reported
Project Description:	OTHER ROOFWINDOWSTRANSSIDING
AR Tracking ID:	372659
Super Lic Number:	AS031082
Monitor Lic Number:	AM001760
Lab Lic Number:	AA000225
Year:	2021
Sticker Number:	100340740R4
Form Type:	ANF-001
Fee Status:	THIRTY FIVE
Facility Phone:	5084502720
Sub Town:	Not reported
Worksite:	BLDGS 2,3,4,5,ROOF, UPPER LEVEL
Occupied:	0
Contractor:	AC000459
Contract Type:	WRITTEN
Hours:	7A-5P
Project Type:	Dem
Abatement Process:	oth:RED BARRIER TAPE
Location:	OUTDOORS
Decon Process:	WASHBUCKET
Disposal Methods:	(2) 6-MIL BAGS WETTED
Facility Usage:	COMMERCIAL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	VERDU ORGANICA LLC
Owner Address:	35 CHASE AVENUE
Owner City:	DUDLEY
Owner State:	MA
On Site Manager Name:	JOE VILLATICO
On Site Manager Phone:	5084502720
Ins Comp:	STATE NATIONAL INSURANCE
Policy Number:	WC0868369
EXP Date:	9/15/2021
Facility Size:	28000
Transporter Name:	ECONOMIC ENVIRO TECHS, INC.
Transporter Address:	38 INTERVALE ROAD
Transporter City:	FITCHBURG
Transporter State:	MA
Final Site:	Not reported
Certified Name:	HENRY MOSES
Cert Sign Date:	09/10/2021
Certified Company:	ECONOMIC ENVIRO TECHS, INC.
Certified Phone:	9784233999
Entered_by:	HENRYMOSES

Name:	35 CHASE AVENUE
Address:	35 CHASE AVENUE
City,State,Zip:	DUDLEY, MA
Notification:	Not reported
DEP Region:	Not reported
Notifiers Name:	Not reported
Start Date:	06/22/2021
End Date:	10/01/2021
Date Entered:	Not reported

ETHAN ALLEN INC (Continued) **S106863442**

Entry Date:	09/24/2021
Quantity Materical Removed SF:	18000
Quantity Material Removed LF:	Not reported
Project Description:	OTHER ROOFWINDOWSTRANSSIDING
AR Tracking ID:	373573
Super Lic Number:	AS031082
Monitor Lic Number:	AM001760
Lab Lic Number:	AA000225
Year:	2021
Sticker Number:	100340740R5
Form Type:	ANF-001
Fee Status:	THIRTY FIVE
Facility Phone:	5084502720
Sub Town:	Not reported
Worksite:	BLDGS 2,3,4,5,ROOF, UPPER LEVEL
Occupied:	0
Contractor:	AC000459
Contract Type:	WRITTEN
Hours:	7A-5P
Project Type:	Dem
Abatement Process:	oth:RED BARRIER TAPE
Location:	OUTDOORS
Decon Process:	WASHBUCKET
Disposal Methods:	(2) 6-MIL BAGS WETTED
Facility Usage:	COMMERCIAL
Waiver Given:	Not reported
DEP Waiver Number:	Not reported
DLWD Waiver Number:	Not reported
Small Owner Occ:	0
Owner Name:	VERDU ORGANICA LLC
Owner Address:	35 CHASE AVENUE
Owner City:	DUDLEY
Owner State:	MA
On Site Manager Name:	JOE VILLATICO
On Site Manager Phone:	5084502720
Ins Comp:	STATE NATIONAL INSURANCE
Policy Number:	WC0868369
EXP Date:	9/15/2021
Facility Size:	28000
Transporter Name:	ECONOMIC ENVIRO TECHS, INC.
Transporter Address:	38 INTERVALE ROAD
Transporter City:	FITCHBURG
Transporter State:	MA
Final Site:	Not reported
Certified Name:	HENRY MOSES
Cert Sign Date:	09/24/2021
Certified Company:	ECONOMIC ENVIRO TECHS, INC.
Certified Phone:	9784233999
Entered_by:	HENRYMOSES

ENFORCEMENT:

Name:	CHASE HILL REALTY LLC
Address:	35 CHASE AVE
City,State,Zip:	DUDLEY, MA 015710000
Region:	CERO
DEP Region:	CERO
DEP Program:	3a

ETHAN ALLEN INC (Continued) **S106863442**

DEP Bureau:	BWSC
Program:	BWSC
Program Id:	2-0015663
High Or Low Level Enforcement:	HLE
FMF #:	0
Comptroller Billing Name:	Not reported
Town Where Violation Occurred:	DUDLEY
Date Executed:	11/12/2014
ENF #:	ACOP-CE-14-3A008-Q1
Document Type:	ACOP
AG Ref (Y/N):	NO
Doc Archived (Y/N):	Not reported
EJ Community (Y/N):	NO
Regional Comment:	Not reported
Final Payment Due Date:	11/07/2015
ACOP $:	7160
PAN $:	Not reported
EMS (Y/N):	Not reported
EMS$:	Not reported
SEP (Y/N):	NO
SEP $:	Not reported
Demand $:	Not reported
Suspended $:	Not reported
Ownership:	Commercially Owned

HW GEN:

Name:	GREATEST HITS
Address:	35 CHASE AVE
City,State,Zip:	DUDLEY, MA 01571
EPA Id:	MAR000603340
RCRA Generator Status:	VSQG
State Generator Status:	VQG-MA

Count: 3 records. ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
DUDLEY	S102084488	POLE 138 ON RTE 31	DRESSER HILL RD	01571	MA SHWS, MA RELEASE
DUDLEY	S101016184	ROADWAY RELEASE	WEST MAIN ST	01571	MA SHWS, MA RELEASE, MA SPILLS
WEBSTER	S123244215	HYDRAULIC OIL RELEASE	ASH STREET		MA SHWS, MA RELEASE

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

Number of Days to Update: Provides confirmation that EDR is reporting records that have been updated within 90 days from the date the government agency made the information available to the public.

STANDARD ENVIRONMENTAL RECORDS

Lists of Federal NPL (Superfund) sites

NPL: National Priority List

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 12/01/2022
Next Scheduled EDR Contact: 04/10/2023
Data Release Frequency: Quarterly

NPL Site Boundaries

Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)
Telephone: 202-564-7333

EPA Region 1
Telephone 617-918-1143

EPA Region 6
Telephone: 214-655-6659

EPA Region 3
Telephone 215-814-5418

EPA Region 7
Telephone: 913-551-7247

EPA Region 4
Telephone 404-562-8033

EPA Region 8
Telephone: 303-312-6774

EPA Region 5
Telephone 312-886-6686

EPA Region 9
Telephone: 415-947-4246

EPA Region 10
Telephone 206-553-8665

Proposed NPL: Proposed National Priority List Sites

A site that has been proposed for listing on the National Priorities List through the issuance of a proposed rule in the Federal Register. EPA then accepts public comments on the site, responds to the comments, and places on the NPL those sites that continue to meet the requirements for listing.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 12/01/2022
Next Scheduled EDR Contact: 04/10/2023
Data Release Frequency: Quarterly

NPL LIENS: Federal Superfund Liens

Federal Superfund Liens. Under the authority granted the USEPA by CERCLA of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner received notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/1991
Date Data Arrived at EDR: 02/02/1994
Date Made Active in Reports: 03/30/1994
Number of Days to Update: 56

Source: EPA
Telephone: 202-564-4267
Last EDR Contact: 08/15/2011
Next Scheduled EDR Contact: 11/28/2011
Data Release Frequency: No Update Planned

Lists of Federal Delisted NPL sites

Delisted NPL: National Priority List Deletions

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: N/A
Last EDR Contact: 12/01/2022
Next Scheduled EDR Contact: 04/10/2023
Data Release Frequency: Quarterly

Lists of Federal sites subject to CERCLA removals and CERCLA orders

FEDERAL FACILITY: Federal Facility Site Information listing

A listing of National Priority List (NPL) and Base Realignment and Closure (BRAC) sites found in the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) Database where EPA Federal Facilities Restoration and Reuse Office is involved in cleanup activities.

Date of Government Version: 08/25/2022
Date Data Arrived at EDR: 09/06/2022
Date Made Active in Reports: 12/05/2022
Number of Days to Update: 90

Source: Environmental Protection Agency
Telephone: 703-603-8704
Last EDR Contact: 12/21/2022
Next Scheduled EDR Contact: 04/10/2023
Data Release Frequency: Varies

SEMS: Superfund Enterprise Management System

SEMS (Superfund Enterprise Management System) tracks hazardous waste sites, potentially hazardous waste sites, and remedial activities performed in support of EPA's Superfund Program across the United States. The list was formerly know as CERCLIS, renamed to SEMS by the EPA in 2015. The list contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). This dataset also contains sites which are either proposed to or on the National Priorities List (NPL) and the sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/01/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Quarterly

Lists of Federal CERCLA sites with NFRAP

SEMS-ARCHIVE: Superfund Enterprise Management System Archive

SEMS-ARCHIVE (Superfund Enterprise Management System Archive) tracks sites that have no further interest under the Federal Superfund Program based on available information. The list was formerly known as the CERCLIS-NFRAP, renamed to SEMS ARCHIVE by the EPA in 2015. EPA may perform a minimal level of assessment work at a site while it is archived if site conditions change and/or new information becomes available. Archived sites have been removed and archived from the inventory of SEMS sites. Archived status indicates that, to the best of EPA's knowledge, assessment at a site has been completed and that EPA has determined no further steps will be taken to list the site on the National Priorities List (NPL), unless information indicates this decision was not appropriate or other considerations require a recommendation for listing at a later time. The decision does not necessarily mean that there is no hazard associated with a given site; it only means that. based upon available information, the location is not judged to be potential NPL site.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/01/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Quarterly

Lists of Federal RCRA facilities undergoing Corrective Action

CORRACTS: Corrective Action Report

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 11/21/2022
Date Data Arrived at EDR: 11/21/2022
Date Made Active in Reports: 12/05/2022
Number of Days to Update: 14

Source: EPA
Telephone: 800-424-9346
Last EDR Contact: 12/21/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

Lists of Federal RCRA TSD facilities

RCRA-TSDF: RCRA - Treatment, Storage and Disposal

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Transporters are individuals or entities that move hazardous waste from the generator offsite to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 11/21/2022
Date Data Arrived at EDR: 11/21/2022
Date Made Active in Reports: 12/05/2022
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 12/21/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

Lists of Federal RCRA generators

RCRA-LQG: RCRA - Large Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month.

Date of Government Version: 11/21/2022
Date Data Arrived at EDR: 11/21/2022
Date Made Active in Reports: 12/05/2022
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 12/21/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

RCRA-SQG: RCRA - Small Quantity Generators

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month.

Date of Government Version: 11/21/2022
Date Data Arrived at EDR: 11/21/2022
Date Made Active in Reports: 12/05/2022
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 12/21/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

RCRA-VSQG: RCRA - Very Small Quantity Generators (Formerly Conditionally Exempt Small Quantity Generators)

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Very small quantity generators (VSQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month.

Date of Government Version: 11/21/2022
Date Data Arrived at EDR: 11/21/2022
Date Made Active in Reports: 12/05/2022
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 12/21/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

Federal institutional controls / engineering controls registries

LUCIS: Land Use Control Information System

LUCIS contains records of land use control information pertaining to the former Navy Base Realignment and Closure properties.

Date of Government Version: 08/16/2022
Date Data Arrived at EDR: 08/22/2022
Date Made Active in Reports: 10/24/2022
Number of Days to Update: 63

Source: Department of the Navy
Telephone: 843-820-7326
Last EDR Contact: 11/01/2022
Next Scheduled EDR Contact: 02/20/2023
Data Release Frequency: Varies

US ENG CONTROLS: Engineering Controls Sites List

A listing of sites with engineering controls in place. Engineering controls include various forms of caps, building foundations, liners, and treatment methods to create pathway elimination for regulated substances to enter environmental media or effect human health.

Date of Government Version: 08/15/2022
Date Data Arrived at EDR: 08/17/2022
Date Made Active in Reports: 10/24/2022
Number of Days to Update: 68

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/16/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Varies

US INST CONTROLS: Institutional Controls Sites List

A listing of sites with institutional controls in place. Institutional controls include administrative measures, such as groundwater use restrictions, construction restrictions, property use restrictions, and post remediation care requirements intended to prevent exposure to contaminants remaining on site. Deed restrictions are generally required as part of the institutional controls.

Date of Government Version: 08/15/2022
Date Data Arrived at EDR: 08/17/2022
Date Made Active in Reports: 10/24/2022
Number of Days to Update: 68

Source: Environmental Protection Agency
Telephone: 703-603-0695
Last EDR Contact: 11/16/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Federal ERNS list

ERNS: Emergency Response Notification System

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/12/2022
Date Data Arrived at EDR: 12/14/2022
Date Made Active in Reports: 12/19/2022
Number of Days to Update: 5

Source: National Response Center, United States Coast Guard
Telephone: 202-267-2180
Last EDR Contact: 12/14/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

Lists of state- and tribal hazardous waste facilities

MA SHWS: Site Transition List

Contains information on releases of oil and hazardous materials that have been reported to DEP.

Date of Government Version: 07/22/2022
Date Data Arrived at EDR: 10/03/2022
Date Made Active in Reports: 12/15/2022
Number of Days to Update: 73

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 12/09/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Quarterly

CT SHWS: Inventory of Hazardous Disposal Sites

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: 04/23/2010
Date Data Arrived at EDR: 04/23/2010
Date Made Active in Reports: 05/25/2010
Number of Days to Update: 32

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3705
Last EDR Contact: 12/19/2022
Next Scheduled EDR Contact: 04/10/2023
Data Release Frequency: No Update Planned

Lists of state and tribal landfills and solid waste disposal facilities

MA SWF/LF: Solid Waste Facility Database/Transfer Stations

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 05/02/2022
Date Data Arrived at EDR: 05/03/2022
Date Made Active in Reports: 07/22/2022
Number of Days to Update: 80

Source: Department of Environmental Protection
Telephone: 617-292-5989
Last EDR Contact: 09/30/2022
Next Scheduled EDR Contact: 01/09/2023
Data Release Frequency: Annually

MA LF PROFILES: Landfill Profiles Listing

This spreadsheet describes landfills that have actively accepted waste or have closed under MassDEP Solid Waste Regulations first adopted in 1971 (310 CMR 16.00 and 310 CMR 19.00). The list does not include landfills that closed before 1971 (and which never had a MassDEP permit or approval), or for which agency data is incomplete.

Date of Government Version: 07/01/2015
Date Data Arrived at EDR: 10/27/2015
Date Made Active in Reports: 12/14/2015
Number of Days to Update: 48

Source: Department of Environmental Protection
Telephone: 617-292-5868
Last EDR Contact: 09/29/2022
Next Scheduled EDR Contact: 01/09/2023
Data Release Frequency: Varies

CT SWF/LF: List of Landfills/Transfer Stations
Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 01/31/2022
Date Data Arrived at EDR: 04/22/2022
Date Made Active in Reports: 07/11/2022
Number of Days to Update: 80
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3366
Last EDR Contact: 10/20/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Annually

Lists of state and tribal leaking storage tanks

MA LAST: Leaking Aboveground Storage Tank Sites
Sites within the Releases Database that have a AST listed as its source.

Date of Government Version: 07/22/2022
Date Data Arrived at EDR: 10/03/2022
Date Made Active in Reports: 12/15/2022
Number of Days to Update: 73
Source: Department of Environmental Protection
Telephone: 617-292-5500
Last EDR Contact: 12/09/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Quarterly

MA LUST: Leaking Underground Storage Tank Listing
Sites within the Leaking Underground Storage Tank Listing that have a UST listed as its source.

Date of Government Version: 07/22/2022
Date Data Arrived at EDR: 10/03/2022
Date Made Active in Reports: 12/15/2022
Number of Days to Update: 73
Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 12/09/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Quarterly

CT LUST: Leaking Underground Storage Tank List
Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 09/20/2022
Date Data Arrived at EDR: 09/26/2022
Date Made Active in Reports: 12/09/2022
Number of Days to Update: 74
Source: Department of Energy & Environmental Protection
Telephone: 860-424-3376
Last EDR Contact: 12/21/2022
Next Scheduled EDR Contact: 04/10/2023
Data Release Frequency: Semi-Annually

INDIAN LUST R6: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 04/28/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64
Source: EPA Region 6
Telephone: 214-665-6597
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN LUST R5: Leaking Underground Storage Tanks on Indian Land
Leaking underground storage tanks located on Indian Land in Michigan, Minnesota and Wisconsin.

Date of Government Version: 04/11/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64
Source: EPA, Region 5
Telephone: 312-886-7439
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN LUST R10: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Alaska, Idaho, Oregon and Washington.

Date of Government Version: 04/20/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64
Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN LUST R9: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 04/08/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64
Source: Environmental Protection Agency
Telephone: 415-972-3372
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN LUST R8: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Colorado, Montana, North Dakota, South Dakota, Utah and Wyoming.

Date of Government Version: 04/20/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64
Source: EPA Region 8
Telephone: 303-312-6271
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN LUST R7: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Iowa, Kansas, and Nebraska

Date of Government Version: 04/14/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64
Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN LUST R1: Leaking Underground Storage Tanks on Indian Land
A listing of leaking underground storage tank locations on Indian Land.

Date of Government Version: 04/28/2021
Date Data Arrived at EDR: 06/11/2021
Date Made Active in Reports: 09/07/2021
Number of Days to Update: 88
Source: EPA Region 1
Telephone: 617-918-1313
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN LUST R4: Leaking Underground Storage Tanks on Indian Land
LUSTs on Indian land in Florida, Mississippi and North Carolina.

Date of Government Version: 06/02/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/31/2022
Number of Days to Update: 79
Source: EPA Region 4
Telephone: 404-562-8677
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

Lists of state and tribal registered storage tanks

FEMA UST: Underground Storage Tank Listing
A listing of all FEMA owned underground storage tanks.

Date of Government Version: 10/14/2021
Date Data Arrived at EDR: 11/05/2021
Date Made Active in Reports: 02/01/2022
Number of Days to Update: 88
Source: FEMA
Telephone: 202-646-5797
Last EDR Contact: 09/27/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

MA UST: Summary Listing of all the Tanks Registered in the State of Massachusetts

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 07/12/2022
Date Data Arrived at EDR: 07/14/2022
Date Made Active in Reports: 09/27/2022
Number of Days to Update: 75

Source: Department of Fire Services, Office of the Public Safety
Telephone: 617-556-1035
Last EDR Contact: 12/13/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Quarterly

CT UST: Underground Storage Tank Data

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 08/16/2022
Date Data Arrived at EDR: 08/18/2022
Date Made Active in Reports: 11/07/2022
Number of Days to Update: 81

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3376
Last EDR Contact: 11/16/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Semi-Annually

MA AST: Aboveground Storage Tank Database

Registered Aboveground Storage Tanks.

Date of Government Version: 09/21/2022
Date Data Arrived at EDR: 10/07/2022
Date Made Active in Reports: 12/27/2022
Number of Days to Update: 81

Source: Department of Public Safety
Telephone: 617-556-1035
Last EDR Contact: 10/07/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: No Update Planned

MA AST 2: Aboveground Storage Tanks

Aboveground storage tanks

Date of Government Version: 10/06/2022
Date Data Arrived at EDR: 10/06/2022
Date Made Active in Reports: 12/22/2022
Number of Days to Update: 77

Source: Department of Fire Services
Telephone: 978-567-3181
Last EDR Contact: 10/04/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Varies

CT AST: Marine Terminals and Tank Information

A listing of bulk petroleum facilities that receive petroleum by a vessel.

Date of Government Version: 07/11/2022
Date Data Arrived at EDR: 08/01/2022
Date Made Active in Reports: 10/18/2022
Number of Days to Update: 78

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3233
Last EDR Contact: 10/26/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Varies

INDIAN UST R9: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 9 (Arizona, California, Hawaii, Nevada, the Pacific Islands, and Tribal Nations).

Date of Government Version: 04/08/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 9
Telephone: 415-972-3368
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN UST R4: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 4 (Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and Tribal Nations)

Date of Government Version: 06/02/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/31/2022
Number of Days to Update: 79

Source: EPA Region 4
Telephone: 404-562-9424
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN UST R6: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 6 (Louisiana, Arkansas, Oklahoma, New Mexico, Texas and 65 Tribes).

Date of Government Version: 04/28/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 6
Telephone: 214-665-7591
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN UST R5: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 5 (Michigan, Minnesota and Wisconsin and Tribal Nations).

Date of Government Version: 04/11/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 5
Telephone: 312-886-6136
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN UST R1: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 1 (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont and ten Tribal Nations).

Date of Government Version: 04/07/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA, Region 1
Telephone: 617-918-1313
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN UST R10: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 10 (Alaska, Idaho, Oregon, Washington, and Tribal Nations).

Date of Government Version: 04/20/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 10
Telephone: 206-553-2857
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN UST R7: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 7 (Iowa, Kansas, Missouri, Nebraska, and 9 Tribal Nations).

Date of Government Version: 04/14/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 7
Telephone: 913-551-7003
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

INDIAN UST R8: Underground Storage Tanks on Indian Land

The Indian Underground Storage Tank (UST) database provides information about underground storage tanks on Indian land in EPA Region 8 (Colorado, Montana, North Dakota, South Dakota, Utah, Wyoming and 27 Tribal Nations).

Date of Government Version: 04/20/2022
Date Data Arrived at EDR: 06/13/2022
Date Made Active in Reports: 08/16/2022
Number of Days to Update: 64

Source: EPA Region 8
Telephone: 303-312-6137
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

State and tribal institutional control / engineering control registries

MA INST CONTROL: Sites With Activity and Use Limitation

Activity and Use Limitations establish limits and conditions on the future use of contaminated property, and therefore allow cleanups to be tailored to these uses.

Date of Government Version: 07/22/2022
Date Data Arrived at EDR: 10/03/2022
Date Made Active in Reports: 12/15/2022
Number of Days to Update: 73

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 12/09/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Quarterly

Lists of state and tribal voluntary cleanup sites

INDIAN VCP R1: Voluntary Cleanup Priority Listing

A listing of voluntary cleanup priority sites located on Indian Land located in Region 1.

Date of Government Version: 07/27/2015
Date Data Arrived at EDR: 09/29/2015
Date Made Active in Reports: 02/18/2016
Number of Days to Update: 142

Source: EPA, Region 1
Telephone: 617-918-1102
Last EDR Contact: 12/13/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Varies

INDIAN VCP R7: Voluntary Cleanup Priority Lisitng

A listing of voluntary cleanup priority sites located on Indian Land located in Region 7.

Date of Government Version: 03/20/2008
Date Data Arrived at EDR: 04/22/2008
Date Made Active in Reports: 05/19/2008
Number of Days to Update: 27

Source: EPA, Region 7
Telephone: 913-551-7365
Last EDR Contact: 07/08/2021
Next Scheduled EDR Contact: 07/20/2009
Data Release Frequency: Varies

Lists of state and tribal brownfield sites

MA BROWNFIELDS: Completed Brownfields Covenants Listing

Under Massachusetts law, M.G.L. c. 21E is the statute that governs the cleanup of releases of oil and/or hazardous material to the environment. The Brownfields Act of 1998 amended M.G.L. c. 21E by establishing significant liability relief and financial incentives to spur the redevelopment of brownfields, while ensuring that the Commonwealth's environmental standards are met. Most brownfields are redeveloped with the benefit of liability protections that operate automatically under M.G.L. c. 21E.

Date of Government Version: 04/05/2017
Date Data Arrived at EDR: 08/03/2017
Date Made Active in Reports: 10/10/2017
Number of Days to Update: 68

Source: Office of the Attorney General
Telephone: 617-963-2423
Last EDR Contact: 10/28/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Annually

MA BROWNFIELDS 2: Potential Brownfields Listing

A listing of potential brownfields site locations in the state.

Date of Government Version: 12/03/2019
Date Data Arrived at EDR: 01/29/2021
Date Made Active in Reports: 04/21/2021
Number of Days to Update: 82

Source: Department of Environmental Protection
Telephone: 617-556-1007
Last EDR Contact: 10/28/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Varies

CT BROWNFIELDS 2: Brownfields Inventory

A brownfield site is generally defined as "real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant or contaminanta?|"

Date of Government Version: 06/22/2022
Date Data Arrived at EDR: 09/09/2022
Date Made Active in Reports: 11/30/2022
Number of Days to Update: 82

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3705
Last EDR Contact: 12/15/2022
Next Scheduled EDR Contact: 03/27/2023
Data Release Frequency: Varies

CT BROWNFIELDS: Brownfields Inventory

CBRA has identified over 200 brownfield sites eligible for redevelopment. In most cases these are prime properties for commercial or industrial use. CBRA's grants, assistance and financing lower the financial risks and eliminate the legal, regulatory and environmental risks of redevelopment.

Date of Government Version: 02/24/2022
Date Data Arrived at EDR: 03/15/2022
Date Made Active in Reports: 06/09/2022
Number of Days to Update: 86

Source: Connecticut Brownfields Redevelopment Authority
Telephone: 860-258-7833
Last EDR Contact: 12/15/2022
Next Scheduled EDR Contact: 03/27/2023
Data Release Frequency: No Update Planned

ADDITIONAL ENVIRONMENTAL RECORDS

Local Brownfield lists

US BROWNFIELDS: A Listing of Brownfields Sites

Brownfields are real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant. Cleaning up and reinvesting in these properties takes development pressures off of undeveloped, open land, and both improves and protects the environment. Assessment, Cleanup and Redevelopment Exchange System (ACRES) stores information reported by EPA Brownfields grant recipients on brownfields properties assessed or cleaned up with grant funding as well as information on Targeted Brownfields Assessments performed by EPA Regions. A listing of ACRES Brownfield sites is obtained from Cleanups in My Community. Cleanups in My Community provides information on Brownfields properties for which information is reported back to EPA, as well as areas served by Brownfields grant programs.

Date of Government Version: 02/23/2022
Date Data Arrived at EDR: 03/10/2022
Date Made Active in Reports: 03/10/2022
Number of Days to Update: 0

Source: Environmental Protection Agency
Telephone: 202-566-2777
Last EDR Contact: 12/07/2022
Next Scheduled EDR Contact: 03/27/2023
Data Release Frequency: Semi-Annually

Local Lists of Landfill / Solid Waste Disposal Sites

INDIAN ODI: Report on the Status of Open Dumps on Indian Lands

Location of open dumps on Indian land.

Date of Government Version: 12/31/1998
Date Data Arrived at EDR: 12/03/2007
Date Made Active in Reports: 01/24/2008
Number of Days to Update: 52

Source: Environmental Protection Agency
Telephone: 703-308-8245
Last EDR Contact: 10/20/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Varies

DEBRIS REGION 9: Torres Martinez Reservation Illegal Dump Site Locations

A listing of illegal dump sites location on the Torres Martinez Indian Reservation located in eastern Riverside County and northern Imperial County, California.

Date of Government Version: 01/12/2009
Date Data Arrived at EDR: 05/07/2009
Date Made Active in Reports: 09/21/2009
Number of Days to Update: 137

Source: EPA, Region 9
Telephone: 415-947-4219
Last EDR Contact: 10/11/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: No Update Planned

ODI: Open Dump Inventory
An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/1985
Date Data Arrived at EDR: 08/09/2004
Date Made Active in Reports: 09/17/2004
Number of Days to Update: 39

Source: Environmental Protection Agency
Telephone: 800-424-9346
Last EDR Contact: 06/09/2004
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

IHS OPEN DUMPS: Open Dumps on Indian Land
A listing of all open dumps located on Indian Land in the United States.

Date of Government Version: 04/01/2014
Date Data Arrived at EDR: 08/06/2014
Date Made Active in Reports: 01/29/2015
Number of Days to Update: 176

Source: Department of Health & Human Serivces, Indian Health Service
Telephone: 301-443-1452
Last EDR Contact: 10/28/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Varies

Local Lists of Hazardous waste / Contaminated Sites

US HIST CDL: National Clandestine Laboratory Register
A listing of clandestine drug lab locations that have been removed from the DEAs National Clandestine Laboratory Register.

Date of Government Version: 07/29/2022
Date Data Arrived at EDR: 08/18/2022
Date Made Active in Reports: 10/24/2022
Number of Days to Update: 67

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/16/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: No Update Planned

US CDL: Clandestine Drug Labs
A listing of clandestine drug lab locations. The U.S. Department of Justice ("the Department") provides this web site as a public service. It contains addresses of some locations where law enforcement agencies reported they found chemicals or other items that indicated the presence of either clandestine drug laboratories or dumpsites. In most cases, the source of the entries is not the Department, and the Department has not verified the entry and does not guarantee its accuracy. Members of the public must verify the accuracy of all entries by, for example, contacting local law enforcement and local health departments.

Date of Government Version: 07/29/2022
Date Data Arrived at EDR: 08/18/2022
Date Made Active in Reports: 10/24/2022
Number of Days to Update: 67

Source: Drug Enforcement Administration
Telephone: 202-307-1000
Last EDR Contact: 11/16/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Quarterly

Local Land Records

MA LIENS: Liens Information Listing
A listing of environmental liens.

Date of Government Version: 03/07/2018
Date Data Arrived at EDR: 03/09/2018
Date Made Active in Reports: 06/21/2018
Number of Days to Update: 104

Source: Department of Environmental Protection
Telephone: 617-292-5628
Last EDR Contact: 11/08/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Varies

CT LIENS: Environmental Liens Listing

A listing of environmental liens placed by the Cost Recovery Program.

Date of Government Version: 02/11/2019
Date Data Arrived at EDR: 02/19/2019
Date Made Active in Reports: 03/04/2019
Number of Days to Update: 13

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3120
Last EDR Contact: 11/01/2022
Next Scheduled EDR Contact: 02/20/2023
Data Release Frequency: Varies

LIENS 2: CERCLA Lien Information

A Federal CERCLA ('Superfund') lien can exist by operation of law at any site or property at which EPA has spent Superfund monies. These monies are spent to investigate and address releases and threatened releases of contamination. CERCLIS provides information as to the identity of these sites and properties.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 202-564-6023
Last EDR Contact: 12/01/2022
Next Scheduled EDR Contact: 04/10/2023
Data Release Frequency: Semi-Annually

Records of Emergency Release Reports

HMIRS: Hazardous Materials Information Reporting System

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/19/2022
Date Data Arrived at EDR: 09/19/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 11

Source: U.S. Department of Transportation
Telephone: 202-366-4555
Last EDR Contact: 12/14/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

MA RELEASE: Reportable Releases

Contains information on all releases of oil and hazardous materials that have been reported to DEP

Date of Government Version: 07/22/2022
Date Data Arrived at EDR: 10/03/2022
Date Made Active in Reports: 12/15/2022
Number of Days to Update: 73

Source: Department of Environmental Protection
Telephone: 617-292-5990
Last EDR Contact: 12/09/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Quarterly

MA SPILLS: Historical Spill List

The Spills Database was the release notification tracking system for spills that occurred prior to October 1, 1993. This information should be considered to be primarily of historical interest since all of the listed spills have either been cleaned up or assigned new tracking numbers and moved to the Reportable Releases or Sites Transition List databases.

Date of Government Version: 09/30/1993
Date Data Arrived at EDR: 12/03/2003
Date Made Active in Reports: 12/31/2003
Number of Days to Update: 28

Source: Department of Environmental Protection
Telephone: 617-292-5720
Last EDR Contact: 12/03/2003
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CT SPILLS: Oil & Chemical Spill Database

Oil and Chemical Spill Data.

Date of Government Version: 09/22/2022
Date Data Arrived at EDR: 09/26/2022
Date Made Active in Reports: 12/09/2022
Number of Days to Update: 74

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3024
Last EDR Contact: 12/21/2022
Next Scheduled EDR Contact: 04/10/2023
Data Release Frequency: Semi-Annually

MA SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 12/11/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/08/2013
Number of Days to Update: 36

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

CT SPILLS 90: SPILLS90 data from FirstSearch

Spills 90 includes those spill and release records available exclusively from FirstSearch databases. Typically, they may include chemical, oil and/or hazardous substance spills recorded after 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 90.

Date of Government Version: 10/15/2012
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 02/11/2013
Number of Days to Update: 39

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

MA SPILLS 80: SPILLS80 data from FirstSearch

Spills 80 includes those spill and release records available from FirstSearch databases prior to 1990. Typically, they may include chemical, oil and/or hazardous substance spills recorded before 1990. Duplicate records that are already included in EDR incident and release records are not included in Spills 80.

Date of Government Version: 03/10/1998
Date Data Arrived at EDR: 01/03/2013
Date Made Active in Reports: 03/05/2013
Number of Days to Update: 61

Source: FirstSearch
Telephone: N/A
Last EDR Contact: 01/03/2013
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

Other Ascertainable Records

RCRA NonGen / NLR: RCRA - Non Generators / No Longer Regulated

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Non-Generators do not presently generate hazardous waste.

Date of Government Version: 11/21/2022
Date Data Arrived at EDR: 11/21/2022
Date Made Active in Reports: 12/05/2022
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: (888) 372-7341
Last EDR Contact: 12/21/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

FUDS: Formerly Used Defense Sites

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

Date of Government Version: 08/11/2022
Date Data Arrived at EDR: 08/11/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 50

Source: U.S. Army Corps of Engineers
Telephone: 202-528-4285
Last EDR Contact: 11/10/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Varies

DOD: Department of Defense Sites

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 06/07/2021
Date Data Arrived at EDR: 07/13/2021
Date Made Active in Reports: 03/09/2022
Number of Days to Update: 239

Source: USGS
Telephone: 888-275-8747
Last EDR Contact: 10/13/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Varies

FEDLAND: Federal and Indian Lands

Federally and Indian administrated lands of the United States. Lands included are administrated by: Army Corps of Engineers, Bureau of Reclamation, National Wild and Scenic River, National Wildlife Refuge, Public Domain Land, Wilderness, Wilderness Study Area, Wildlife Management Area, Bureau of Indian Affairs, Bureau of Land Management, Department of Justice, Forest Service, Fish and Wildlife Service, National Park Service.

Date of Government Version: 04/02/2018
Date Data Arrived at EDR: 04/11/2018
Date Made Active in Reports: 11/06/2019
Number of Days to Update: 574

Source: U.S. Geological Survey
Telephone: 888-275-8747
Last EDR Contact: 10/03/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: N/A

SCRD DRYCLEANERS: State Coalition for Remediation of Drycleaners Listing

The State Coalition for Remediation of Drycleaners was established in 1998, with support from the U.S. EPA Office of Superfund Remediation and Technology Innovation. It is comprised of representatives of states with established drycleaner remediation programs. Currently the member states are Alabama, Connecticut, Florida, Illinois, Kansas, Minnesota, Missouri, North Carolina, Oregon, South Carolina, Tennessee, Texas, and Wisconsin.

Date of Government Version: 01/01/2017
Date Data Arrived at EDR: 02/03/2017
Date Made Active in Reports: 04/07/2017
Number of Days to Update: 63

Source: Environmental Protection Agency
Telephone: 615-532-8599
Last EDR Contact: 11/03/2022
Next Scheduled EDR Contact: 02/20/2023
Data Release Frequency: Varies

US FIN ASSUR: Financial Assurance Information

All owners and operators of facilities that treat, store, or dispose of hazardous waste are required to provide proof that they will have sufficient funds to pay for the clean up, closure, and post-closure care of their facilities.

Date of Government Version: 09/19/2022
Date Data Arrived at EDR: 09/20/2022
Date Made Active in Reports: 12/22/2022
Number of Days to Update: 93

Source: Environmental Protection Agency
Telephone: 202-566-1917
Last EDR Contact: 12/14/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Quarterly

EPA WATCH LIST: EPA WATCH LIST

EPA maintains a "Watch List" to facilitate dialogue between EPA, state and local environmental agencies on enforcement matters relating to facilities with alleged violations identified as either significant or high priority. Being on the Watch List does not mean that the facility has actually violated the law only that an investigation by EPA or a state or local environmental agency has led those organizations to allege that an unproven violation has in fact occurred. Being on the Watch List does not represent a higher level of concern regarding the alleged violations that were detected, but instead indicates cases requiring additional dialogue between EPA, state and local agencies - primarily because of the length of time the alleged violation has gone unaddressed or unresolved.

Date of Government Version: 08/30/2013
Date Data Arrived at EDR: 03/21/2014
Date Made Active in Reports: 06/17/2014
Number of Days to Update: 88

Source: Environmental Protection Agency
Telephone: 617-520-3000
Last EDR Contact: 10/28/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Quarterly

2020 COR ACTION: 2020 Corrective Action Program List

The EPA has set ambitious goals for the RCRA Corrective Action program by creating the 2020 Corrective Action Universe. This RCRA cleanup baseline includes facilities expected to need corrective action. The 2020 universe contains a wide variety of sites. Some properties are heavily contaminated while others were contaminated but have since been cleaned up. Still others have not been fully investigated yet, and may require little or no remediation. Inclusion in the 2020 Universe does not necessarily imply failure on the part of a facility to meet its RCRA obligations.

Date of Government Version: 09/30/2017
Date Data Arrived at EDR: 05/08/2018
Date Made Active in Reports: 07/20/2018
Number of Days to Update: 73

Source: Environmental Protection Agency
Telephone: 703-308-4044
Last EDR Contact: 10/28/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Varies

TSCA: Toxic Substances Control Act

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/2016
Date Data Arrived at EDR: 06/17/2020
Date Made Active in Reports: 09/10/2020
Number of Days to Update: 85

Source: EPA
Telephone: 202-260-5521
Last EDR Contact: 12/12/2022
Next Scheduled EDR Contact: 03/27/2023
Data Release Frequency: Every 4 Years

TRIS: Toxic Chemical Release Inventory System

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 08/14/2020
Date Made Active in Reports: 11/04/2020
Number of Days to Update: 82

Source: EPA
Telephone: 202-566-0250
Last EDR Contact: 11/01/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Annually

SSTS: Section 7 Tracking Systems

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 07/18/2022
Date Data Arrived at EDR: 07/18/2022
Date Made Active in Reports: 07/29/2022
Number of Days to Update: 11

Source: EPA
Telephone: 202-564-4203
Last EDR Contact: 10/18/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Annually

ROD: Records Of Decision

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: 703-416-0223
Last EDR Contact: 12/01/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Annually

RMP: Risk Management Plans

When Congress passed the Clean Air Act Amendments of 1990, it required EPA to publish regulations and guidance for chemical accident prevention at facilities using extremely hazardous substances. The Risk Management Program Rule (RMP Rule) was written to implement Section 112(r) of these amendments. The rule, which built upon existing industry codes and standards, requires companies of all sizes that use certain flammable and toxic substances to develop a Risk Management Program, which includes a(n): Hazard assessment that details the potential effects of an accidental release, an accident history of the last five years, and an evaluation of worst-case and alternative accidental releases; Prevention program that includes safety precautions and maintenance, monitoring, and employee training measures; and Emergency response program that spells out emergency health care, employee training measures and procedures for informing the public and response agencies (e.g the fire department) should an accident occur.

Date of Government Version: 04/27/2022
Date Data Arrived at EDR: 05/04/2022
Date Made Active in Reports: 05/10/2022
Number of Days to Update: 6

Source: Environmental Protection Agency
Telephone: 202-564-8600
Last EDR Contact: 10/27/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

RAATS: RCRA Administrative Action Tracking System

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/1995
Date Data Arrived at EDR: 07/03/1995
Date Made Active in Reports: 08/07/1995
Number of Days to Update: 35

Source: EPA
Telephone: 202-564-4104
Last EDR Contact: 06/02/2008
Next Scheduled EDR Contact: 09/01/2008
Data Release Frequency: No Update Planned

PRP: Potentially Responsible Parties

A listing of verified Potentially Responsible Parties

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: EPA
Telephone: 202-564-6023
Last EDR Contact: 12/01/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Quarterly

PADS: PCB Activity Database System

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 01/20/2022
Date Data Arrived at EDR: 01/20/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 64

Source: EPA
Telephone: 202-566-0500
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Annually

ICIS: Integrated Compliance Information System

The Integrated Compliance Information System (ICIS) supports the information needs of the national enforcement and compliance program as well as the unique needs of the National Pollutant Discharge Elimination System (NPDES) program.

Date of Government Version: 11/18/2016
Date Data Arrived at EDR: 11/23/2016
Date Made Active in Reports: 02/10/2017
Number of Days to Update: 79

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 09/27/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Quarterly

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

FTTS: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA/Office of Prevention, Pesticides and Toxic Substances
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

FTTS INSP: FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)
A listing of FIFRA/TSCA Tracking System (FTTS) inspections and enforcements.

Date of Government Version: 04/09/2009
Date Data Arrived at EDR: 04/16/2009
Date Made Active in Reports: 05/11/2009
Number of Days to Update: 25
Source: EPA
Telephone: 202-566-1667
Last EDR Contact: 08/18/2017
Next Scheduled EDR Contact: 12/04/2017
Data Release Frequency: No Update Planned

MLTS: Material Licensing Tracking System
MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 10/26/2022
Date Data Arrived at EDR: 11/22/2022
Date Made Active in Reports: 12/05/2022
Number of Days to Update: 13
Source: Nuclear Regulatory Commission
Telephone: 301-415-7169
Last EDR Contact: 10/11/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Quarterly

COAL ASH DOE: Steam-Electric Plant Operation Data
A listing of power plants that store ash in surface ponds.

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/22/2022
Number of Days to Update: 84
Source: Department of Energy
Telephone: 202-586-8719
Last EDR Contact: 11/29/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Varies

COAL ASH EPA: Coal Combustion Residues Surface Impoundments List
A listing of coal combustion residues surface impoundments with high hazard potential ratings.

Date of Government Version: 01/12/2017
Date Data Arrived at EDR: 03/05/2019
Date Made Active in Reports: 11/11/2019
Number of Days to Update: 251
Source: Environmental Protection Agency
Telephone: N/A
Last EDR Contact: 11/23/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Varies

PCB TRANSFORMER: PCB Transformer Registration Database
The database of PCB transformer registrations that includes all PCB registration submittals.

Date of Government Version: 09/13/2019
Date Data Arrived at EDR: 11/06/2019
Date Made Active in Reports: 02/10/2020
Number of Days to Update: 96
Source: Environmental Protection Agency
Telephone: 202-566-0517
Last EDR Contact: 11/03/2022
Next Scheduled EDR Contact: 02/13/2023
Data Release Frequency: Varies

RADINFO: Radiation Information Database
The Radiation Information Database (RADINFO) contains information about facilities that are regulated by U.S. Environmental Protection Agency (EPA) regulations for radiation and radioactivity.

Date of Government Version: 07/01/2019
Date Data Arrived at EDR: 07/01/2019
Date Made Active in Reports: 09/23/2019
Number of Days to Update: 84

Source: Environmental Protection Agency
Telephone: 202-343-9775
Last EDR Contact: 12/20/2022
Next Scheduled EDR Contact: 04/10/2023
Data Release Frequency: Quarterly

HIST FTTS: FIFRA/TSCA Tracking System Administrative Case Listing

A complete administrative case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2007
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

HIST FTTS INSP: FIFRA/TSCA Tracking System Inspection & Enforcement Case Listing

A complete inspection and enforcement case listing from the FIFRA/TSCA Tracking System (FTTS) for all ten EPA regions. The information was obtained from the National Compliance Database (NCDB). NCDB supports the implementation of FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) and TSCA (Toxic Substances Control Act). Some EPA regions are now closing out records. Because of that, and the fact that some EPA regions are not providing EPA Headquarters with updated records, it was decided to create a HIST FTTS database. It included records that may not be included in the newer FTTS database updates. This database is no longer updated.

Date of Government Version: 10/19/2006
Date Data Arrived at EDR: 03/01/2007
Date Made Active in Reports: 04/10/2007
Number of Days to Update: 40

Source: Environmental Protection Agency
Telephone: 202-564-2501
Last EDR Contact: 12/17/2008
Next Scheduled EDR Contact: 03/17/2008
Data Release Frequency: No Update Planned

DOT OPS: Incident and Accident Data

Department of Transporation, Office of Pipeline Safety Incident and Accident data.

Date of Government Version: 01/02/2020
Date Data Arrived at EDR: 01/28/2020
Date Made Active in Reports: 04/17/2020
Number of Days to Update: 80

Source: Department of Transporation, Office of Pipeline Safety
Telephone: 202-366-4595
Last EDR Contact: 10/24/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Quarterly

CONSENT: Superfund (CERCLA) Consent Decrees

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

Date of Government Version: 06/30/2022
Date Data Arrived at EDR: 07/21/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 71

Source: Department of Justice, Consent Decree Library
Telephone: Varies
Last EDR Contact: 09/27/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

BRS: Biennial Reporting System

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 03/02/2022
Date Made Active in Reports: 03/25/2022
Number of Days to Update: 23

Source: EPA/NTIS
Telephone: 800-424-9346
Last EDR Contact: 12/21/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Biennially

INDIAN RESERV: Indian Reservations

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 07/14/2015
Date Made Active in Reports: 01/10/2017
Number of Days to Update: 546

Source: USGS
Telephone: 202-208-3710
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Semi-Annually

FUSRAP: Formerly Utilized Sites Remedial Action Program

DOE established the Formerly Utilized Sites Remedial Action Program (FUSRAP) in 1974 to remediate sites where radioactive contamination remained from Manhattan Project and early U.S. Atomic Energy Commission (AEC) operations.

Date of Government Version: 07/26/2021
Date Data Arrived at EDR: 07/27/2021
Date Made Active in Reports: 10/22/2021
Number of Days to Update: 87

Source: Department of Energy
Telephone: 202-586-3559
Last EDR Contact: 10/27/2022
Next Scheduled EDR Contact: 02/16/2023
Data Release Frequency: Varies

UMTRA: Uranium Mill Tailings Sites

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized.

Date of Government Version: 08/30/2019
Date Data Arrived at EDR: 11/15/2019
Date Made Active in Reports: 01/28/2020
Number of Days to Update: 74

Source: Department of Energy
Telephone: 505-845-0011
Last EDR Contact: 11/09/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Varies

LEAD SMELTER 1: Lead Smelter Sites

A listing of former lead smelter site locations.

Date of Government Version: 10/27/2022
Date Data Arrived at EDR: 11/01/2022
Date Made Active in Reports: 11/15/2022
Number of Days to Update: 14

Source: Environmental Protection Agency
Telephone: 703-603-8787
Last EDR Contact: 12/01/2022
Next Scheduled EDR Contact: 04/10/2023
Data Release Frequency: Varies

LEAD SMELTER 2: Lead Smelter Sites

A list of several hundred sites in the U.S. where secondary lead smelting was done from 1931and 1964. These sites may pose a threat to public health through ingestion or inhalation of contaminated soil or dust

Date of Government Version: 04/05/2001
Date Data Arrived at EDR: 10/27/2010
Date Made Active in Reports: 12/02/2010
Number of Days to Update: 36

Source: American Journal of Public Health
Telephone: 703-305-6451
Last EDR Contact: 12/02/2009
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

US AIRS (AFS): Aerometric Information Retrieval System Facility Subsystem (AFS)

The database is a sub-system of Aerometric Information Retrieval System (AIRS). AFS contains compliance data on air pollution point sources regulated by the U.S. EPA and/or state and local air regulatory agencies. This information comes from source reports by various stationary sources of air pollution, such as electric power plants, steel mills, factories, and universities, and provides information about the air pollutants they produce. Action, air program, air program pollutant, and general level plant data. It is used to track emissions and compliance data from industrial plants.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US AIRS MINOR: Air Facility System Data

A listing of minor source facilities.

Date of Government Version: 10/12/2016
Date Data Arrived at EDR: 10/26/2016
Date Made Active in Reports: 02/03/2017
Number of Days to Update: 100

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/26/2017
Next Scheduled EDR Contact: 01/08/2018
Data Release Frequency: Annually

US MINES: Mines Master Index File

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

Date of Government Version: 08/03/2022
Date Data Arrived at EDR: 08/17/2022
Date Made Active in Reports: 08/31/2022
Number of Days to Update: 14

Source: Department of Labor, Mine Safety and Health Administration
Telephone: 303-231-5959
Last EDR Contact: 11/17/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Semi-Annually

MINES VIOLATIONS: MSHA Violation Assessment Data

Mines violation and assessment information. Department of Labor, Mine Safety & Health Administration.

Date of Government Version: 11/29/2022
Date Data Arrived at EDR: 11/30/2022
Date Made Active in Reports: 12/22/2022
Number of Days to Update: 22

Source: DOL, Mine Safety & Health Admi
Telephone: 202-693-9424
Last EDR Contact: 11/28/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Quarterly

US MINES 2: Ferrous and Nonferrous Metal Mines Database Listing

This map layer includes ferrous (ferrous metal mines are facilities that extract ferrous metals, such as iron ore or molybdenum) and nonferrous (Nonferrous metal mines are facilities that extract nonferrous metals, such as gold, silver, copper, zinc, and lead) metal mines in the United States.

Date of Government Version: 05/06/2020
Date Data Arrived at EDR: 05/27/2020
Date Made Active in Reports: 08/13/2020
Number of Days to Update: 78

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/21/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Varies

US MINES 3: Active Mines & Mineral Plants Database Listing

Active Mines and Mineral Processing Plant operations for commodities monitored by the Minerals Information Team of the USGS.

Date of Government Version: 04/14/2011
Date Data Arrived at EDR: 06/08/2011
Date Made Active in Reports: 09/13/2011
Number of Days to Update: 97

Source: USGS
Telephone: 703-648-7709
Last EDR Contact: 11/21/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Varies

ABANDONED MINES: Abandoned Mines

An inventory of land and water impacted by past mining (primarily coal mining) is maintained by OSMRE to provide information needed to implement the Surface Mining Control and Reclamation Act of 1977 (SMCRA). The inventory contains information on the location, type, and extent of AML impacts, as well as, information on the cost associated with the reclamation of those problems. The inventory is based upon field surveys by State, Tribal, and OSMRE program officials. It is dynamic to the extent that it is modified as new problems are identified and existing problems are reclaimed.

Date of Government Version: 09/13/2022
Date Data Arrived at EDR: 09/14/2022
Date Made Active in Reports: 12/05/2022
Number of Days to Update: 82

Source: Department of Interior
Telephone: 202-208-2609
Last EDR Contact: 12/13/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Quarterly

FINDS: Facility Index System/Facility Registry System

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 08/03/2022
Date Data Arrived at EDR: 08/25/2022
Date Made Active in Reports: 10/24/2022
Number of Days to Update: 60

Source: EPA
Telephone: (617) 918-1111
Last EDR Contact: 11/29/2022
Next Scheduled EDR Contact: 03/13/2023
Data Release Frequency: Quarterly

UXO: Unexploded Ordnance Sites

A listing of unexploded ordnance site locations

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 01/11/2022
Date Made Active in Reports: 02/14/2022
Number of Days to Update: 34

Source: Department of Defense
Telephone: 703-704-1564
Last EDR Contact: 10/05/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Varies

ECHO: Enforcement & Compliance History Information

ECHO provides integrated compliance and enforcement information for about 800,000 regulated facilities nationwide.

Date of Government Version: 09/25/2022
Date Data Arrived at EDR: 09/30/2022
Date Made Active in Reports: 12/22/2022
Number of Days to Update: 83

Source: Environmental Protection Agency
Telephone: 202-564-2280
Last EDR Contact: 09/30/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Quarterly

DOCKET HWC: Hazardous Waste Compliance Docket Listing

A complete list of the Federal Agency Hazardous Waste Compliance Docket Facilities.

Date of Government Version: 05/06/2021
Date Data Arrived at EDR: 05/21/2021
Date Made Active in Reports: 08/11/2021
Number of Days to Update: 82

Source: Environmental Protection Agency
Telephone: 202-564-0527
Last EDR Contact: 11/15/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Varies

FUELS PROGRAM: EPA Fuels Program Registered Listing

This listing includes facilities that are registered under the Part 80 (Code of Federal Regulations) EPA Fuels Programs. All companies now are required to submit new and updated registrations.

Date of Government Version: 08/11/2022
Date Data Arrived at EDR: 08/11/2022
Date Made Active in Reports: 09/30/2022
Number of Days to Update: 50

Source: EPA
Telephone: 800-385-6164
Last EDR Contact: 11/10/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Quarterly

PFAS NPL: Superfund Sites with PFAS Detections Information

EPA's Office of Land and Emergency Management and EPA Regional Offices maintain data describing what is known about site investigations, contamination, and remedial actions under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) where PFAS is present in the environment.

Date of Government Version: 02/23/2022
Date Data Arrived at EDR: 07/08/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 123

Source: Environmental Protection Agency
Telephone: 703-603-8895
Last EDR Contact: 10/04/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS FEDERAL SITES: Federal Sites PFAS Information

Several federal entities, such as the federal Superfund program, Department of Defense, National Aeronautics and Space Administration, Department of Transportation, and Department of Energy provided information for sites with known or suspected detections at federal facilities.

Date of Government Version: 02/23/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS TSCA: PFAS Manufacture and Imports Information

EPA issued the Chemical Data Reporting (CDR) Rule under the Toxic Substances Control Act (TSCA) and requires chemical manufacturers and facilities that manufacture or import chemical substances to report data to EPA. EPA publishes non-confidential business information (non-CBI) and includes descriptive information about each site, corporate parent, production volume, other manufacturing information, and processing and use information.

Date of Government Version: 01/03/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/04/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS RCRA MANIFEST: PFAS Transfers Identified In the RCRA Database Listing

To work around the lack of PFAS waste codes in the RCRA database, EPA developed the PFAS Transfers dataset by mining e-Manifest records containing at least one of these common PFAS keywords: PFAS, PFOA, PFOS, PERFL, AFFF, GENX, GEN-X (plus the VT waste codes). These keywords were searched for in the following text fields: Manifest handling instructions (MANIFEST_HANDLING_INSTR), Non-hazardous waste description (NON_HAZ_WASTE_DESCRIPTION), DOT printed information (DOT_PRINTED_INFORMATION), Waste line handling instructions (WASTE_LINE_HANDLING_INSTR), Waste residue comments (WASTE_RESIDUE_COMMENTS).

Date of Government Version: 01/03/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS ATSDR: PFAS Contamination Site Location Listing

PFAS contamination site locations from the Department of Health & Human Services, Center for Disease Control & Prevention. ATSDR is involved at a number of PFAS-related sites, either directly or through assisting state and federal partners. As of now, most sites are related to drinking water contamination connected with PFAS production facilities or fire training areas where aqueous film-forming firefighting foam (AFFF) was regularly used.

Date of Government Version: 06/24/2020
Date Data Arrived at EDR: 03/17/2021
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 601

Source: Department of Health & Human Services
Telephone: 202-741-5770
Last EDR Contact: 10/28/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Varies

PFAS WQP: Ambient Environmental Sampling for PFAS

The Water Quality Portal (WQP) is a part of a modernized repository storing ambient sampling data for all environmental media and tissue samples. A wide range of federal, state, tribal and local governments, academic and non-governmental organizations and individuals submit project details and sampling results to this public repository. The information is commonly used for research and assessments of environmental quality.

Date of Government Version: 01/03/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS NPDES: Clean Water Act Discharge Monitoring Information

Any discharger of pollutants to waters of the United States from a point source must have a National Pollutant Discharge Elimination System (NPDES) permit. The process for obtaining limits involves the regulated entity (permittee) disclosing releases in a NPDES permit application and the permitting authority (typically the state but sometimes EPA) deciding whether to require monitoring or monitoring with limits.

Date of Government Version: 01/03/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS ECHO: Facilities in Industries that May Be Handling PFAS Listing

Regulators and the public have expressed interest in knowing which regulated entities may be using PFAS. EPA has developed a dataset from various sources that show which industries may be handling PFAS. Approximately 120,000 facilities subject to federal environmental programs have operated or currently operate in industry sectors with processes that may involve handling and/or release of PFAS.

Date of Government Version: 01/03/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS ECHO FIRE TRAINING: Facilities in Industries that May Be Handling PFAS Listing

A list of fire training sites was added to the Industry Sectors dataset using a keyword search on the permitted facilitys name to identify sites where fire-fighting foam may have been used in training exercises. Additionally, you may view an example spreadsheet of the subset of fire training facility data, as well as the keywords used in selecting or deselecting a facility for the subset. as well as the keywords used in selecting or deselecting a facility for the subset. These keywords were tested to maximize accuracy in selecting facilities that may use fire-fighting foam in training exercises, however, due to the lack of a required reporting field in the data systems for designating fire training sites, this methodology may not identify all fire training sites or may potentially misidentify them.

Date of Government Version: 08/22/2018
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

PFAS PART 139 AIRPORT: All Certified Part 139 Airports PFAS Information Listing

Since July 1, 2006, all certified part 139 airports are required to have fire-fighting foam onsite that meet military specifications (MIL-F-24385) (14 CFR 139.317). To date, these military specification fire-fighting foams are fluorinated and have been historically used for training and extinguishing. The 2018 FAA Reauthorization Act has a provision stating that no later than October 2021, FAA shall not require the use of fluorinated AFFF. This provision does not prohibit the use of fluorinated AFFF at Part 139 civilian airports; it only prohibits FAA from mandating its use. The Federal Aviation Administration?s document AC 150/5210-6D - Aircraft Fire Extinguishing Agents provides guidance on Aircraft Fire Extinguishing Agents, which includes Aqueous Film Forming Foam (AFFF).

Date of Government Version: 08/22/2018
Date Data Arrived at EDR: 10/26/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 13

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/26/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

AQUEOUS FOAM NRC: Aqueous Foam Related Incidents Listing

The National Response Center (NRC) serves as an emergency call center that fields initial reports for pollution and railroad incidents and forwards that information to appropriate federal/state agencies for response. The spreadsheets posted to the NRC website contain initial incident data that has not been validated or investigated by a federal/state response agency. Response center calls from 1990 to the most recent complete calendar year where there was indication of Aqueous Film Forming Foam (AFFF) usage are included in this dataset. NRC calls may reference AFFF usage in the ?Material Involved? or ?Incident Description? fields.

Date of Government Version: 02/23/2022
Date Data Arrived at EDR: 03/31/2022
Date Made Active in Reports: 11/08/2022
Number of Days to Update: 222

Source: Environmental Protection Agency
Telephone: 202-272-0167
Last EDR Contact: 10/06/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

MA PFAS: PFAS Contaminated Sites Listing

Detection of Per- and Polyfluoroalkyl Substances (PFAS) in drinking water.

Date of Government Version: 06/24/2022
Date Data Arrived at EDR: 06/28/2022
Date Made Active in Reports: 09/12/2022
Number of Days to Update: 76

Source: Department of Environmental Protection
Telephone: 617-292-6770
Last EDR Contact: 12/12/2022
Next Scheduled EDR Contact: 04/10/2023
Data Release Frequency: Varies

CT PFAS: PFAS Contamination Site Listing

A listing of spills reported to the department between 1996 and the present that have substance released, such as ?foam? or other materials associated with PFAS.

Date of Government Version: 09/22/2022
Date Data Arrived at EDR: 09/26/2022
Date Made Active in Reports: 10/27/2022
Number of Days to Update: 31

Source: Department of Energy and Environmental Protection
Telephone: 860-424-3705
Last EDR Contact: 12/21/2022
Next Scheduled EDR Contact: 04/10/2023
Data Release Frequency: Quarterly

MA AIRS: Permitted Facilities Listing

A listing of Air Quality permit applications.

Date of Government Version: 10/06/2022
Date Data Arrived at EDR: 10/06/2022
Date Made Active in Reports: 12/22/2022
Number of Days to Update: 77

Source: Department of Environmental Protection
Telephone: 617-292-5789
Last EDR Contact: 10/04/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Varies

CT AIRS: Permitted Air Sources Listing

A listing of permitted air sources in Connecticut.

Date of Government Version: 08/11/2022
Date Data Arrived at EDR: 08/11/2022
Date Made Active in Reports: 11/01/2022
Number of Days to Update: 82

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3026
Last EDR Contact: 10/26/2022
Next Scheduled EDR Contact: 02/13/2023
Data Release Frequency: Varies

MA ASBESTOS: Asbestos Notification Listing

Asbestos sites

Date of Government Version: 08/23/2022
Date Data Arrived at EDR: 08/24/2022
Date Made Active in Reports: 09/06/2022
Number of Days to Update: 13

Source: Department of Environmental Protection
Telephone: 617-292-5982
Last EDR Contact: 11/08/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Varies

CT ASBESTOS: Asbestos Notification Listing
A listing of asbestos notification site locations.

Date of Government Version: 05/04/2022
Date Data Arrived at EDR: 05/25/2022
Date Made Active in Reports: 08/09/2022
Number of Days to Update: 76

Source: Department of Public Health
Telephone: 860-509-7371
Last EDR Contact: 12/21/2022
Next Scheduled EDR Contact: 02/13/2023
Data Release Frequency: Varies

MA DRYCLEANERS: Regulated Drycleaning Facilities
A listing of Department of Environmental Protection regulated drycleaning facilities that use perchloroethylene under the Environmental Results Program.

Date of Government Version: 07/12/2022
Date Data Arrived at EDR: 07/14/2022
Date Made Active in Reports: 09/27/2022
Number of Days to Update: 75

Source: Department of Environmental Protection
Telephone: 617-292-5633
Last EDR Contact: 12/13/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Varies

CT DRYCLEANERS: Drycleaner Facilities
A listing of drycleaner facility locations.

Date of Government Version: 07/18/2008
Date Data Arrived at EDR: 08/08/2008
Date Made Active in Reports: 08/27/2008
Number of Days to Update: 19

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3026
Last EDR Contact: 11/30/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Varies

MA ENFORCEMENT: Enforcement Action Cases
A listing of enforcement action cases tracked by Department of Environmental Protection programs, including Solid Waste and Hazardous Waste.

Date of Government Version: 07/19/2022
Date Data Arrived at EDR: 07/20/2022
Date Made Active in Reports: 07/27/2022
Number of Days to Update: 7

Source: Department of Environmental Quality
Telephone: 617-292-5979
Last EDR Contact: 10/20/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Varies

CT ENFORCEMENT: Enforcement Case Listing
The types of enforcement actions included are administrative consent orders, final unilateral orders and final dispositions of civil cases through the Attorney General's Office.

Date of Government Version: 06/30/2022
Date Data Arrived at EDR: 07/08/2022
Date Made Active in Reports: 07/11/2022
Number of Days to Update: 3

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3265
Last EDR Contact: 10/04/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Varies

MA Financial Assurance 1: Financial Assurance Information Listing
Information for hazardous waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 12/01/2010
Date Data Arrived at EDR: 12/23/2010
Date Made Active in Reports: 02/03/2011
Number of Days to Update: 42

Source: Department of Environmental Protection
Telephone: 617-292-5970
Last EDR Contact: 11/30/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Varies

CT Financial Assurance 1: Financial Assurance Information Listing

A listing containing RCRA financial assurance information submitted on behalf of the CT DEP's Program Analysis Group of the Waste Engineering and Enforcement Division.

Date of Government Version: 06/13/2022
Date Data Arrived at EDR: 06/14/2022
Date Made Active in Reports: 08/31/2022
Number of Days to Update: 78

Source: Department of Energy & Environmental Protection
Telephone: 860-418-5930
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 03/27/2023
Data Release Frequency: Varies

MA Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for underground storage tanks. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 07/12/2022
Date Data Arrived at EDR: 07/14/2022
Date Made Active in Reports: 09/27/2022
Number of Days to Update: 75

Source: Office of State Fire Marshal
Telephone: 978-567-3100
Last EDR Contact: 12/13/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Varies

CT Financial Assurance 2: Financial Assurance Information Listing

A listing of financial assurance information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay.

Date of Government Version: 06/13/2022
Date Data Arrived at EDR: 06/14/2022
Date Made Active in Reports: 08/31/2022
Number of Days to Update: 78

Source: Department of Energy & Environmental Protection
Telephone: 860-418-5930
Last EDR Contact: 12/06/2022
Next Scheduled EDR Contact: 03/27/2023
Data Release Frequency: Varies

MA Financial Assurance 3: Financial Assurance Information listing

Information for solid waste facilities. Financial assurance is intended to ensure that resources are available to pay for the cost of closure, post-closure care, and corrective measures if the owner or operator of a regulated facility is unable or unwilling to pay

Date of Government Version: 01/16/2018
Date Data Arrived at EDR: 04/17/2018
Date Made Active in Reports: 06/15/2018
Number of Days to Update: 59

Source: Department of Environmental Protection
Telephone: 617-292-5970
Last EDR Contact: 09/27/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

MA GWDP: Ground Water Discharge Permits

The Ground Water Discharge Permits datalayer (formerly known as Groundwater Discharge Points) is a statewide point dataset containing approximate locations of permitted discharges to groundwater.

Date of Government Version: 12/29/2021
Date Data Arrived at EDR: 01/25/2022
Date Made Active in Reports: 04/18/2022
Number of Days to Update: 83

Source: MassGIS
Telephone: 617-556-1150
Last EDR Contact: 10/28/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Varies

MA HW GEN: List of Massachusetts Hazardous Waste Generators

Permanent generator identification numbers for all Massachusetts generators of hazardous waste and waste oil that have registered with or notified MassDEP of their hazardous waste activities.

Date of Government Version: 09/15/2022
Date Data Arrived at EDR: 09/20/2022
Date Made Active in Reports: 12/07/2022
Number of Days to Update: 78

Source: Department of Environmental Protection
Telephone: 617-292-5500
Last EDR Contact: 12/14/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Semi-Annually

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 08/08/2022
Date Data Arrived at EDR: 08/08/2022
Date Made Active in Reports: 10/21/2022
Number of Days to Update: 74

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 11/16/2022
Next Scheduled EDR Contact: 02/20/2023
Data Release Frequency: No Update Planned

MA MERCURY: Mercury Product Recyling Drop-Off Locations Listing

A listing of locations, collecting and recycling for mercury-added products. Mercury is toxic to the human nervous system, as well as fish and animals. Mercury can enter the body either through skin absorption or through inhalation of mercury vapors. At room temperature, small beads of mercury will vaporize.

Date of Government Version: 09/26/2022
Date Data Arrived at EDR: 09/26/2022
Date Made Active in Reports: 12/09/2022
Number of Days to Update: 74

Source: Department of Environmental Protection
Telephone: 617-292-5632
Last EDR Contact: 11/23/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Varies

MA NPDES: NPDES Permit Listing

Listing of treatment plants in Massachusetts that hold permits to discharge to groundwater.

Date of Government Version: 01/07/2020
Date Data Arrived at EDR: 02/11/2020
Date Made Active in Reports: 04/21/2020
Number of Days to Update: 70

Source: Department of Environmental Protection
Telephone: 508-767-2781
Last EDR Contact: 11/10/2022
Next Scheduled EDR Contact: 02/20/2023
Data Release Frequency: Varies

CT NPDES: Wastewater Permit Listing

A listing of permits issued by the DEP.

Date of Government Version: 05/02/2022
Date Data Arrived at EDR: 05/05/2022
Date Made Active in Reports: 07/28/2022
Number of Days to Update: 84

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3832
Last EDR Contact: 12/13/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Varies

MA TIER 2: Tier 2 Information Listing

A listing of facilities which store or manufacture hazardous materials and submit a chemical inventory report

Date of Government Version: 12/31/2019
Date Data Arrived at EDR: 07/19/2021
Date Made Active in Reports: 08/17/2021
Number of Days to Update: 29

Source: Massachusetts Emergency Management Agency
Telephone: 508-820-2019
Last EDR Contact: 11/01/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Annually

MA TSD: TSD Facility

List of Licensed Hazardous Waste Treatment, Storage Disposal Facilities (TSDFs) in Massachusetts.

Date of Government Version: 09/15/2022
Date Data Arrived at EDR: 09/20/2022
Date Made Active in Reports: 12/07/2022
Number of Days to Update: 78

Source: Department of Environmental Protection
Telephone: 617-292-5580
Last EDR Contact: 12/14/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Varies

MA UIC: Underground Injection Control Listing

A list of UIC registration data and their locations

Date of Government Version: 03/10/2022
Date Data Arrived at EDR: 03/15/2022
Date Made Active in Reports: 06/10/2022
Number of Days to Update: 87

Source: Department of Environmental Protection
Telephone: 617-566-1172
Last EDR Contact: 11/01/2022
Next Scheduled EDR Contact: 02/20/2023
Data Release Frequency: Varies

CT UIC: Underground Injection Control Listing

A list of of subsurface disposal permits and their locations.

Date of Government Version: 05/11/2022
Date Data Arrived at EDR: 05/12/2022
Date Made Active in Reports: 05/31/2022
Number of Days to Update: 19

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3058
Last EDR Contact: 09/29/2022
Next Scheduled EDR Contact: 01/30/2023
Data Release Frequency: Varies

PCS INACTIVE: Listing of Inactive PCS Permits

An inactive permit is a facility that has shut down or is no longer discharging.

Date of Government Version: 11/05/2014
Date Data Arrived at EDR: 01/06/2015
Date Made Active in Reports: 05/06/2015
Number of Days to Update: 120

Source: EPA
Telephone: 202-564-2496
Last EDR Contact: 09/28/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Semi-Annually

PCS: Permit Compliance System

PCS is a computerized management information system that contains data on National Pollutant Discharge Elimination System (NPDES) permit holding facilities. PCS tracks the permit, compliance, and enforcement status of NPDES facilities.

Date of Government Version: 07/14/2011
Date Data Arrived at EDR: 08/05/2011
Date Made Active in Reports: 09/29/2011
Number of Days to Update: 55

Source: EPA, Office of Water
Telephone: 202-564-2496
Last EDR Contact: 09/28/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Semi-Annually

CT COI: Completion of Investigation

The COI must be signed and submitted by the Certifying Party to document that the investigation of the parcel has been completed in accordance with CGS Section 22a-134a(g)(1).

Date of Government Version: 04/07/2022
Date Data Arrived at EDR: 04/08/2022
Date Made Active in Reports: 07/01/2022
Number of Days to Update: 84

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3000
Last EDR Contact: 12/13/2022
Next Scheduled EDR Contact: 04/03/2023
Data Release Frequency: Varies

MINES MRDS: Mineral Resources Data System

Mineral Resources Data System

Date of Government Version: 04/06/2018
Date Data Arrived at EDR: 10/21/2019
Date Made Active in Reports: 10/24/2019
Number of Days to Update: 3

Source: USGS
Telephone: 703-648-6533
Last EDR Contact: 11/22/2022
Next Scheduled EDR Contact: 03/06/2023
Data Release Frequency: Varies

PCS ENF: Enforcement data

No description is available for this data

Date of Government Version: 12/31/2014
Date Data Arrived at EDR: 02/05/2015
Date Made Active in Reports: 03/06/2015
Number of Days to Update: 29

Source: EPA
Telephone: 202-564-2497
Last EDR Contact: 09/28/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Varies

GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

EDR HIGH RISK HISTORICAL RECORDS

EDR Exclusive Records

EDR MGP: EDR Proprietary Manufactured Gas Plants

The EDR Proprietary Manufactured Gas Plant Database includes records of coal gas plants (manufactured gas plants) compiled by EDR's researchers. Manufactured gas sites were used in the United States from the 1800's to 1950's to produce a gas that could be distributed and used as fuel. These plants used whale oil, rosin, coal, or a mixture of coal, oil, and water that also produced a significant amount of waste. Many of the byproducts of the gas production, such as coal tar (oily waste containing volatile and non-volatile chemicals), sludges, oils and other compounds are potentially hazardous to human health and the environment. The byproduct from this process was frequently disposed of directly at the plant site and can remain or spread slowly, serving as a continuous source of soil and groundwater contamination.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: No Update Planned

EDR Hist Auto: EDR Exclusive Historical Auto Stations

EDR has searched selected national collections of business directories and has collected listings of potential gas station/filling station/service station sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include gas station/filling station/service station establishments. The categories reviewed included, but were not limited to gas, gas station, gasoline station, filling station, auto, automobile repair, auto service station, service station, etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR Hist Cleaner: EDR Exclusive Historical Cleaners

EDR has searched selected national collections of business directories and has collected listings of potential dry cleaner sites that were available to EDR researchers. EDR's review was limited to those categories of sources that might, in EDR's opinion, include dry cleaning establishments. The categories reviewed included, but were not limited to dry cleaners, cleaners, laundry, laundromat, cleaning/laundry, wash & dry etc. This database falls within a category of information EDR classifies as "High Risk Historical Records", or HRHR. EDR's HRHR effort presents unique and sometimes proprietary data about past sites and operations that typically create environmental concerns, but may not show up in current government records searches.

Date of Government Version: N/A
Date Data Arrived at EDR: N/A
Date Made Active in Reports: N/A
Number of Days to Update: N/A

Source: EDR, Inc.
Telephone: N/A
Last EDR Contact: N/A
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

EDR RECOVERED GOVERNMENT ARCHIVES

Exclusive Recovered Govt. Archives

MA RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Massachusetts.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

CT RGA HWS: Recovered Government Archive State Hazardous Waste Facilities List

The EDR Recovered Government Archive State Hazardous Waste database provides a list of SHWS incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Energy & Environmental Protection formerly know as the DEP which changes in July 2011 in Connecticut.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/02/2014
Number of Days to Update: 185

Source: Department of Energy & Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

MA RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Environmental Protection in Massachusetts.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 12/24/2013
Number of Days to Update: 176

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

CT RGA LUST: Recovered Government Archive Leaking Underground Storage Tank

The EDR Recovered Government Archive Leaking Underground Storage Tank database provides a list of LUST incidents derived from historical databases and includes many records that no longer appear in current government lists. Compiled from Records formerly available from the Department of Energy & Environmental Protection formerly know as the DEP which changes in July 2011 in Connecticut.

Date of Government Version: N/A
Date Data Arrived at EDR: 07/01/2013
Date Made Active in Reports: 01/02/2014
Number of Days to Update: 185

Source: Department of Energy & Environmental Protection
Telephone: N/A
Last EDR Contact: 06/01/2012
Next Scheduled EDR Contact: N/A
Data Release Frequency: Varies

OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

CT MANIFEST: Hazardous Waste Manifest Data

Facility and manifest data. Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a tsd facility.

Date of Government Version: 08/08/2022
Date Data Arrived at EDR: 08/08/2022
Date Made Active in Reports: 10/21/2022
Number of Days to Update: 74

Source: Department of Energy & Environmental Protection
Telephone: 860-424-3375
Last EDR Contact: 11/16/2022
Next Scheduled EDR Contact: 02/20/2023
Data Release Frequency: No Update Planned

NJ MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 12/31/2018
Date Data Arrived at EDR: 04/10/2019
Date Made Active in Reports: 05/16/2019
Number of Days to Update: 36

Source: Department of Environmental Protection
Telephone: N/A
Last EDR Contact: 10/03/2022
Next Scheduled EDR Contact: 01/16/2023
Data Release Frequency: Annually

NY MANIFEST: Facility and Manifest Data
Manifest is a document that lists and tracks hazardous waste from the generator through transporters to a TSD facility.

Date of Government Version: 01/01/2019
Date Data Arrived at EDR: 10/29/2021
Date Made Active in Reports: 01/19/2022
Number of Days to Update: 82

Source: Department of Environmental Conservation
Telephone: 518-402-8651
Last EDR Contact: 10/28/2022
Next Scheduled EDR Contact: 02/06/2023
Data Release Frequency: Quarterly

PA MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 06/30/2018
Date Data Arrived at EDR: 07/19/2019
Date Made Active in Reports: 09/10/2019
Number of Days to Update: 53

Source: Department of Environmental Protection
Telephone: 717-783-8990
Last EDR Contact: 10/05/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Annually

RI MANIFEST: Manifest information
Hazardous waste manifest information

Date of Government Version: 12/31/2020
Date Data Arrived at EDR: 11/30/2021
Date Made Active in Reports: 02/18/2022
Number of Days to Update: 80

Source: Department of Environmental Management
Telephone: 401-222-2797
Last EDR Contact: 12/20/2022
Next Scheduled EDR Contact: 02/27/2023
Data Release Frequency: Annually

VT MANIFEST: Hazardous Waste Manifest Data
Hazardous waste manifest information.

Date of Government Version: 10/28/2019
Date Data Arrived at EDR: 10/29/2019
Date Made Active in Reports: 01/09/2020
Number of Days to Update: 72

Source: Department of Environmental Conservation
Telephone: 802-241-3443
Last EDR Contact: 10/05/2022
Next Scheduled EDR Contact: 01/23/2023
Data Release Frequency: Annually

WI MANIFEST: Manifest Information
Hazardous waste manifest information.

Date of Government Version: 05/31/2018
Date Data Arrived at EDR: 06/19/2019
Date Made Active in Reports: 09/03/2019
Number of Days to Update: 76

Source: Department of Natural Resources
Telephone: N/A
Last EDR Contact: 12/01/2022
Next Scheduled EDR Contact: 03/20/2023
Data Release Frequency: Annually

Oil/Gas Pipelines
Source: Endeavor Business Media
Petroleum Bundle (Crude Oil, Refined Products, Petrochemicals, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)) N = Natural Gas Bundle (Natural Gas, Gas Liquids (LPG/NGL), and Specialty Gases (Miscellaneous)). This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Electric Power Transmission Line Data
Source: Endeavor Business Media
This map includes information copyrighted by Endeavor Business Media. This information is provided on a best effort basis and Endeavor Business Media does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of Endeavor Business Media.

Sensitive Receptors: There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

AHA Hospitals:
Source: American Hospital Association, Inc.
Telephone: 312-280-5991
The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

Medical Centers: Provider of Services Listing
Source: Centers for Medicare & Medicaid Services
Telephone: 410-786-3000
A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

Nursing Homes
Source: National Institutes of Health
Telephone: 301-594-6248
Information on Medicare and Medicaid certified nursing homes in the United States.

Public Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

Private Schools
Source: National Center for Education Statistics
Telephone: 202-502-7300
The National Center for Education Statistics' primary database on private school locations in the United States.

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: MassDEP
Telephone: 617-292-5907

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

STREET AND ADDRESS INFORMATION

Â© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

GEOCHECK ®- PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

22116.00
97 NEW BOSTON ROAD
DUDLEY, MA 01571

TARGET PROPERTY COORDINATES

Latitude (North):	42.02928 - 42ˆ 1’ 45.41’’
Longitude (West):	71.904145 - 71ˆ 54’ 14.92’’
Universal Tranverse Mercator:	Zone 19
UTM X (Meters):	259578.5
UTM Y (Meters):	4656895.0
Elevation:	480 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	11743651 WEBSTER, MA
Version Date:	2018

EDR’s GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

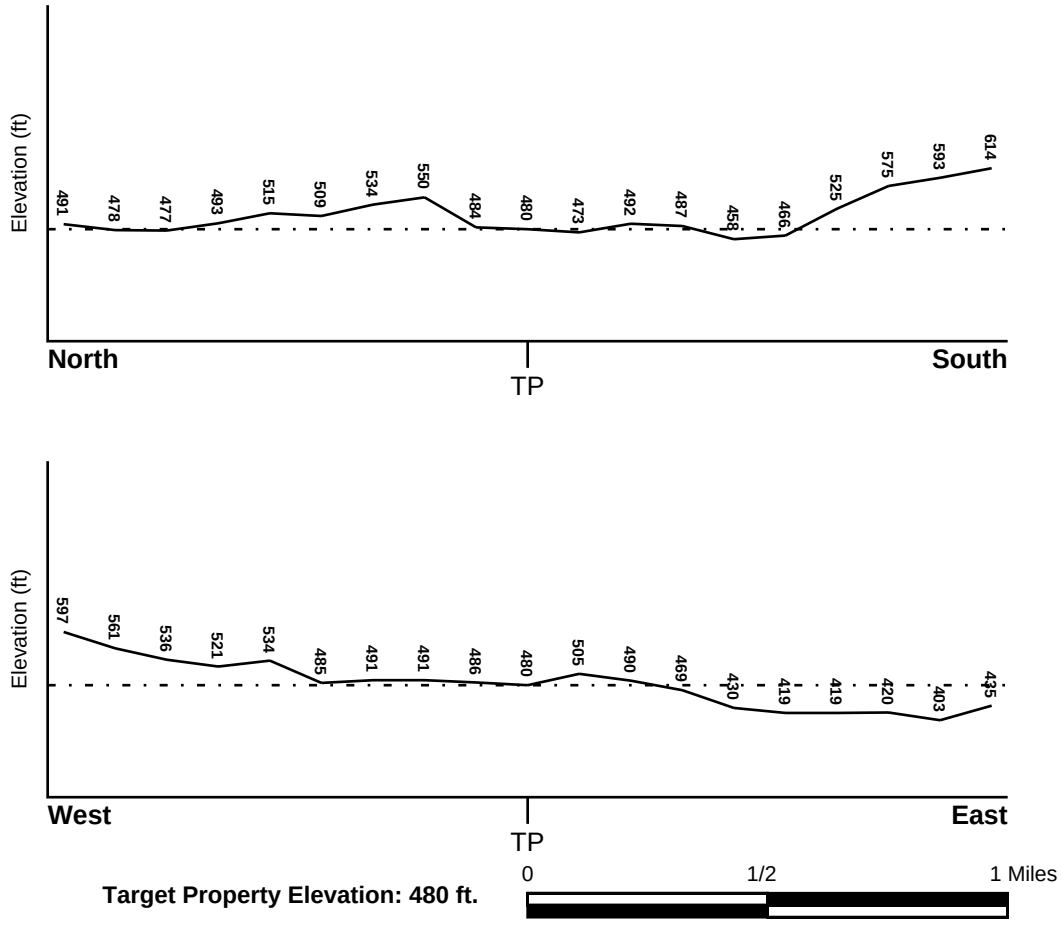
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General South

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

Flood Plain Panel at Target Property	FEMA Source Type
25027C0969E	FEMA FIRM Flood data

Additional Panels in search area:	FEMA Source Type
25027C0966E	FEMA FIRM Flood data
25027C0967E	FEMA FIRM Flood data
25027C0968E	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

NWI Quad at Target Property	NWI Electronic Data Coverage
WEBSTER	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

MAP ID	LOCATION FROM TP	GENERAL DIRECTION GROUNDWATER FLOW
9	1/2 - 1 Mile NW	NE
1G	1/2 - 1 Mile NW	NE

For additional site information, refer to Physical Setting Source Map Findings.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

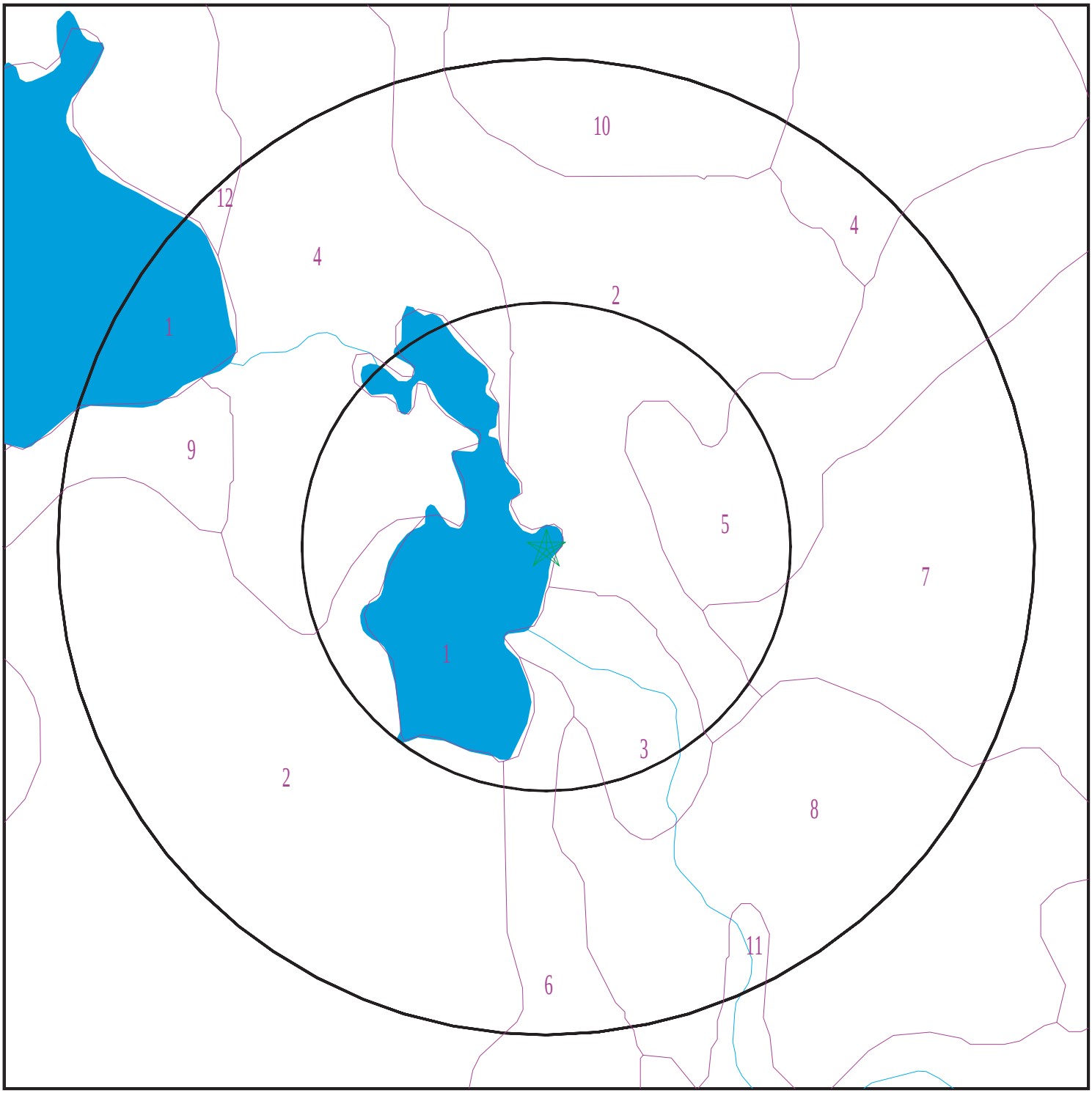
Era:	Paleozoic
System:	Ordovician
Series:	Ordovician
Code:	Oe *(decoded above as Era, System & Series)*

GEOLOGIC AGE IDENTIFICATION

Category: Eugeosynclinal Deposits

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 7213211.2s



Target Property
SSURGO Soil
Water

0 1/16 1/8 1/4 Miles

N

SITE NAME:	22116.00	CLIENT:	Pare Corporation
ADDRESS:	97 New Boston Road Dudley MA 01571	CONTACT:	Arianne Barton
LAT/LONG:	42.02928 / 71.904145	INQUIRY #:	7213211.2s
		DATE:	December 28, 2022 12:09 pm

Copyright © 2022 EDR, Inc. © 2015 TomTom Rel. 2015.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Water

Soil Surface Texture:
Hydrologic Group: Not reported

Soil Drainage Class:
Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

Soil Map ID: 2

Soil Component Name: Canton

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
2	3 inches	20 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
3	20 inches	64 inches	gravelly loamy sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6

Soil Map ID: 3

Soil Component Name: Swansea

Soil Surface Texture: muck

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Very poorly drained

Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 15 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	muck	Not reported	Not reported	Max: 705 Min: 141.14	Max: Min:
2	3 inches	33 inches	muck	Not reported	Not reported	Max: 705 Min: 141.14	Max: Min:
3	33 inches	64 inches	gravelly loamy sand	Not reported	Not reported	Max: 705 Min: 141.14	Max: Min:

Soil Map ID: 4

Soil Component Name: Merrimac

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Somewhat excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information

	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
2	5 inches	16 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
3	16 inches	27 inches	gravelly loamy sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
4	27 inches	64 inches	stratified gravelly sand to very gravelly sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6

Soil Map ID: 5

Soil Component Name: Chatfield

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	fine sandy loam	Not reported	Not reported	Max: 0.07 Min: 0	Max: Min:
2	3 inches	29 inches	fine sandy loam	Not reported	Not reported	Max: 0.07 Min: 0	Max: Min:
3	29 inches	33 inches	unweathered bedrock	Not reported	Not reported	Max: 0.07 Min: 0	Max: Min:

Soil Map ID: 6

Soil Component Name: Hinckley

Soil Surface Texture: sandy loam

Hydrologic Group: Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.

Soil Drainage Class: Excessively drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	sandy loam	Not reported	Not reported	Max: 705 Min: 141.14	Max: 6 Min: 3.6
2	5 inches	16 inches	gravelly loamy sand	Not reported	Not reported	Max: 705 Min: 141.14	Max: 6 Min: 3.6

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
3	16 inches	64 inches	very gravelly coarse sand	Not reported	Not reported	Max: 705 Min: 141.14	Max: 6 Min: 3.6

Soil Map ID: 7

Soil Component Name: Charlton

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
2	7 inches	33 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
3	33 inches	64 inches	sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5

Soil Map ID: 8

Soil Component Name: Charlton

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
2	7 inches	33 inches	fine sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5
3	33 inches	64 inches	sandy loam	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: 6 Min: 4.5

Soil Map ID: 9

Soil Component Name: Whitman

Soil Surface Texture: mucky sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Very poorly drained

Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	5 inches	mucky sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6.5 Min: 4.5
2	5 inches	11 inches	sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6.5 Min: 4.5

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
3	11 inches	25 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6.5 Min: 4.5
4	25 inches	64 inches	fine sandy loam	Not reported	Not reported	Max: 1.41 Min: 0	Max: 6.5 Min: 4.5

Soil Map ID: 10

Soil Component Name: Canton

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	3 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
2	3 inches	20 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6
3	20 inches	64 inches	gravelly loamy sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 6 Min: 3.6

Soil Map ID: 11

Soil Component Name: Walpole

Soil Surface Texture: fine sandy loam

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Very poorly drained

Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: Low

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	1 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 7.3 Min: 4.5
2	1 inches	18 inches	fine sandy loam	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 7.3 Min: 4.5
3	18 inches	64 inches	gravelly sand	Not reported	Not reported	Max: 141.14 Min: 42.34	Max: 7.3 Min: 4.5

Soil Map ID: 12

Soil Component Name: Freetown

Soil Surface Texture: muck

Hydrologic Group: Class D - Very slow infiltration rates. Soils are clayey, have a high water table, or are shallow to an impervious layer.

Soil Drainage Class: Very poorly drained

Hydric Status: All hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 15 inches

Soil Layer Information							
	Boundary			Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil		
1	0 inches	7 inches	muck	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: Min:
2	7 inches	64 inches	muck	Not reported	Not reported	Max: 42.34 Min: 4.23	Max: Min:

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

DATABASE	SEARCH DISTANCE (miles)
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
1	USGS40000464199	1/2 - 1 Mile ENE
A2	USGS40000464229	1/2 - 1 Mile ENE
B6	USGS40000464323	1/2 - 1 Mile NE
C8	USGS40000464380	1/2 - 1 Mile NE

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

MAP ID	WELL ID	LOCATION FROM TP

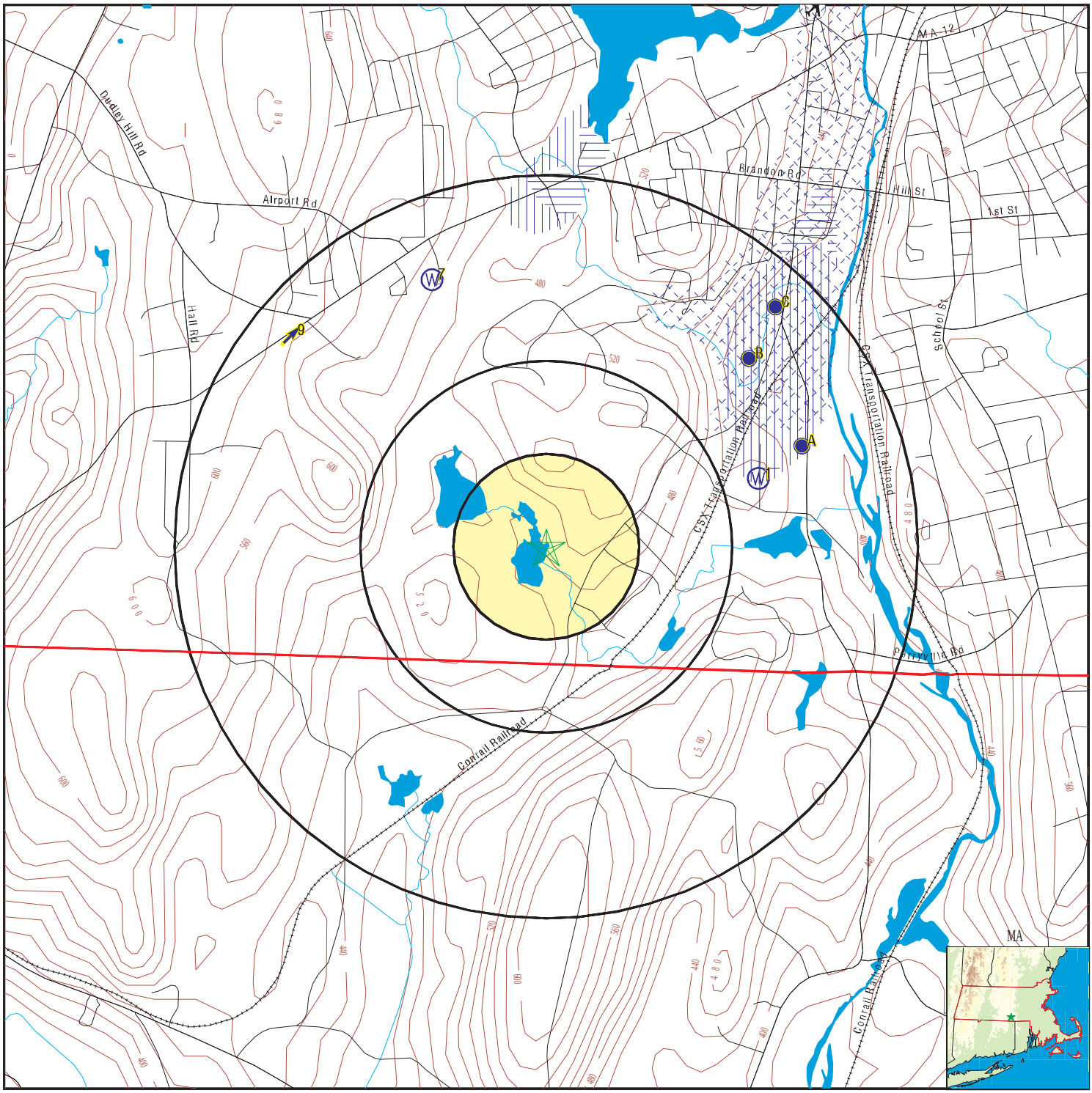
No PWS System Found

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
B3	MA9000000002484	1/2 - 1 Mile NE
B4	MA9000000003801	1/2 - 1 Mile NE
A5	MA9000000003160	1/2 - 1 Mile ENE
7	MA9000000004684	1/2 - 1 Mile NNW
C10	MA9000000000319	1/2 - 1 Mile NE

PHYSICAL SETTING SOURCE MAP - 7213211.2s



County Boundary
Major Roads
Contour Lines
Airports
Earthquake epicenter, Richter 5 or greater
Water Wells
Public Water Supply Wells
Cluster of Multiple Icons

0 1/4 1/2 1 Miles

Groundwater Flow Direction
GI Indeterminate Groundwater Flow at Location
GV Groundwater Flow Varies at Location

Potentially Productive Aquifers
Not Potentially Productive Aquifers
DEP Approved Zone IIs
EPA Designated Sole Src. Aq.

SITE NAME: 22116.00	CLIENT: Pare Corporation
ADDRESS: 97 New Boston Road Dudley MA 01571	CONTACT: Arianne Barton INQUIRY #: 7213211.2s
LAT/LONG: 42.02928 / 71.904145	DATE: December 28, 2022 12:09 pm

Copyright © 2022 EDR, Inc. © 2015 TomTom Rel. 2015.

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

1
ENE
1/2 - 1 Mile
Lower

FED USGS **USGS40000464199**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	1144	Type:	Well
Description:	Not Reported	HUC:	Not Reported
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Mixed (confined and unconfined multiple aquifers)		
Construction Date:	Not Reported	Well Depth:	Not Reported
Well Depth Units:	Not Reported	Well Hole Depth:	Not Reported
Well Hole Depth Units:	Not Reported		

A2
ENE
1/2 - 1 Mile
Lower

FED USGS **USGS40000464229**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-D2W 7	Type:	Well
Description:	Not Reported	HUC:	01100001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Sand and gravel aquifers (glaciated regions)		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19480907	Well Depth:	51
Well Depth Units:	ft	Well Hole Depth:	51
Well Hole Depth Units:	ft		

B3
NE
1/2 - 1 Mile
Lower

MA WELLS **MA9000000002484**

PWS ID:	2080000	Site Name:	GP WELL #6
Type:	Community Groundwater Well		
Facility Name:	Not Reported	SubBasin:	FRENCH
Basemap:	DOQ	Accuracy Estimate (ft):	100
Feature Type:	PH	Location Method:	PHO
Primary Location Source:	AP_DOQ	Secondary Location Source:	MS_USGS
Tertiary Location Source:	Not Reported		
Source ID:	2080000-06G	PWS Name:	DUDLEY WATER DEPARTMENT
Source Name:	GP WELL #6	PWS Status:	A
Source Status:	A	PWS Class:	COM
Source Availability:	ACTIVE		

Well Name:	GP WELL #6	Purveyor:	DUDLEY WATER DEPARTMENT
Basin:	FRENCH	Region:	2

B4
NE
1/2 - 1 Mile
Lower

MA WELLS **MA9000000003801**

PWS ID:	2080000	Site Name:	NEW BOSTON ROAD #4
Type:	Community Groundwater Well		
Facility Name:	Not Reported	SubBasin:	FRENCH
Basemap:	DOQ	Accuracy Estimate (ft):	100
Feature Type:	PH	Location Method:	PHO
Primary Location Source:	AP_DOQ	Secondary Location Source:	Not Reported
Tertiary Location Source:	Not Reported		
Source ID:	2080000-04G	PWS Name:	DUDLEY WATER DEPARTMENT
Source Name:	NEW BOSTON ROAD #4	PWS Status:	A
Source Status:	A	PWS Class:	COM
Source Availability:	EMERG		
Well Name:	NEW BOSTON ROAD #4	Purveyor:	DUDLEY WATER DEPARTMENT
Basin:	FRENCH	Region:	2

A5
ENE
1/2 - 1 Mile
Lower

MA WELLS **MA9000000003160**

PWS ID:	2080000	Site Name:	SCHOFIELD AVENUE #5
Type:	Community Groundwater Well		
Facility Name:	Not Reported	SubBasin:	FRENCH
Basemap:	DOQ	Accuracy Estimate (ft):	100
Feature Type:	PH	Location Method:	PHO
Primary Location Source:	AP_DOQ	Secondary Location Source:	MS_USGS
Tertiary Location Source:	Not Reported		
Source ID:	2080000-05G	PWS Name:	DUDLEY WATER DEPARTMENT
Source Name:	SCHOFIELD AVENUE #5	PWS Status:	A
Source Status:	A	PWS Class:	COM
Source Availability:	EMERG		
Well Name:	SCHOFIELD AVENUE #5	Purveyor:	DUDLEY WATER DEPARTMENT
Basin:	FRENCH	Region:	2

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation | Database | EDR ID Number

B6
NE
1/2 - 1 Mile
Lower

FED USGS **USGS40000464323**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-D2W 6	Type:	Well
Description:	Not Reported	HUC:	01100001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1949
Well Depth:	77	Well Depth Units:	ft
Well Hole Depth:	77	Well Hole Depth Units:	ft

7
NNW
1/2 - 1 Mile
Higher

MA WELLS **MA9000000004684**

PWS ID:	Not Reported	Site Name:	Not Reported
Type:	Not Reported	Facility Name:	GENTEX OPTICS INC
SubBasin:	FRENCH		
Basemap:	DOQ	Accuracy Estimate (ft):	100
Feature Type:	CF	Location Method:	PHO
Primary Location Source:	KNOW	Secondary Location Source:	AP_DOQ
Tertiary Location Source:	MS_LMTQ	UST ID:	0
Date Mapped:	21-NOV-05		

C8
NE
1/2 - 1 Mile
Lower

FED USGS **USGS40000464380**

Organization ID:	USGS-MA		
Organization Name:	USGS Massachusetts Water Science Center		
Monitor Location:	MA-D2W 4	Type:	Well
Description:	Not Reported	HUC:	01100001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Sand and gravel aquifers (glaciated regions)		
Formation Type:	Not Reported	Aquifer Type:	Not Reported
Construction Date:	19610614	Well Depth:	62
Well Depth Units:	ft	Well Hole Depth:	62
Well Hole Depth Units:	ft		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

			Database	EDR ID Number
9 **NW** **1/2 - 1 Mile** **Higher**	Site ID: Groundwater Flow: Water Table Depth: Date:	2-0000358 NE Shallowest: 8.03 ft. Deepest: 11.47 ft. 03/1993	**AQUIFLOW**	**4994**

C10
NE
1/2 - 1 Mile
Lower

MA WELLS **MA9000000000319**

PWS ID:	2080000	Site Name:	SCHOFIELD AVENUE #2
Type:	Community Groundwater Well		
Facility Name:	Not Reported	SubBasin:	FRENCH
Basemap:	NA	Accuracy Estimate (ft):	100
Feature Type:	GW	Location Method:	GP_6
Primary Location Source:	SV	Secondary Location Source:	Not Reported
Tertiary Location Source:	Not Reported		
Source ID:	2080000-02G	PWS Name:	DUDLEY WATER DEPARTMENT
Source Name:	SCHOFIELD AVENUE #2	PWS Status:	A
Source Status:	I	PWS Class:	COM
Source Availability:	INACT		
Well Name:	SCHOFIELD AVENUE #2	Purveyor:	DUDLEY WATER DEPARTMENT
Basin:	FRENCH	Region:	2

			Database	EDR ID Number
1G **NW** **1/2 - 1 Mile** **Lower**	Site ID: Groundwater Flow: Water Table Depth: Date:	2-0000358 NE Shallowest: 8.03 ft. Deepest: 11.47 ft. 03/1993	**AQUIFLOW**	**4994**

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS
RADON

AREA RADON INFORMATION

State Database: MA Radon

Radon Test Results

County	% of sites>4 pCi/L	Median
WORCESTER	38	2.8

Federal EPA Radon Zone for WORCESTER County: 1

Note: Zone 1 indoor average level > 4 pCi/L.
: Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
: Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for WORCESTER COUNTY, MA

Number of sites tested: 192

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	4.644 pCi/L	61%	39%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	4.548 pCi/L	63%	34%	3%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)
Source: United States Geologic Survey
EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

Current USGS 7.5 Minute Topographic Map
Source: U.S. Geological Survey

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.
Source: FEMA
Telephone: 877-336-2627
Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetland Inventory
Source: MassDEP
Telephone: 617-292-5907

HYDROGEOLOGIC INFORMATION

AQUIFLOW^{R} Information System
Source: EDR proprietary database of groundwater flow information
EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit
Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database
Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)
Telephone: 800-672-5559
SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data
Source: EPA/Office of Drinking Water
Telephone: 202-564-3750
Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)
This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Massachusetts Geographic Information System (MassGIS) Datalayers
Source: Executive Office of Environmental Affairs
Telephone:

Public Water Supply Database

Telephone:
The Public Water Supply datalayer contains the locations of public community surface and groundwater supply sources and public non-community supply sources as defined in 310 CMR 22.00.

Areas of Critical Environmental Concern

Telephone:
The Areas of Critical Environmental Concern (ACEC) datalayer shows the location of areas that have been designated ACECs by the Secretary of Environmental Affairs. ACEC designation requires greater environmental review of certain kinds of proposed development under state jurisdiction within the ACEC boundaries. The ACEC Program is administered by the Department of Environmental Management (DEM) on behalf of the Secretary of Environmental Affairs. The Massachusetts Coastal Zone Management (MCZM) Office managed the original Coastal ACEC Program from 1978 to 1993, and continues to play a key role in monitoring coastal ACECs. Procedures for ACEC designation and the general policies governing the effects of designation are contained in the ACEC regulations (301 CMR 12.00). The ACEC datalayer has been compiled by MCZM and DEM and includes both coastal and inland areas.

EPA Designated Sole Source Aquifers

Telephone:
The Sole Source Aquifer datalayer was compiled by the Department of Environmental Protection (DEP) Division of Water Supply (DWS). Seven Sole Source Aquifers have been designated by the US Environmental Protection Agency (EPA) for Massachusetts. A Sole Source Aquifer (SSA) is an aquifer designated by US EPA as the sole or principal source of drinking water for a given aquifer service area; that is, an aquifer which is needed to supply 50% or more of the drinking water for that area and for which there are no reasonably available alternative sources should that aquifer become contaminated. The aquifers were defined by an EPA hydrogeologist.

Aquifers

Telephone:
MassGIS produced an aquifer datalayer composed of 20 individual panels, generally based on the boundaries of the major drainage basins. Areas of high and medium yield were mapped. This datalayer includes polygon attribute coding to help in the identification of areas in which cleanup of hazardous waste sites must meet drinking water standards, as defined in the Massachusetts Contingency Plan (MCP) (310 CMR 40.00000).

Non-Potential Drinking Water Source Areas

Telephone:
Non-Potential Drinking Water Source Areas (NPDWSA) are regulatory in nature representing one of many considerations used in determining the standards to which ground water must be cleaned in the event of a release of oil or hazardous material. NPDWSAs are not based on existing water quality and do not indicate poor ambient conditions.

DEP Approved Zone IIs

Telephone:
The Department of Environmental Protection (DEP) approved Zone IIs datalayer was compiled by the DEP Division of Water Supply (DWS). The database contains 281 approved Zone IIs statewide. As stated in 310 CMR 22.02, a Zone II is 'that area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated (180 days of pumping at safe yield, with no recharge from precipitation.) It is bounded by the groundwater divides which result from pumping the well and by the contact of the aquifer with less permeable materials such as till or bedrock. In some cases, streams or lakes may act as recharge boundaries. In all cases, Zone IIs shall extend up gradient to its point of intersection with prevailing hydrogeologic boundaries (a groundwater flow divide, a contact with till or bedrock, or a recharge boundary).' These data are used in association with the Public Water Supplies datalayer. The following describes certain unique features of this association.\n - Any proposed new well which will pump at least 100,000 gallons per day must have a Zone II delineation completed and approved by DEP prior to the well coming on line. \n- Additionally, a new source may not be on-line yet, but other, older wells may fall within its Zone II boundary.\n - Further, existing wells must have a Zone II delineated as a condition of receiving a water withdrawal permit under the Water Management Act.

OTHER STATE DATABASE INFORMATION

RADON

State Database: MA Radon
Source: Department of Health
Telephone: 413-586-7525
Radon Test Results

Area Radon Information
Source: USGS
Telephone: 703-356-4020
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones
Source: EPA
Telephone: 703-356-4020
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

PHYSICAL SETTING SOURCE RECORDS SEARCHED

STREET AND ADDRESS INFORMATION

Â© 2015 TomTom North America, Inc. All rights reserved. This material is proprietary and the subject of copyright protection and other intellectual property rights owned by or licensed to Tele Atlas North America, Inc. The use of this material is subject to the terms of a license agreement. You will be held liable for any unauthorized copying or disclosure of this material.

APPENDIX C

EDR Sanborn Fire Insurance Map Report

22116.00

97 New Boston Road

Dudley, MA 01571

Inquiry Number: 7213211.3

December 28, 2022

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

12/28/22

Site Name:

22116.00
97 New Boston Road
Dudley, MA 01571
EDR Inquiry # 7213211.3

Client Name:

Pare Corporation
8 Blackstone Valley Place
Lincoln, RI 02865
Contact: Arianne Barton

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Pare Corporation were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 8F41-468A-A9C6

PO # 22116.00

Project 22116.00

UNMAPPED PROPERTY

This report certifies that the complete holdings of the Sanborn Library, LLC collection have been searched based on client supplied target property information, and fire insurance maps covering the target property were not found.

Sanborn® Library search results

Certification #: 8F41-468A-A9C6

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

Limited Permission To Make Copies

Pare Corporation (the client) is permitted to make up to FIVE photocopies of this Sanborn Map transmittal and each fire insurance map accompanying this report solely for the limited use of its customer. No one other than the client is authorized to make copies. Upon request made directly to an EDR Account Executive, the client may be permitted to make a limited number of additional photocopies. This permission is conditioned upon compliance by the client, its customer and their agents with EDR's copyright policy; a copy of which is available upon request.

Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA), ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT. Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

Copyright 2022 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.

APPENDIX D

EDR Historical Aerial Photography Report

22116.00

97 New Boston Road

Dudley, MA 01571

Inquiry Number: 7213211.5

December 28, 2022

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

12/28/22

Site Name:

22116.00
97 New Boston Road
Dudley, MA 01571
EDR Inquiry # 7213211.5

Client Name:

Pare Corporation
8 Blackstone Valley Place
Lincoln, RI 02865
Contact: Arianne Barton

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	*Scale*	*Details*	*Source*
2018	1"=500'	Flight Year: 2018	USDA/NAIP
2014	1"=500'	Flight Year: 2014	USDA/NAIP
2010	1"=500'	Flight Year: 2010	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1996	1"=500'	Flight Date: April 15, 1996	CTMAGIC
1991	1"=500'	Acquisition Date: April 12, 1991	USGS/DOQQ
1985	1"=500'	Flight Date: March 16, 1985	USDA
1974	1"=500'	Flight Date: April 20, 1974	USGS
1970	1"=500'	Flight Date: March 11, 1970	USGS
1969	1"=500'	Flight Date: June 10, 1969	CTMAGIC
1966	1"=500'	Flight Date: March 09, 1966	USGS
1951	1"=500'	Flight Date: October 13, 1951	CTMAGIC
1938	1"=500'	Flight Date: December 16, 1938	USGS
1934	1"=500'	Flight Date: April 10, 1934	FAIR

When delivered electronically by EDR, the aerial photo images included with this report are for ONE TIME USE ONLY. Further reproduction of these aerial photo images is prohibited without permission from EDR. For more information contact your EDR Account Executive.

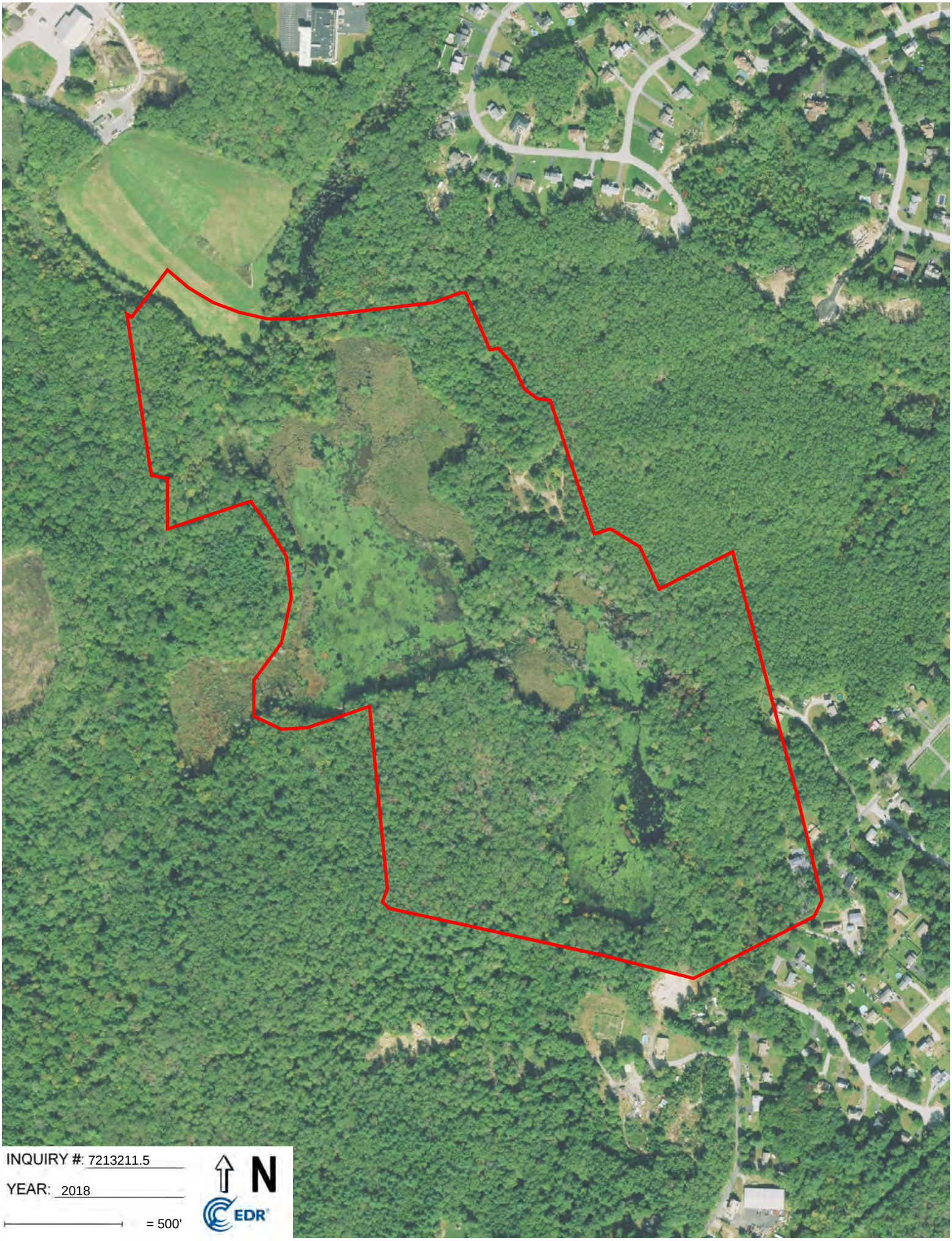
Disclaimer - Copyright and Trademark Notice

This Report contains certain information obtained from a variety of public and other sources reasonably available to Environmental Data Resources, LLC. It cannot be concluded from this Report that coverage information for the target and surrounding properties does not exist from other sources. This Report is provided on an "AS IS", "AS AVAILABLE" basis. NO WARRANTY EXPRESS OR IMPLIED IS MADE WHATSOEVER IN CONNECTION WITH THIS REPORT. ENVIRONMENTAL DATA RESOURCES, LLC AND ITS SUBSIDIARIES, AFFILIATES AND THIRD PARTY SUPPLIERS DISCLAIM ALL WARRANTIES, OF ANY KIND OR NATURE, EXPRESS OR IMPLIED, ARISING OUT OF OR RELATED TO THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT, INCLUDING WITHOUT LIMITATION, ANY WARRANTIES REGARDING ACCURACY, QUALITY, CORRECTNESS, COMPLETENESS, COMPREHENSIVENESS, SUITABILITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, NON-INFRINGEMENT, MISAPPROPRIATION, OR OTHERWISE. ALL RISK IS ASSUMED BY THE USER. IN NO EVENT SHALL ENVIRONMENTAL DATA RESOURCES, LLC OR ITS SUBSIDIARIES, AFFILIATES OR THIRD PARTY SUPPLIERS BE LIABLE TO ANYONE FOR ANY DIRECT, INCIDENTAL, INDIRECT, SPECIAL, CONSEQUENTIAL OR OTHER DAMAGES OF ANY TYPE OR KIND (INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS, LOSS OF USE, OR LOSS OF DATA), ARISING OUT OF OR IN ANY WAY CONNECTED WITH THIS REPORT OR ANY OF THE DATA AND INFORMATION PROVIDED IN THIS REPORT.

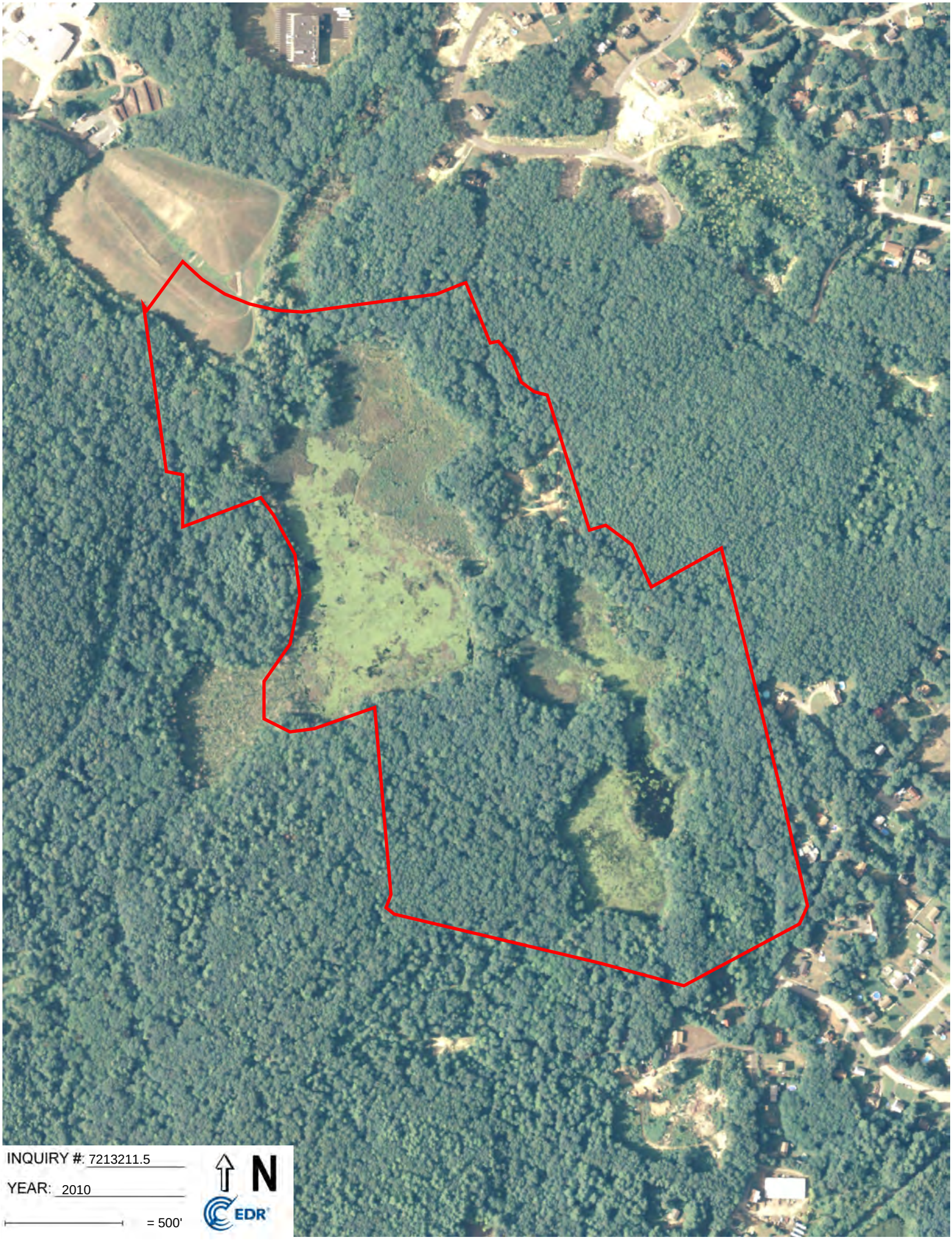
Any analyses, estimates, ratings, environmental risk levels, or risk codes provided in this Report are provided for illustrative purposes only, and are not intended to provide, nor should they be interpreted as providing any facts regarding, or prediction or forecast of, any environmental risk for any property. Only an assessment performed by a qualified environmental professional can provide findings, opinions or conclusions regarding the environmental risk or conditions in, on or at any property.

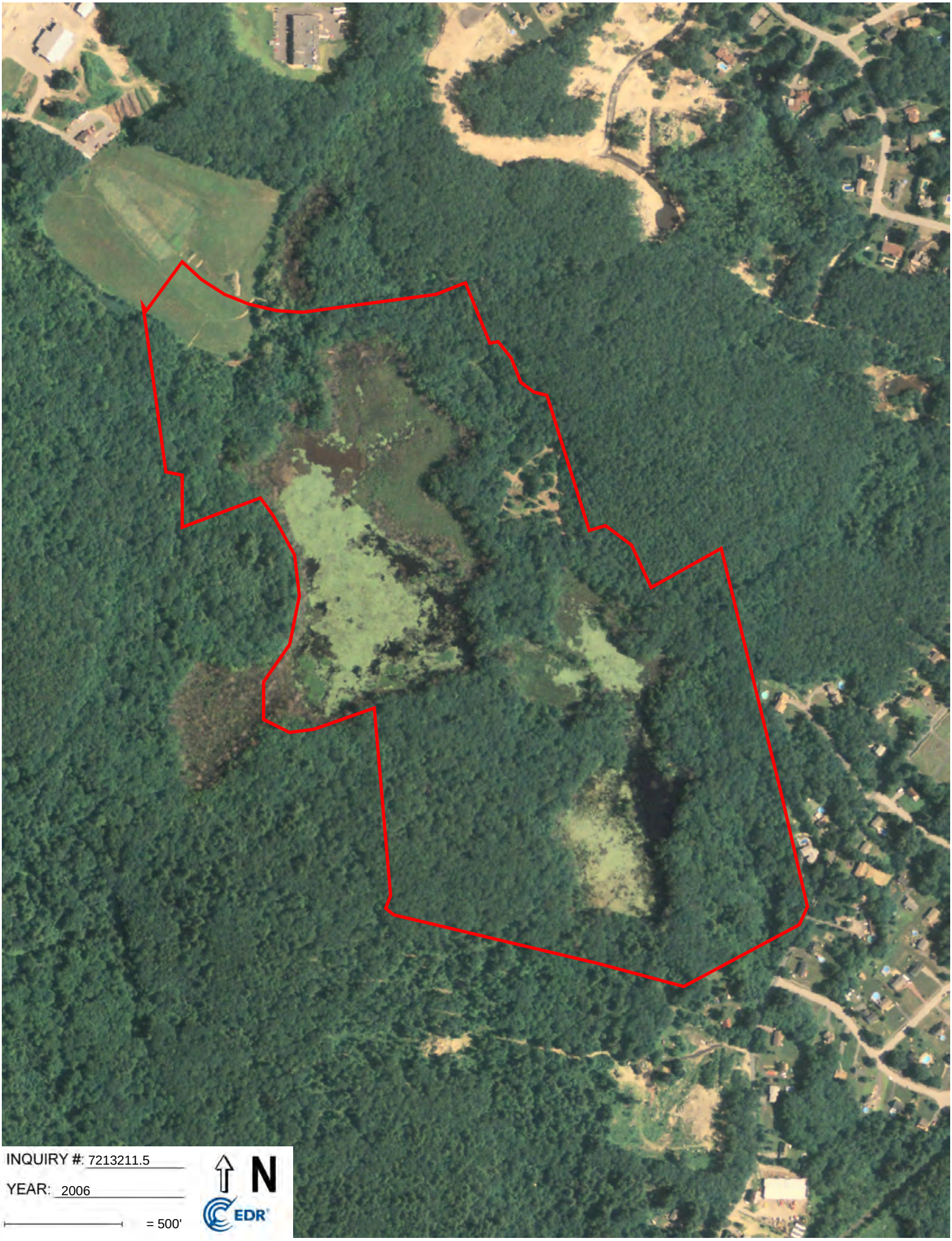
Copyright 2022 by Environmental Data Resources, Inc. All rights reserved. Reproduction in any media or format, in whole or in part, of any report or map of Environmental Data Resources, Inc., or its affiliates, is prohibited without prior written permission.

EDR and its logos (including Sanborn and Sanborn Map) are trademarks of Environmental Data Resources, LLC or its affiliates. All other trademarks used herein are the property of their respective owners.


INQUIRY #: 7213211.5
YEAR: 2018
= 500'
N
EDR


INQUIRY #: 7213211.5
YEAR: 2014
= 500'
N
EDR


INQUIRY #: 7213211.5
YEAR: 2010
= 500'
N
EDR


INQUIRY #: 7213211.5
YEAR: 2006
= 500'
N
EDR



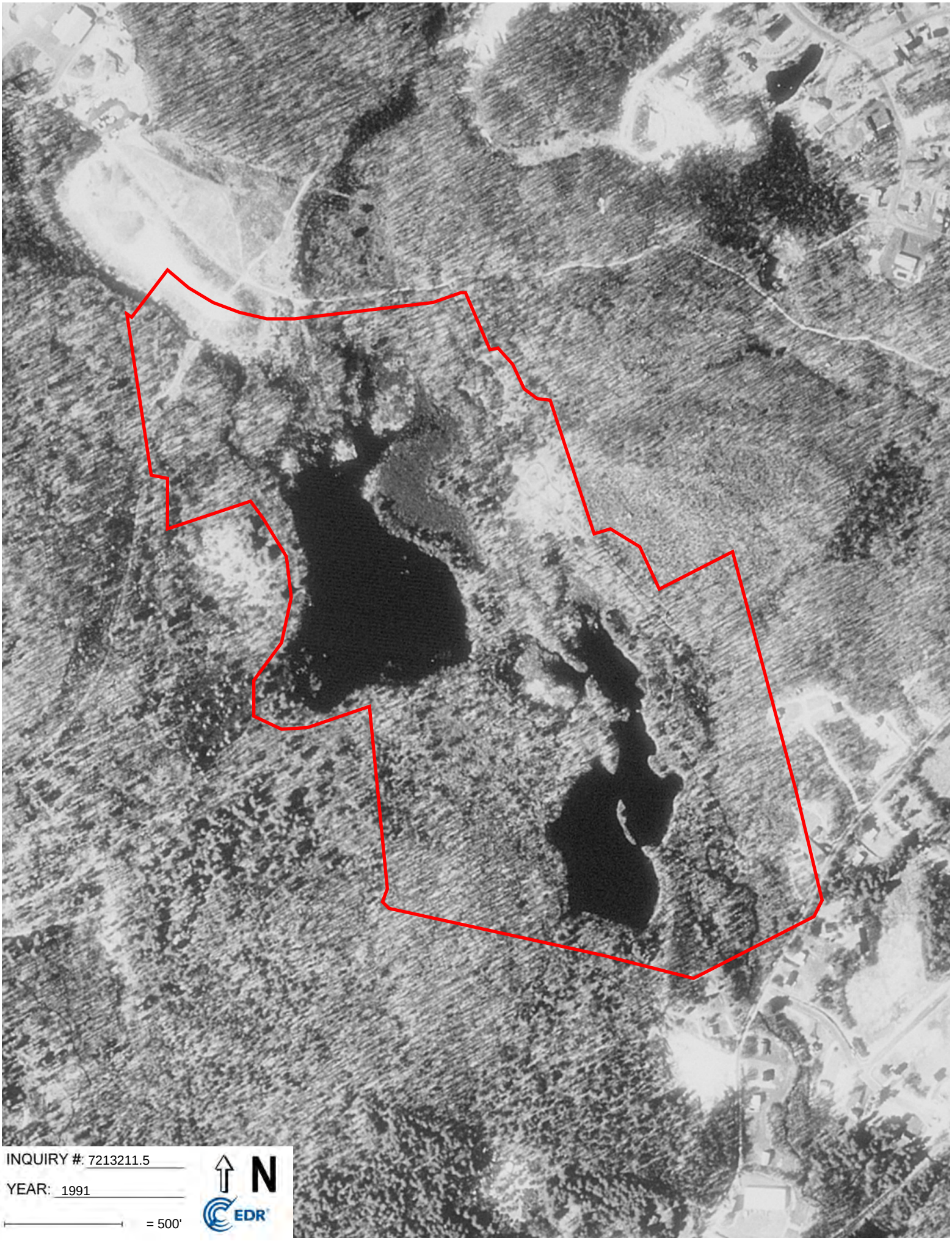
INQUIRY #: 7213211.5

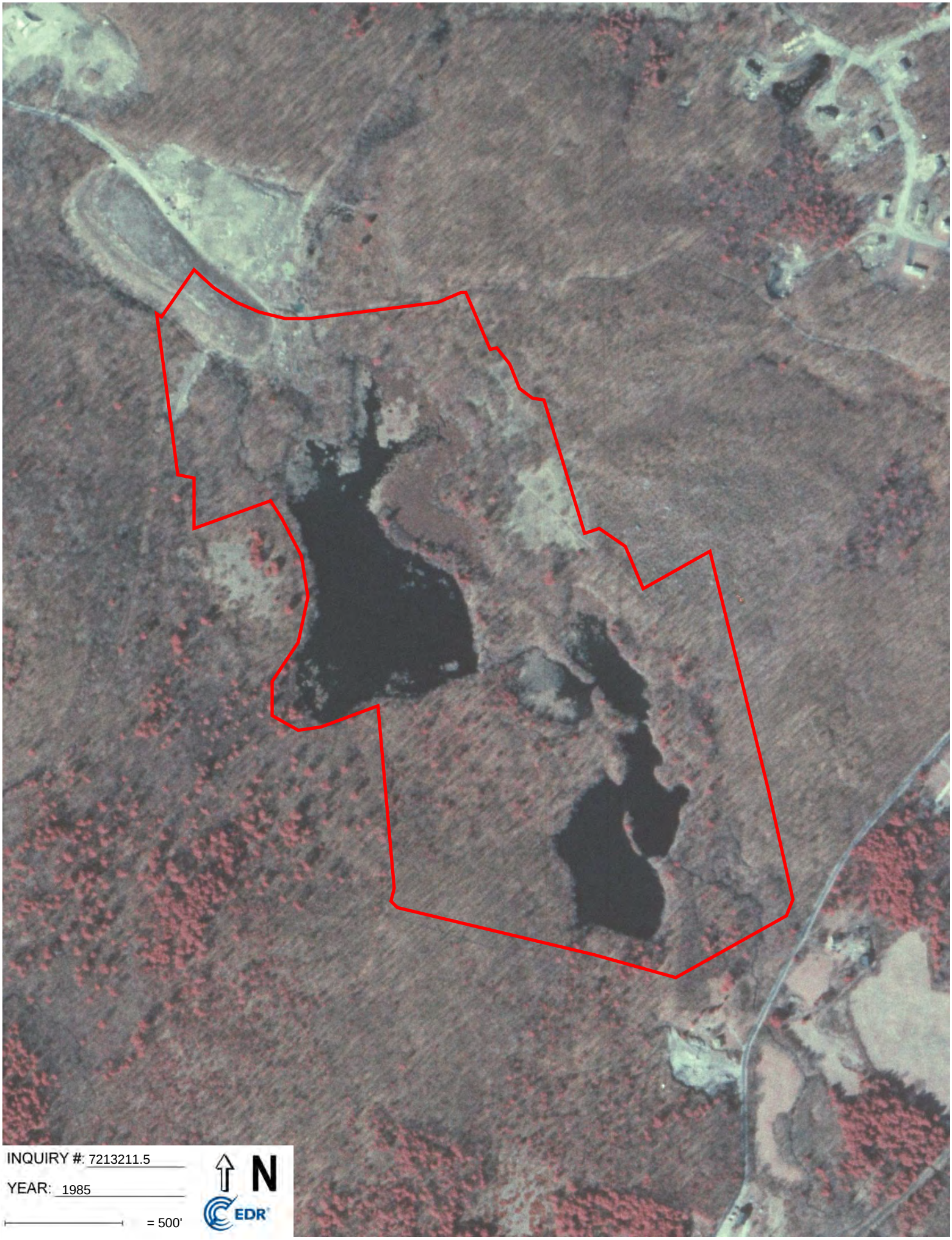
YEAR: 1996

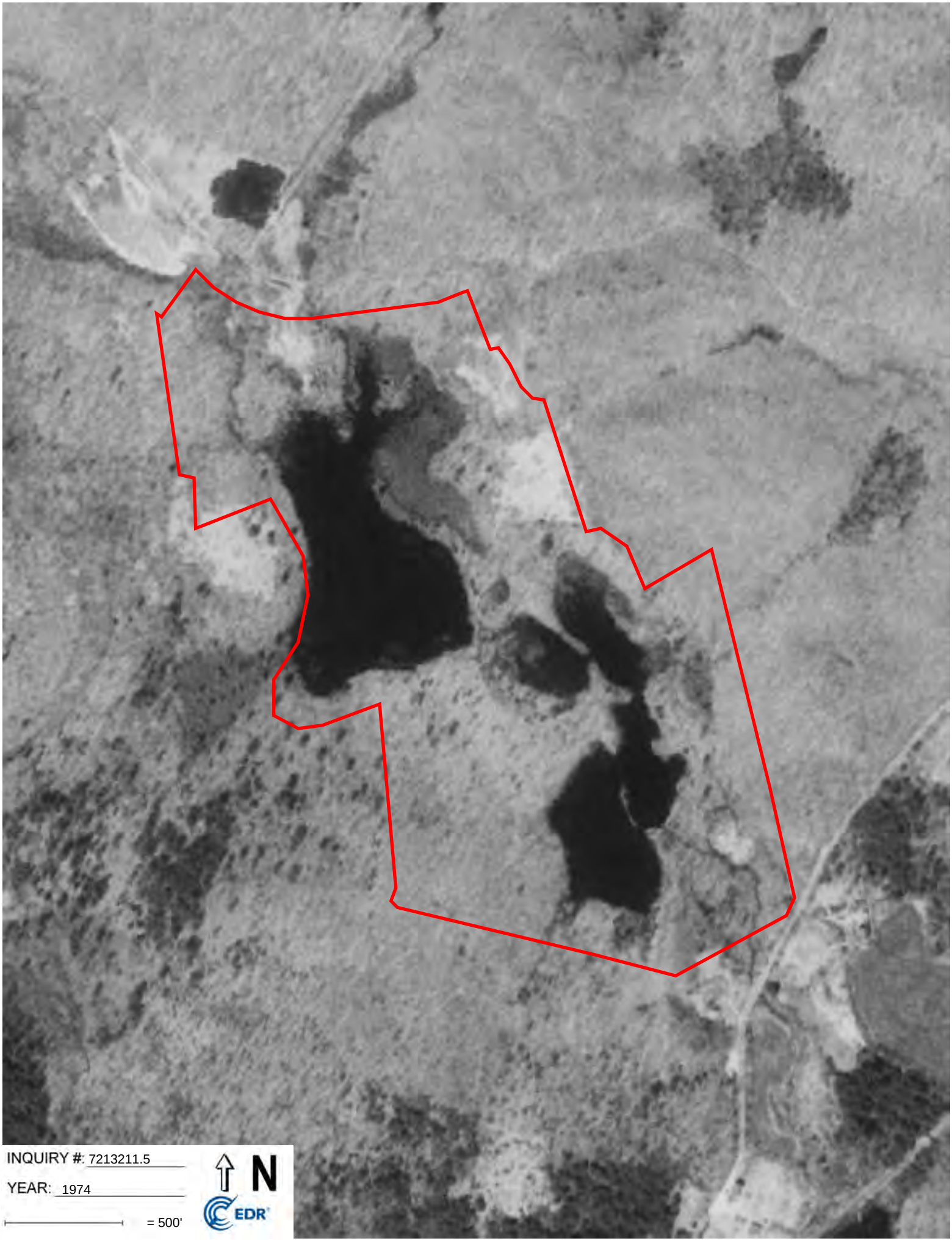
= 500'

N

EDR


INQUIRY #: 7213211.5
YEAR: 1991
= 500'
N
EDR


INQUIRY #: 7213211.5
YEAR: 1985
= 500'
N
EDR



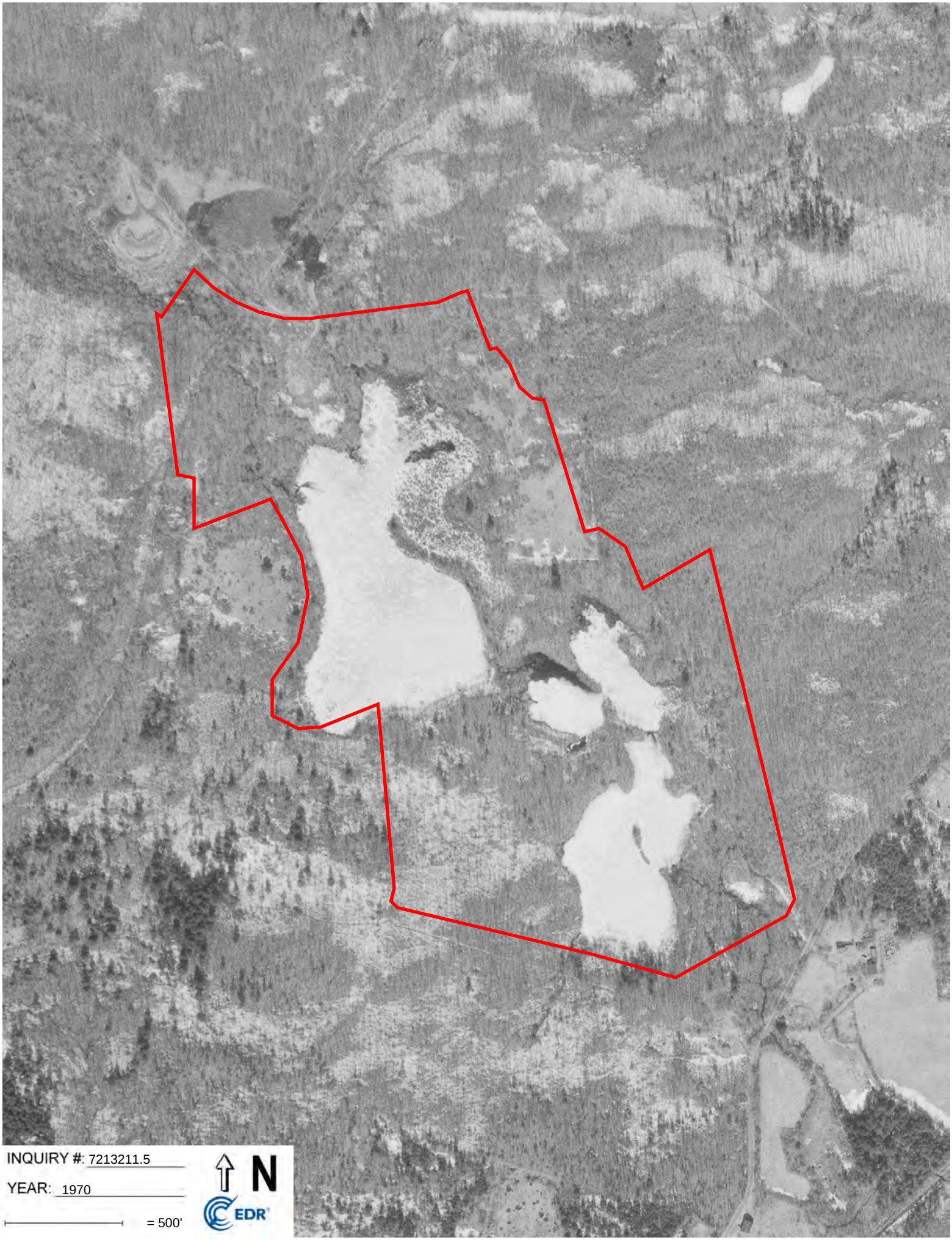
INQUIRY #: 7213211.5

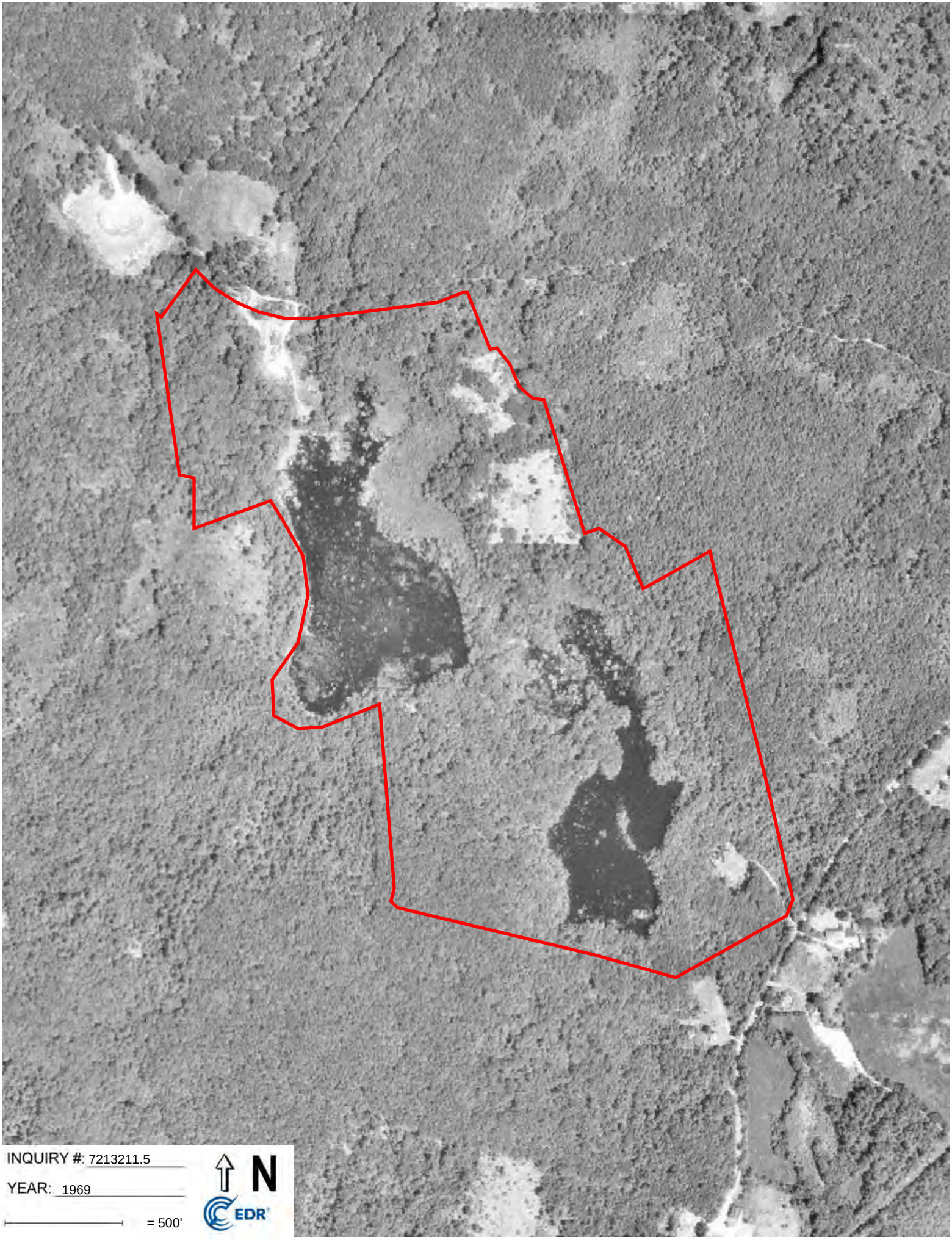
YEAR: 1974

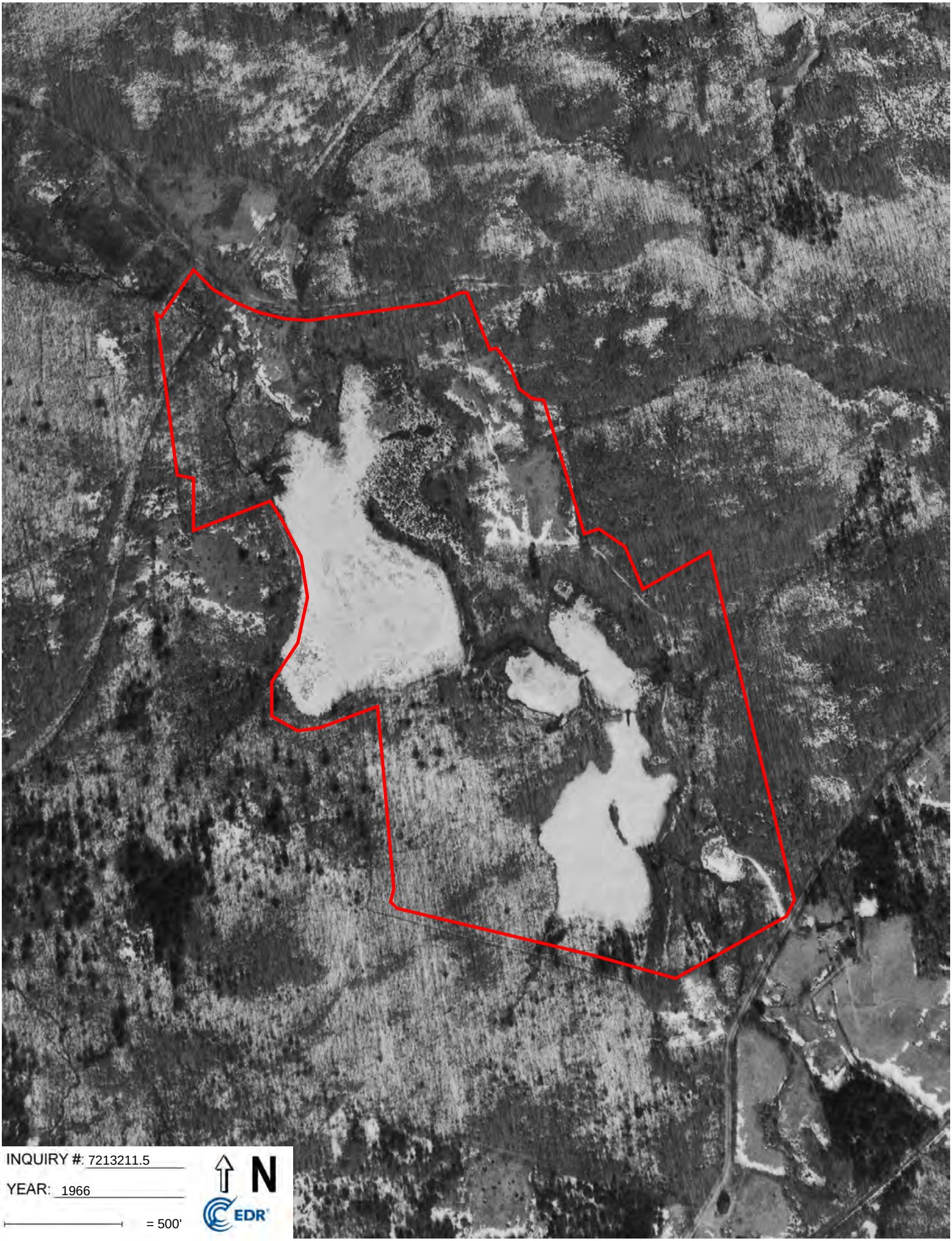
= 500'

N

EDR


INQUIRY #: 7213211.5
YEAR: 1970
= 500'
N
EDR


INQUIRY #: 7213211.5
YEAR: 1969
= 500'
N
EDR



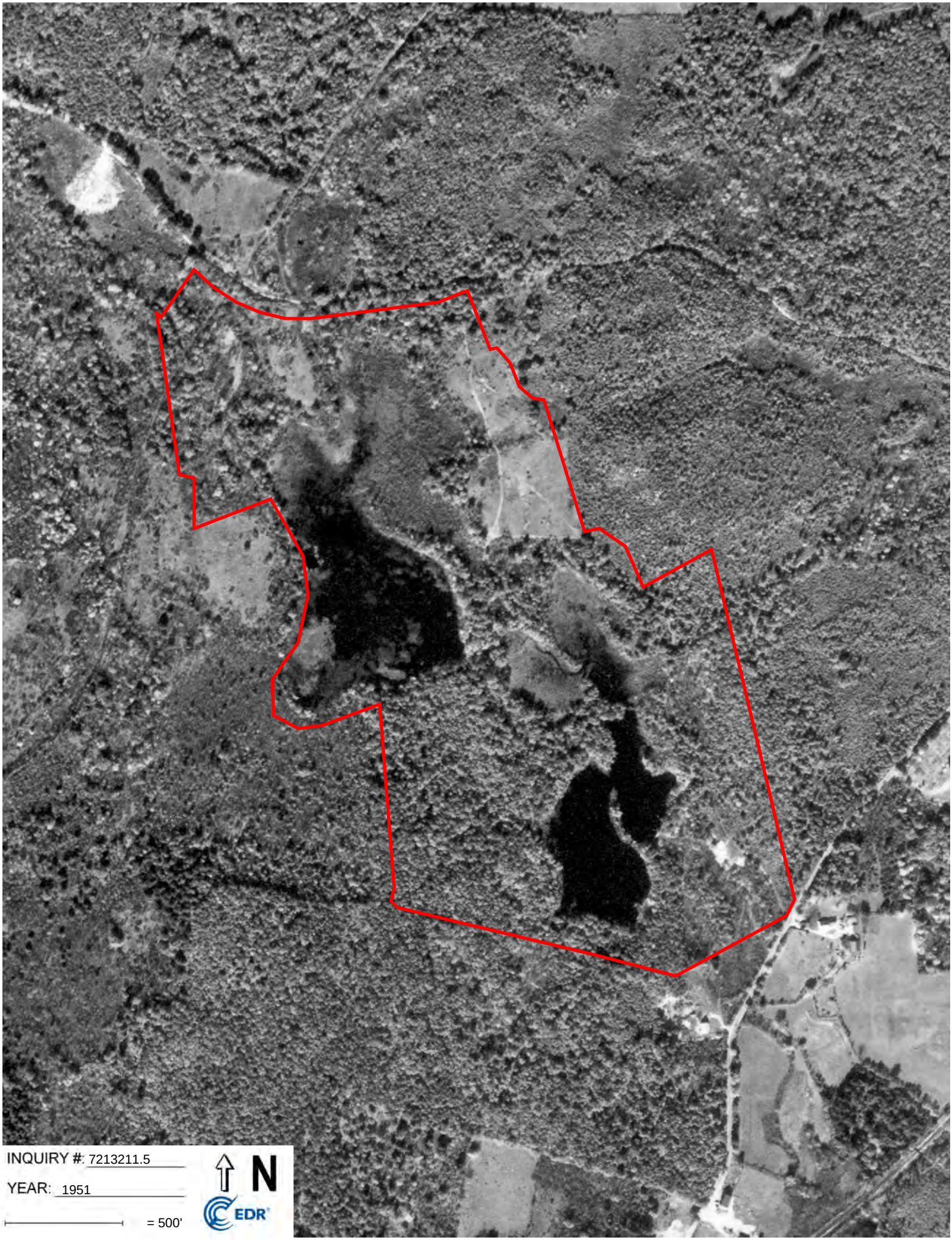
INQUIRY #: 7213211.5

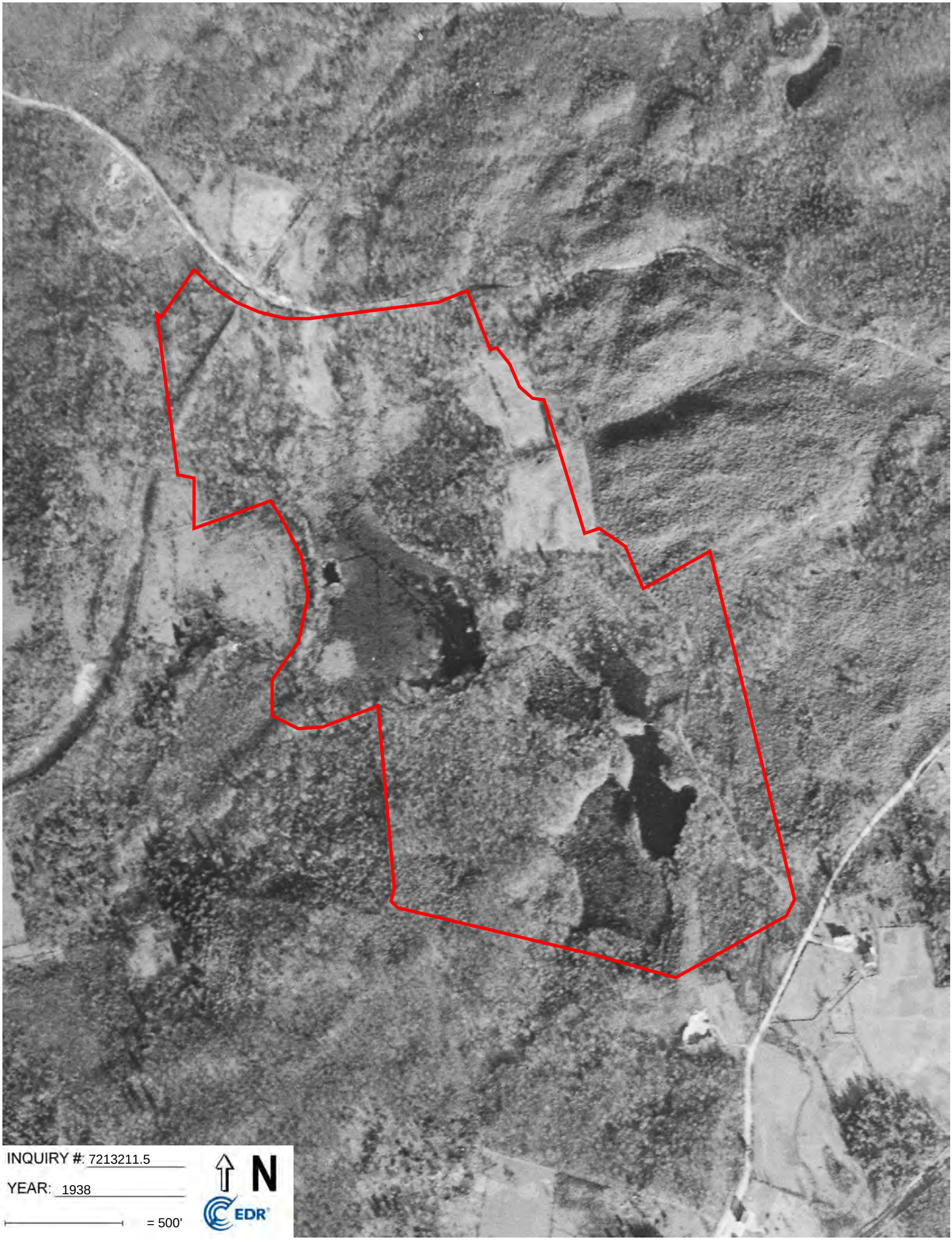
YEAR: 1966

= 500'

N

EDR


INQUIRY #: 7213211.5
YEAR: 1951
= 500'
N
EDR



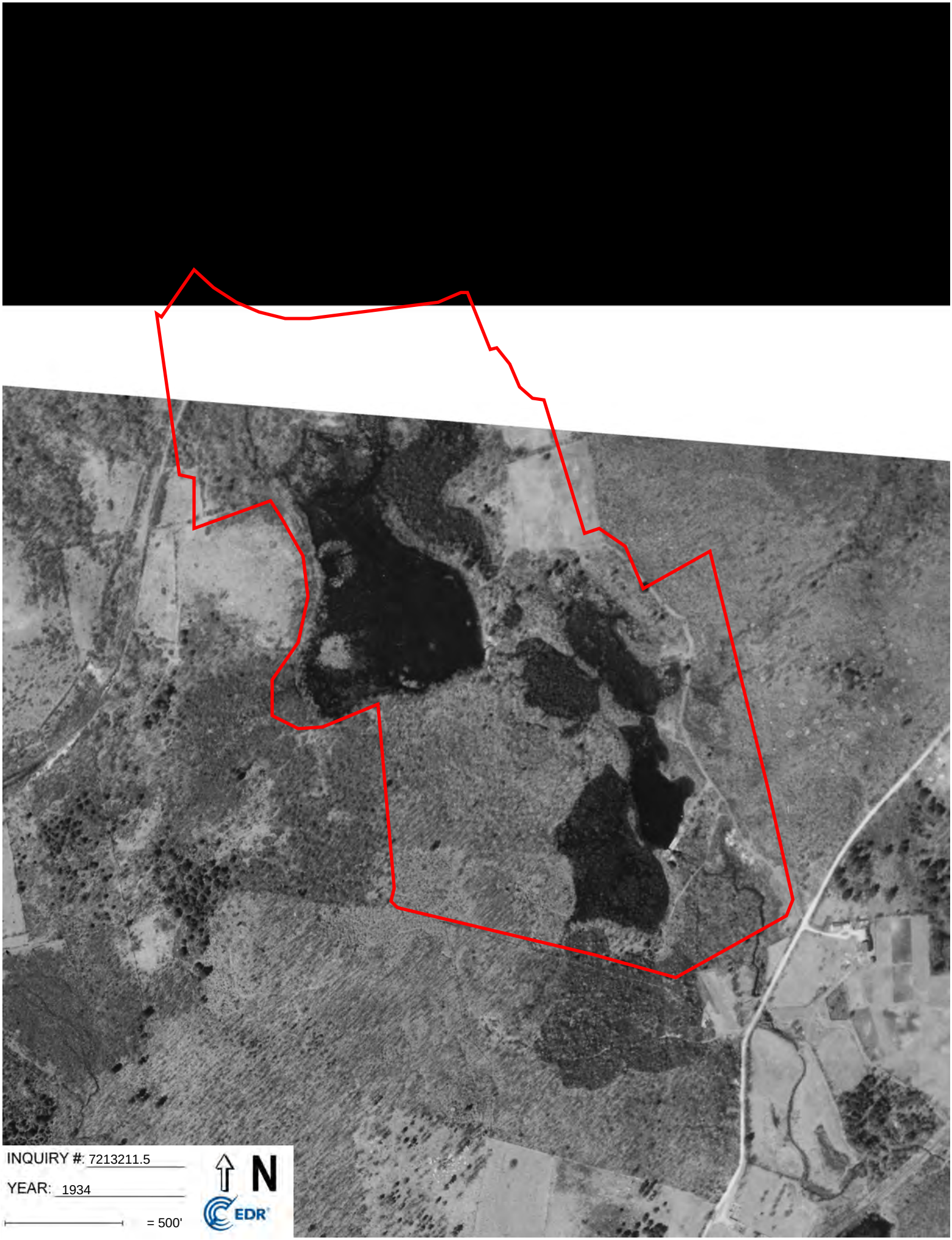
INQUIRY #: 7213211.5

YEAR: 1938

= 500'

N

EDR


INQUIRY #: 7213211.5
YEAR: 1934
= 500'
N
EDR

APPENDIX E

Carpenter Pond Sediment Results Table

	Screening Benchmarks								Sediment Sample				
	MCP Method 1 Soil	MCP Method 2 Direct Contact			MassDEP COMM-97 Disposal Criteria		Freshwater Sediment Screening Values		IMP-1	IMP-2	IMP-3	DS-CPD	IMP-2 (PFAS)
					Lined	Unlined							
Analysis [units]	S-1/GW-1	S-1	S-2	S-3	Landfill	Landfill	TEC[1]	PEC	11/7/2022	11/7/2022	11/7/2022	11/7/2022	3/21/2023
Metals [mg/kg]													
Antimony	20	20	30	30			NA	NA	ND	ND	ND	ND	NT
Arsenic	20	20	20	50	40	40	9.79	33	ND	ND	**15.1**	**17**	NT
Barium	1,000	1,000	3,000	5,000			NE	NE	**54.3**	**14.2**	**33.1**	**49.9**	NT
Beryllium	90	90	200	200			NE	NE	ND	ND	ND	ND[4]	NT
Cadmium	70	70	100	100	80	30	0.99	4.98	ND	ND	ND	ND	NT
Chromium (TOTAL)	100	100	200	200	1,000	1,000	43.4	111	**5.98**	ND	**29**	**12**	NT
Copper	NE	NE	NE	NE			31.6	149	ND	ND	ND	ND	NT
Lead	200	200	600	600	2,000	1,000	35.8	128	**6.26**	**62.1**	**26**	**8.48**	NT
Mercury	20	20	30	30	10	10	0.18	1.06	ND	ND	**0.06**	ND	NT
Nickel	600	600	1,000	1,000			22.7	48.6	ND	ND	ND	**9.42**	NT
Selenium	400	400	700	700			NE	NE	ND	ND	ND	ND	NT
Silver	100	100	200	200			NE	NE	ND	ND	ND	ND	NT
Thallium	8	8	60	80			NE	NE	ND	ND	ND	ND	NT
Vanadium	400	400	700	700			NE	NE	**7.67**	**4.12**	**11**	**16.9**	NT
Zinc	1,000	1,000	3,000	5,000			121	459	ND	**39.5**	**17.9**	**22.6**	NT
SVOCs (Low Level PAHs) [µg/kg]													
Acenaphthene	4,000	1,000,000	3,000,000	5,000,000			6.7	88.9	ND	ND	ND	ND	NT
Acenaphthylene	1,000	1,000,000	3,000,000	5,000,000			5.9	128	ND	ND	ND	ND	NT
1-Methylnaphthalene	NE	NE	NE	NE					ND	ND	ND	ND	NT
Anthracene	1,000,000	1,000,000	3,000,000	5,000,000			57	845	ND	ND	ND	ND	NT
Benz[a]anthracene	7,000	7,000	40,000	300,000			108	1,050	ND	ND	ND	ND	NT
Benzo[a]pyrene	2,000	2,000	7,000	30,000			150	1,450	ND	ND	ND	ND	NT
Benzo[b]fluoranthene [2]	7,000	70,000	400,000	3,000,000			27.3	13,400	ND	ND	ND	ND	NT
Benzo[g,h,i]perylene [2]	1,000,000	1,000,000	3,000,000	5,000,000			NE	NE	ND	ND	ND	ND	NT
Benzo[k]fluoranthene [2]	70,000	70,000	400,000	3,000,000			NE	NE	ND	ND	ND	ND	NT
Chrysene	70,000	70,000	400,000	3,000,000			166	1,290	ND	ND	ND	ND	NT
Dibenz[a,h]anthracene	700	700	4,000	30,000			33	134.6	ND	ND	ND	ND	NT
Fluoranthene	1,000,000	1,000,000	3,000,000	5,000,000			420	2,230	ND	ND	ND	**20**	NT
Fluorene	1,000,000	1,000,000	3,000,000	5,000,000			77	536	ND	ND	ND	ND	NT
Indeno[1,2,3-cd]pyrene [2]	7,000	7,000	40,000	300,000			NE	NE	ND	ND	ND	ND	NT
Phenanthrene	10,000	500,000	1,000,000	3,000,000			200	1,170	ND	ND	ND	ND	NT
Pyrene	1,000,000	500,000	1,000,000	3,000,000			195	1,520	ND	ND	ND	ND	NT
2-Methylnaphthalene	700	300,000	500,000	500,000			NE	NE	ND	ND	ND	ND	NT
Bis(2-ethylhexyl) phthalate	90,000	90,000	600,000	2,000,000			NE	NE	ND	ND	ND	ND	NT
Naphthalene	4,000	500,000	1,000,000	3,000,000			176	561	ND	ND	ND	ND	NT
Total PAHs [3]	NE	NE	NE	NE	100,000	100,000	1,610	22,800	ND	ND	ND	ND	NT
PCBs [µg/kg]													
Aroclor-1221	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	NE	NE	ND	ND	ND	ND	NT
Aroclor-1232	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	NE	NE	ND	ND	ND	ND	NT
Aroclor-1016/1242	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	NE	NE	ND	ND	ND	ND	NT
Aroclor-1248	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	NE	NE	ND	ND	ND	ND	NT
Aroclor-1254	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	NE	NE	ND	ND	ND	ND	NT
Aroclor-1260	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	NE	NE	ND	ND	ND	ND	NT
Aroclor-1262	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	NE	NE	ND	ND	ND	ND	NT
Aroclor-1268	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	*See Total PCBs*	NE	NE	ND	ND	ND	ND	NT
Total PCB's	1,000	1,000	4,000	4,000	2,000	2,000	59.8	676	ND	ND	ND	ND	NT
Pesticides [µg/kg]													
4,4'-DDD	8,000	8,000	40,000	60,000			4.88	28	ND	ND	ND	ND	NT
4,4'-DDE	6,000	6,000	30,000	60,000			3.16	31.3	ND	ND	ND	ND	NT
4,4'-DDT	6,000	6,000	30,000	60,000			4.16	62.9	ND	ND	ND	ND	NT
Sum of DDD, DDE, & DDT	NE	NE	NE	NE			5.28	572	ND	ND	ND	ND	NT
Alachor	NE	NE	NE	NE					ND	ND	ND	ND	NT
Aldrin	80	80	500	3,000			NE	NE	ND	ND	ND	ND	NT
Dieldrin	80	80	500	3,000			1.9	61.8	ND	ND	ND	ND	NT
Endrin	10,000	10,000	20,000	20,000			2.2	207	ND	ND	ND	ND	NT
Endrin aldehyde	10,000	10,000	20,000	20,000			NE	NE	ND	ND	ND	ND	NT
Endrin Ketone	10,000	10,000	20,000	20,000			NE	NE	ND	ND	ND	ND	NT
Endosulfan I	500	300,000	500,000	500,000			NE	NE	ND	ND	ND	ND	NT
Endosulfan II	500	300,000	500,000	500,000			NE	NE	ND	ND	ND	ND	NT
Endosulfan sulfate	500	300,000	500,000	500,000			NE	NE	ND	ND	ND	ND	NT
alpha-BHC	NE	NE	NE	NE			NE	NE	ND	ND	ND	ND	NT
beta-BHC	NE	NE	NE	NE			NE	NE	ND	ND	ND	ND	NT
delta-BHC	NE	NE	NE	NE			NE	NE	ND	ND	ND	ND	NT
gamma-BHC/Lindane	3	1,000	7,000	60,000			2.37	4.99	ND	ND	ND	ND	NT
Heptachlor	300	300	2,000	10,000			NE	NE	ND	ND	ND	ND	NT
Heptachlor epoxide	100	100	900	1,000			2.47	16	ND	ND	ND	ND	NT
Methoxychlor	200,000	200,000	400,000	400,000			NE	NE	ND	ND	ND	ND	NT
cis-Chlordane	5,000	5,000	30,000	60,000			3.2	17.6	ND	ND	ND	ND	NT
trans-Chlordane	5,000	5,000	30,000	60,000			3.2	17.6	ND	ND	ND	ND	NT
Toxaphene	NE	NE	NE	NE			NE	NE	ND	ND	ND	ND	NT
Herbicides [µg/kg]													
2,4-D	NE	NE	NE	NE			NE	NE	ND	ND	ND	ND	NT
2,4,5-TP (Silvex)	NE	NE	NE	NE			NE	NE	ND	ND	ND	ND	NT
Dicamba	NE	NE	NE	NE			NE	NE	ND	ND	ND	ND	NT
Dichlorprop	NE	NE	NE	NE			NE	NE	ND	ND	ND	ND	NT
2,4,5 T	NE	NE	NE	NE			NE	NE	ND	ND	ND	ND	NT
2,4 DB	NE	NE	NE	NE			NE	NE	ND	ND	ND	ND	NT
Dinoseb	NE	NE	NE	NE			NE	NE	ND	ND	ND	ND	NT
Dalapon	NE	NE	NE	NE			NE	NE	ND	ND	ND	ND	NT
MCPA	NE	NE	NE	NE			NE	NE	ND	ND	ND	ND	NT
Per- and Polyfluoroalkyl Substances (PFAS) [ng/kg]													
Total PFAS	NE	NE	NE	NE			NE	NE	NA	NA	NA	NA	**1,150**
Perfluorodecanoic Acid (PFDA)	300	300,000	400,000	400,000			NE	NE	NA	NA	NA	NA	ND
Perfluorodecane sulfonic acid (PFDS)	300	300,000	400,000	400,000			NE	NE	NA	NA	NA	NA	ND
Perfluoroheptanoic Acid (PFHpA)	500	300,000	400,000	400,000			NE	NE	NA	NA	NA	NA	ND
Perfluoroheptane sulfonic acid (PFHpS)	500	300,000	400,000	400,000			NE	NE	NA	NA	NA	NA	ND
Perfluorohexanesulfonic Acid (PFHxS)	300	300,000	400,000	400,000			NE	NE	NA	NA	NA	NA	ND
Perfluorohexanoic Acid (PFHxA)	300	300,000	400,000	400,000			NE	NE	NA	NA	NA	NA	ND
Perfluorononanoic Acid (PFNA)	320	300,000	400,000	400,000			NE	NE	NA	NA	NA	NA	ND
Perfluorononane sulfonic acid (PFNS)	320	300,000	400,000	400,000			NE	NE	NA	NA	NA	NA	ND
Perfluorooctanesulfonic Acid (PFOS)	2,000	300,000	400,000	400,000			NE	NE	NA	NA	NA	NA	**1,150**
Perfluorooctanoic Acid (PFOA)	720	300,000	400,000	400,000			NE	NE	NA	NA	NA	NA	ND
VOCs [µg/kg]													
1,1,2-Trichlorotrifluoroethane (Freon 113)	NE	NE	NE	NE					ND	ND	ND	ND	NT
Acetone	6,000	500,000	1,000,000	3,000,000					ND	ND	ND	ND	NT
Acrylonitrile	NE	NE	NE	NE					ND	ND	ND	ND	NT
Benzene	2,000	40,000	200,000	1,000,000			NE	NE	ND	ND	ND	ND	NT
Bromobenzene	NE	NE	NE	NE					ND	ND	ND	ND	NT
Bromochloromethane	NE	NE	NE	NE					ND	ND	ND	ND	NT
Bromodichloromethane	100	30,000	100,000	1,000,000					ND	ND	ND	ND	NT
Bromoform	100	300,000	1,000,000	3,000,000					ND	ND	ND	ND	NT
Bromomethane	500	90,000	600,000	600,000					ND	ND	ND	ND	NT
2-Butanone (MEK)	4,000	500,000	1,000,000	3,000,000			NE	NE	**75.8**	ND	ND	**7.45**	NT
n-Butylbenzene	NE	NE	NE	NE					ND	ND	ND	ND	NT
sec-Butylbenzene	NE	NE	NE	NE					ND	ND	ND	ND	NT
tert-Butylbenzene	NE	NE	NE	NE					ND	ND	ND	ND	NT
Carbon disulfide	NE	NE	NE	NE					ND	ND	ND	ND	NT
Carbon tetrachloride	10,000	30,000	100,000	1,000,000					ND	ND	ND	ND	NT
Chlorobenzene	1,000	500,000	1,000,000	3,000,000					ND	ND	ND	ND	NT
Chloroethane	NE	NE	NE	NE					ND	ND	ND	ND	NT
Chloroform	400	500,000	1,000,000	1,000,000					ND	ND	ND	ND	NT
Chloromethane	NE	NE	NE	NE					ND	ND	ND	ND	NT
2-Chlorotoluene	NE	NE	NE	NE					ND	ND	ND	ND	NT
4-Chlorotoluene	NE	NE	NE	NE					ND	ND	ND	ND	NT
1,2-Dibromo-3-Chloropropane	NE	NE	NE	NE					ND	ND	ND	ND	NT
Dibromochloromethane	5	20,000	100,000	500,000					ND	ND	ND	ND	NT
1,2-Dibromoethane (EDB)	100	1,000	5,000	40,000					ND	ND	ND	ND	NT
Dibromomethane	NE	NE	NE	NE					ND	ND	ND	ND	NT
1,2-Dichlorobenzene	9,000	1,000,000	3,000,000	5,000,000					ND	ND	ND	ND	NT
1,3-Dichlorobenzene	3,000	100,000	500,000	500,000					ND	ND	ND	ND	NT
1,4-Dichlorobenzene	700	80,000	400,000	3,000,000					ND	ND	ND	ND	NT
Dichlorodifluoromethane (Freon 12)	NE	NE	NE	NE					ND	ND	ND	ND	NT
1,1-Dichloroethane	400	500,000	1,000,000	3,000,000					ND	ND	ND	ND	NT
1,2-Dichloroethane	100	20,000	100,000	900,000					ND	ND	ND	ND	NT
1,1-Dichloroethene	3,000	500,000	1,000,000	3,000,000					ND	ND	ND	ND	NT
cis-1,2-Dichloroethene	300	100,000	500,000	500,000					ND	ND	ND	ND	NT
trans-1,2-Dichloroethene	1,000	500,000	1,000,000	3,000,000					ND	ND	ND	ND	NT
1,2-Dichloropropane	100	30,000	100,000	1,000,000					ND	ND	ND	ND	NT
1,3-Dichloropropane	NE	NE	NE	NE					ND	ND	ND	ND	NT
2,2-Dichloropropane	NE	NE	NE	NE					ND	ND	ND	ND	NT
1,1-Dichloropropene	NE	NE	NE	NE					ND	ND	ND	ND	NT
cis-1,3-Dichloropropene	*See Total 1,3-DCP*	*See Total 1,3-DCP*	*See Total 1,3-DCP*	*See Total 1,3-DCP*					ND	ND	ND	ND	NT
trans-1,3-Dichloropropene	*See Total 1,3-DCP*	*See Total 1,3-DCP*	*See Total 1,3-DCP*	*See Total 1,3-DCP*					ND	ND	ND	ND	NT
1,3-Dichloropropene, Total	0.01	20,000	90,000	900,000					ND	ND	ND	ND	NT
Ethylbenzene	40,000	500,000	1,000,000	3,000,000					ND	ND	ND	ND	NT
Hexachlorobutadiene	30,000	30,000	100,000	100,000					ND	ND	ND	ND	NT
4-Isopropylbenzene	NE	NE	NE	NE					ND	ND	ND	ND	NT
Methyl tert-butyl ether (MTBE)	100	100,000	500,000	500,000			NE	NE	ND	ND	ND	ND	NT
4-methyl-2-pentanone (MIBK)	400	500,000	1,000,000	3,000,000					ND	ND	ND	ND	NT
Methylene Chloride	100	400,000	700,000	700,000					ND	ND	ND	ND	NT
Naphthalene	4,000	500,000	1,000,000	3,000,000					ND	ND	ND	ND	NT
N-Propylbenzene	NE	NE	NE	NE					ND	ND	ND	ND	NT
Styrene	3,000	70,000	300,000	3,000,000					ND	ND	ND	ND	NT
1,1,2,2-Tetrachloroethane	5	10,000	50,000	400,000					ND	ND	ND	ND	NT
1,1,1,2-Tetrachloroethane	100	80,000	400,000	500,000					ND	ND	ND	ND	NT
Tetrachloroethene	1,000	30,000	200,000	1,000,000					ND	ND	ND	ND	NT
Toluene	30,000	500,000	1,000,000	3,000,000			4.5	4.5	ND	ND	ND	ND	NT
1,2,3-Trichlorobenzene	NE	NE	NE	NE					ND	ND	ND	ND	NT
1,2,4-Trichlorobenzene	2,000	700,000	3,000,000	5,000,000					ND	ND	ND	ND	NT
1,3,5-Trichlorobenzene	NE	NE	NE	NE					ND	ND	ND	ND	NT
1,1,1-Trichloroethane	30,000	500,000	1,000,000	3,000,000					ND	ND	ND	ND	NT
1,1,2-Trichloroethane	100	40,000	200,000	500,000					ND	ND	ND	ND	NT
Trichloroethene	300	30,000	60,000	60,000					ND	ND	ND	ND	NT
Trichlorofluoromethane (Freon 11)	NE	NE	NE	NE					ND	ND	ND	ND	NT
1,2,3-Trichloropropane	NE	NE	NE	NE					ND	ND	ND	ND	NT
1,2,4-Trimethylbenzene	NE	NE	NE	NE					ND	ND	ND	ND	NT
1,3,5-Trimethylbenzene	NE	NE	NE	NE					ND	ND	ND	ND	NT
Vinyl Chloride	900	1,000	7,000	60,000					ND	ND	ND	ND	NT
m&p-Xylenes	*See Total Xylenes*	*See Total Xylenes*	*See Total Xylenes*	*See Total Xylenes*			NE	NE	ND	ND	ND	ND	NT
o-Xylene	*See Total Xylenes*	*See Total Xylenes*	*See Total Xylenes*	*See Total Xylenes*			NE	NE	ND	ND	ND	ND	NT
Xylenes, Total	400,000	500,000	1,000,000	3,000,000					ND	ND	ND	ND	NT
Tetrahydrofuran	NE	NE	NE	NE					ND	ND	ND	ND	NT
Ethyl ether	NE	NE	NE	NE					ND	ND	ND	ND	NT
Tert-amyl methyl ether	NE	NE	NE	NE					ND	ND	ND	ND	NT
Ethyl tert-butyl ether	NE	NE	NE	NE					ND	ND	ND	ND	NT
di-Isopropyl ether	NE	NE	NE	NE					ND	ND	ND	ND	NT
tert-Butanol	NE	NE	NE	NE					ND	ND	ND	ND	NT
1,4-Dioxane	200	20,000	90,000	500,000					ND	ND	ND	ND	NT
trans-1,4-Dichloro-2-butene	NE	NE	NE	NE					ND	ND	ND	ND	NT
Ethanol	NE	NE	NE	NE					ND	ND	ND	ND	NT
Total VOCs	NE	NE	NE	NE	10,000	4,000	NE	NE	ND	**75.8**	ND	**7.45**	NT
Extractable Petroleum Hydrocarbons [mg/kg] [5]													
C9-C18 Aliphatics	1,000	1,000	3,000	5,000			3.17	3,167	ND	ND	ND	ND	NT
C19-C36 Aliphatics	3,000	3,000	5,000	5,000			9.88	9,883	**20.3**	**78.9**	**23.3**	**29**	NT
C11-C22 Aromatics	1,000	1,000	3,000	5,000			0.09	92	ND	ND	ND	**11.3**	NT
Physical Characteristics													
Total Organic Carbon (mg/kg)							NE	NE	**221,000**	**124,000**	**90,100**	**9,870**	NT
Total Organic Carbon (as %)							NE	NE	**22.1**	**12.4**	**9.01**	**0.987**	NT
Percent Solids (%)							NE	NE	**45.9**	**14.9**	**40.8**	**79**	**24.5**
Percent Water (%)							NE	NE	**54.1**	**85.1**	**59.2**	**21**	NT
Sieve No. 4 (% passing)							NE	NE	**57.1**	**100.0**	**81.7**	**66.3**	NT
Sieve No. 10 (% passing)							NE	NE	**45.2**	**96.6**	**75.4**	**46.4**	NT
Sieve No. 40 (% passing)							NE	NE	**30.3**	**87.3**	**71.1**	**17.6**	NT
Sieve No. 60 (% passing)							NE	NE	**20.2**	**66.6**	**64.9**	**8.7**	NT
Sieve No. 200 (% passing)							NE	NE	**9.8**	**49.6**	**55.9**	**3.6**	NT

Notes:
NE = No criterial has been established for the specified analyte.
ND = Analyte was not detected above the laboratory reporting limit.
Table developed by the Massachusetts Department of Ecological Restoration (MassDER), as amended November 2017, for comparison of sediment analytical results with applicable ecological and human health threshold values as part of the 401 Water Q
Ecological threshold values input by MassDER were obtained through the National Oceanic and Atmospheric Administration's (NOAA's) Screening Quick Reference Tables (SQuiRTs), revised 2008.
TEC (Threshold Effects Concentration) - A threshold below which adverse impacts to benthic organisms are unlikely to occur as a result of contaminant concentrations, based on the average results of sediment toxicity bioassays.
TEL(Threshold Effects Level) - The lowest known value obtained through sediment toxicity bioassays at which adverse effects to benthic organisms were not observed as a result of contaminant concentrations.
PEC (Probable Effects Concentration) - A threshold above which adverse impacts to benthic organisms are likely to occur as a result of contaminant concentrations, based on the average results of sediment toxicity bioassays.
PEL (Probable Effects Level) - The highest known value obtained through sediment toxicity bioassays at which adverse effects to benthic organisms were not observed and/or adverse effects were observed at values above the specified threshold as a re
[1] Where the TEC or PEC were more stringent, values in *italics* were derived from the MassDEP publication "Revised Sediment Screening Values," January 2006.
[2] TEC and PEC values for Petroleum Hydrocarbon Fractions were derived from "Sediment Toxicity of Petroleum Hydrocarbon Fractions", prepared by BATTELLE, Sept. 2007, for MassDEP
[3] MassDEP COMM-97 standard is applicable to all SVOCs capable of detection by EPA Method 8270, of which PAHs are only a small subset.

APPENDIX F

Laboratory Certificates of Analysis & Chain-of-Custody Documentation

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Tim Thies
Pare Corporation
8 Blackstone Valley Place
Lincoln, Rhode Island 02865

Generated 12/20/2022 4:11:50 PM

JOB DESCRIPTION

MA Sediment Samples

JOB NUMBER

620-8150-1

Eurofins New England
646 Camp Ave
North Kingstown RI 02852

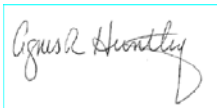
See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins Environment Testing Northeast, LLC Project Manager.

Authorization



Generated
12/20/2022 4:11:50 PM

Authorized for release by
Agnes Huntley, Project Manager
Agnes.Huntley@et.eurofinsus.com
(401)372-3482

Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Detection Summary 6
Client Sample Results 9
Surrogate Summary 37
QC Sample Results 39
QC Association Summary 57
Lab Chronicle 61
Certification Summary 64
Method Summary 68
Sample Summary 69
Chain of Custody 70
Receipt Checklists 74

Definitions/Glossary

Client: Pare Corporation
Project/Site: MA Sediment Samples

Job ID: 620-8150-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*-	LCS and/or LCSD is outside acceptance limits, low biased.
*+	LCS and/or LCSD is outside acceptance limits, high biased.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC Semi VOA

Qualifier	Qualifier Description
S1-	Surrogate recovery exceeds control limits, low biased.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 620-8150-1

Laboratory: Eurofins New England

Narrative

Job Narrative
620-8150-1

Receipt
The samples were received on 11/7/2022 4:42 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 3.7º C.

GC/MS VOA
Method 8260C: The continuing calibration verification (CCV) associated with batch 620-17180 exhibited a poor purge; however, the results of the LCS were within the CCV acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 20% difference from the initial calibration, poor performers are allowed to recover within 50-150%. According to the laboratory standard operating procedure, the LCS is acceptable if it meets CCV acceptance criteria.

Method 8260C: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 620-17179 and analytical batch 620-17180 recovered outside control limits for the following analyte(s): 2-Butanone (MEK), which has been identified as a poor performing analyte when analyzed using this method. According to MCP requirements, poor performers are allowed to recover within 40-160%; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method 8260C: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 620-17474 and analytical batch 620-17475 recovered outside control limits for the following analyte(s): Dichlorodifluoromethane, which has been identified as a poor performing analyte when analyzed using this method. According to 8260c parameters, poor performers are allowed to recover within 50-150%; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA
Method 8082A: Tetrachloro-m-xylene and DCB Decachlorobiphenyl (Surr) recovery for the following sample was outside control limits: IMP-2 (620-8150-1). Evidence of matrix interference was noted in the preparation notes, and is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8082A: DCB Decachlorobiphenyl (Surr) recovery for the following sample was outside control limits: IMP-3 (620-8150-3). Evidence of matrix interference was noted in the preparation notes, and is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Geotechnical
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Subcontract Work
Method TOC: This method was subcontracted to Phoenix Environmental Laboratories, Inc.. The subcontract laboratory certification is different from that of the facility issuing the final report.

Detection Summary

Client: Pare Corporation
Project/Site: MA Sediment Samples

Job ID: 620-8150-1

Client Sample ID: IMP-2 — Lab Sample ID: 620-8150-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	75.8		62.6		ug/Kg	1	☼	8260C	Total/NA
C19-C36 Aliphatics	78.9		43.5		mg/Kg	1	☼	MAEPH2.1	Total/NA
Lead	62.1		13.1		mg/Kg	2	☼	6010D	Total/NA
Zinc	39.5		39.4		mg/Kg	2	☼	6010D	Total/NA
Gravel	0.0				%	1		D422	Total/NA
Sieve Size 3 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sand	50.4				%	1		D422	Total/NA
Sieve Size 2 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Coarse Sand	3.4				%	1		D422	Total/NA
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Medium Sand	9.3				%	1		D422	Total/NA
Sieve Size 1 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Fine Sand	37.7				%	1		D422	Total/NA
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sieve Size 0.375 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Silt	38.1				%	1		D422	Total/NA
Clay	11.5				%	1		D422	Total/NA
Sieve Size #4 - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sieve Size #10 - Percent Finer	96.6				% Passing	1		D422	Total/NA
Sieve Size #20 - Percent Finer	89.4				% Passing	1		D422	Total/NA
Sieve Size #40 - Percent Finer	87.3				% Passing	1		D422	Total/NA
Sieve Size #60 - Percent Finer	66.6				% Passing	1		D422	Total/NA
Sieve Size #80 - Percent Finer	58.9				% Passing	1		D422	Total/NA
Sieve Size #100 - Percent Finer	55.6				% Passing	1		D422	Total/NA
Sieve Size #200 - Percent Finer	49.6				% Passing	1		D422	Total/NA
Hydrometer Reading 1 - Percent Finer	42.4				% Passing	1		D422	Total/NA
Hydrometer Reading 2 - Percent Finer	23.4				% Passing	1		D422	Total/NA
Hydrometer Reading 3 - Percent Finer	16.2				% Passing	1		D422	Total/NA
Hydrometer Reading 4 - Percent Finer	16.2				% Passing	1		D422	Total/NA
Hydrometer Reading 5 - Percent Finer	11.5				% Passing	1		D422	Total/NA
Hydrometer Reading 6 - Percent Finer	8.3				% Passing	1		D422	Total/NA
Hydrometer Reading 7 - Percent Finer	5.9				% Passing	1		D422	Total/NA
Tot.Org.Carbon	124000		100		mg/kg	1		Local Method	Total/NA

Client Sample ID: IMP-1 — Lab Sample ID: 620-8150-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
C19-C36 Aliphatics	20.3		14.2		mg/Kg	1	☼	MAEPH2.1	Total/NA
Chromium	5.98		4.07		mg/Kg	2	☼	6010D	Total/NA
Lead	6.26		4.07		mg/Kg	2	☼	6010D	Total/NA
Gravel	42.9				%	1		D422	Total/NA
Sieve Size 3 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sand	47.3				%	1		D422	Total/NA
Sieve Size 2 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Coarse Sand	11.9				%	1		D422	Total/NA
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Medium Sand	14.9				%	1		D422	Total/NA
Sieve Size 1 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Fine Sand	20.5				%	1		D422	Total/NA
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sieve Size 0.375 inch - Percent Finer	70.7				% Passing	1		D422	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: IMP-1 (Continued) — Lab Sample ID: 620-8150-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Silt	4.5				%	1		D422	Total/NA
Clay	5.2				%	1		D422	Total/NA
Sieve Size #4 - Percent Finer	57.1				% Passing	1		D422	Total/NA
Sieve Size #10 - Percent Finer	45.2				% Passing	1		D422	Total/NA
Sieve Size #20 - Percent Finer	38.5				% Passing	1		D422	Total/NA
Sieve Size #40 - Percent Finer	30.3				% Passing	1		D422	Total/NA
Sieve Size #60 - Percent Finer	20.2				% Passing	1		D422	Total/NA
Sieve Size #80 - Percent Finer	17.3				% Passing	1		D422	Total/NA
Sieve Size #100 - Percent Finer	13.7				% Passing	1		D422	Total/NA
Sieve Size #200 - Percent Finer	9.8				% Passing	1		D422	Total/NA
Hydrometer Reading 1 - Percent Finer	12.4				% Passing	1		D422	Total/NA
Hydrometer Reading 2 - Percent Finer	7.0				% Passing	1		D422	Total/NA
Hydrometer Reading 3 - Percent Finer	7.0				% Passing	1		D422	Total/NA
Hydrometer Reading 4 - Percent Finer	6.1				% Passing	1		D422	Total/NA
Hydrometer Reading 5 - Percent Finer	5.2				% Passing	1		D422	Total/NA
Hydrometer Reading 6 - Percent Finer	3.1				% Passing	1		D422	Total/NA
Hydrometer Reading 7 - Percent Finer	3.1				% Passing	1		D422	Total/NA
Tot.Org.Carbon	221000		100		mg/kg	1		Local Method	Total/NA

Client Sample ID: IMP-3 — Lab Sample ID: 620-8150-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
C19-C36 Aliphatics	23.3		20.0		mg/Kg	1	☼	MAEPH2.1	Total/NA
Arsenic	15.1		8.64		mg/Kg	2	☼	6010D	Total/NA
Chromium	29.0		5.76		mg/Kg	2	☼	6010D	Total/NA
Lead	26.0		5.76		mg/Kg	2	☼	6010D	Total/NA
Zinc	17.9		17.3		mg/Kg	2	☼	6010D	Total/NA
Mercury	0.0634		0.0508		mg/Kg	1	☼	7471B	Total/NA
Gravel	18.3				%	1		D422	Total/NA
Sieve Size 3 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sand	25.8				%	1		D422	Total/NA
Sieve Size 2 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Coarse Sand	6.3				%	1		D422	Total/NA
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Medium Sand	4.3				%	1		D422	Total/NA
Sieve Size 1 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Fine Sand	15.2				%	1		D422	Total/NA
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sieve Size 0.375 inch - Percent Finer	86.3				% Passing	1		D422	Total/NA
Silt	47.9				%	1		D422	Total/NA
Clay	8.1				%	1		D422	Total/NA
Sieve Size #4 - Percent Finer	81.7				% Passing	1		D422	Total/NA
Sieve Size #10 - Percent Finer	75.4				% Passing	1		D422	Total/NA
Sieve Size #20 - Percent Finer	71.9				% Passing	1		D422	Total/NA
Sieve Size #40 - Percent Finer	71.1				% Passing	1		D422	Total/NA
Sieve Size #60 - Percent Finer	64.9				% Passing	1		D422	Total/NA
Sieve Size #80 - Percent Finer	62.7				% Passing	1		D422	Total/NA
Sieve Size #100 - Percent Finer	61.3				% Passing	1		D422	Total/NA
Sieve Size #200 - Percent Finer	55.9				% Passing	1		D422	Total/NA
Hydrometer Reading 1 - Percent Finer	15.0				% Passing	1		D422	Total/NA
Hydrometer Reading 2 - Percent Finer	12.7				% Passing	1		D422	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: IMP-3 (Continued) — Lab Sample ID: 620-8150-3

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Hydrometer Reading 3 - Percent Finer	10.4				% Passing	1		D422	Total/NA
Hydrometer Reading 4 - Percent Finer	10.4				% Passing	1		D422	Total/NA
Hydrometer Reading 5 - Percent Finer	8.1				% Passing	1		D422	Total/NA
Hydrometer Reading 6 - Percent Finer	5.5				% Passing	1		D422	Total/NA
Hydrometer Reading 7 - Percent Finer	4.4				% Passing	1		D422	Total/NA
Tot.Org.Carbon	90100		100		mg/kg	1		Local Method	Total/NA

Client Sample ID: DS-CPD — Lab Sample ID: 620-8150-4

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
2-Butanone (MEK)	7.45	*+	5.91		ug/Kg	1	☼	8260C	Total/NA
Fluoranthene	20.0		19.9		ug/Kg	1	☼	8270D_LL_PAH	Total/NA
C19-C36 Aliphatics	29.0		8.36		mg/Kg	1	☼	MAEPH2.1	Total/NA
C11-C22 Aromatics	11.3		8.36		mg/Kg	1	☼	MAEPH2.1	Total/NA
C11-C22 Aromatics (Adjusted)	11.3		8.36		mg/Kg	1	☼	MAEPH2.1	Total/NA
Arsenic	17.0		3.48		mg/Kg	2	☼	6010D	Total/NA
Chromium	12.0		2.32		mg/Kg	2	☼	6010D	Total/NA
Lead	8.48		2.32		mg/Kg	2	☼	6010D	Total/NA
Nickel	9.42		9.29		mg/Kg	2	☼	6010D	Total/NA
Zinc	22.6		6.96		mg/Kg	2	☼	6010D	Total/NA
Gravel	33.7				%	1		D422	Total/NA
Sieve Size 3 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sand	62.8				%	1		D422	Total/NA
Sieve Size 2 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Coarse Sand	19.9				%	1		D422	Total/NA
Sieve Size 1.5 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Medium Sand	28.8				%	1		D422	Total/NA
Sieve Size 1 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Fine Sand	14.1				%	1		D422	Total/NA
Sieve Size 0.75 inch - Percent Finer	100.0				% Passing	1		D422	Total/NA
Sieve Size 0.375 inch - Percent Finer	82.3				% Passing	1		D422	Total/NA
Silt	1.1				%	1		D422	Total/NA
Clay	2.5				%	1		D422	Total/NA
Sieve Size #4 - Percent Finer	66.3				% Passing	1		D422	Total/NA
Sieve Size #10 - Percent Finer	46.4				% Passing	1		D422	Total/NA
Sieve Size #20 - Percent Finer	32.7				% Passing	1		D422	Total/NA
Sieve Size #40 - Percent Finer	17.6				% Passing	1		D422	Total/NA
Sieve Size #60 - Percent Finer	8.7				% Passing	1		D422	Total/NA
Sieve Size #80 - Percent Finer	6.9				% Passing	1		D422	Total/NA
Sieve Size #100 - Percent Finer	5.2				% Passing	1		D422	Total/NA
Sieve Size #200 - Percent Finer	3.6				% Passing	1		D422	Total/NA
Hydrometer Reading 1 - Percent Finer	4.6				% Passing	1		D422	Total/NA
Hydrometer Reading 2 - Percent Finer	3.5				% Passing	1		D422	Total/NA
Hydrometer Reading 3 - Percent Finer	3.0				% Passing	1		D422	Total/NA
Hydrometer Reading 4 - Percent Finer	3.0				% Passing	1		D422	Total/NA
Hydrometer Reading 5 - Percent Finer	2.5				% Passing	1		D422	Total/NA
Hydrometer Reading 6 - Percent Finer	1.3				% Passing	1		D422	Total/NA
Hydrometer Reading 7 - Percent Finer	1.3				% Passing	1		D422	Total/NA
Tot.Org.Carbon	9870		100		mg/kg	1		Local Method	Total/NA

This Detection Summary does not include radiochemical test results.

Client: Pare Corporation
Project/Site: MA Sediment Samples

Job ID: 620-8150-1

Client Sample ID: IMP-2
Date Collected: 11/07/22 10:35
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-1
Matrix: Solid
Percent Solids: 14.9

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichlorotrifluoroethane (Freon 113)	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Acetone	ND		313		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Acrylonitrile	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Benzene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Bromobenzene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Bromochloromethane	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Bromodichloromethane	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Bromoform	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Bromomethane	ND		62.6		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
2-Butanone (MEK)	**75.8**		62.6		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
n-Butylbenzene	ND		62.6		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
sec-Butylbenzene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
tert-Butylbenzene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Carbon disulfide	ND		62.6		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Carbon tetrachloride	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Chlorobenzene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Chloroethane	ND		62.6		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Chloroform	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Chloromethane	ND		62.6		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
2-Chlorotoluene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
4-Chlorotoluene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,2-Dibromo-3-Chloropropane	ND		62.6		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Dibromochloromethane	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,2-Dibromoethane (EDB)	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Dibromomethane	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,2-Dichlorobenzene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,3-Dichlorobenzene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,4-Dichlorobenzene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Dichlorodifluoromethane (Freon 12)	ND	*-	62.6		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,1-Dichloroethane	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,2-Dichloroethane	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,1-Dichloroethene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
cis-1,2-Dichloroethene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
trans-1,2-Dichloroethene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,2-Dichloropropane	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,3-Dichloropropane	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
2,2-Dichloropropane	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,1-Dichloropropene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
cis-1,3-Dichloropropene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
trans-1,3-Dichloropropene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Ethylbenzene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Hexachlorobutadiene	ND		62.6		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
2-Hexanone (MBK)	ND		62.6		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Isopropylbenzene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
4-Isopropyltoluene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Methyl tert-butyl ether	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
4-Methyl-2-pentanone (MIBK)	ND		62.6		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Methylene Chloride	ND		62.6		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Naphthalene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1

Client Sample ID: IMP-2
Date Collected: 11/07/22 10:35
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-1
Matrix: Solid
Percent Solids: 14.9

Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Styrene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,1,1,2-Tetrachloroethane	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,1,2,2-Tetrachloroethane	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Tetrachloroethene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Toluene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,2,3-Trichlorobenzene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,2,4-Trichlorobenzene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,3,5-Trichlorobenzene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,1,1-Trichloroethane	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,1,2-Trichloroethane	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Trichloroethene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Trichlorofluoromethane (Freon 11)	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,2,3-Trichloropropane	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,2,4-Trimethylbenzene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,3,5-Trimethylbenzene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Vinyl chloride	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
m,p-Xylene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
o-Xylene	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Tetrahydrofuran	ND		62.6		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Ethyl ether	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Tert-amyl methyl ether	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Ethyl tert-butyl ether	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
di-Isopropyl ether	ND		31.3		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
tert-Butanol	ND		626		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
1,4-Dioxane	ND		626		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
trans-1,4-Dichloro-2-butene	ND		156		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1
Ethanol	ND		6260		ug/Kg	☼	11/16/22 10:52	11/16/22 15:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*70 - 130*	*11/16/22 10:52*	*11/16/22 15:39*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*	*11/16/22 10:52*	*11/16/22 15:39*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*	*11/16/22 10:52*	*11/16/22 15:39*	*1*
Dibromofluoromethane (Surr)	*110*		*70 - 130*	*11/16/22 10:52*	*11/16/22 15:39*	*1*

Method: SW846 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		104		ug/Kg	☼	11/08/22 09:59	11/09/22 16:03	1
Acenaphthylene	ND		104		ug/Kg	☼	11/08/22 09:59	11/09/22 16:03	1
1-Methylnaphthalene	ND		104		ug/Kg	☼	11/08/22 09:59	11/09/22 16:03	1
Anthracene	ND		104		ug/Kg	☼	11/08/22 09:59	11/09/22 16:03	1
Benzo[a]anthracene	ND		104		ug/Kg	☼	11/08/22 09:59	11/09/22 16:03	1
Benzo[a]pyrene	ND		104		ug/Kg	☼	11/08/22 09:59	11/09/22 16:03	1
Benzo[b]fluoranthene	ND		104		ug/Kg	☼	11/08/22 09:59	11/09/22 16:03	1
Benzo[g,h,i]perylene	ND		104		ug/Kg	☼	11/08/22 09:59	11/09/22 16:03	1
Benzo[k]fluoranthene	ND		104		ug/Kg	☼	11/08/22 09:59	11/09/22 16:03	1
Chrysene	ND		104		ug/Kg	☼	11/08/22 09:59	11/09/22 16:03	1
Dibenz(a,h)anthracene	ND		104		ug/Kg	☼	11/08/22 09:59	11/09/22 16:03	1
Fluoranthene	ND		104		ug/Kg	☼	11/08/22 09:59	11/09/22 16:03	1
Fluorene	ND		104		ug/Kg	☼	11/08/22 09:59	11/09/22 16:03	1

Client Sample ID: IMP-2
Date Collected: 11/07/22 10:35
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-1
Matrix: Solid
Percent Solids: 14.9

Method: SW846 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	ND		104		ug/Kg	☼	11/08/22 09:59	11/09/22 16:03	1
2-Methylnaphthalene	ND		104		ug/Kg	☼	11/08/22 09:59	11/09/22 16:03	1
Naphthalene	ND		104		ug/Kg	☼	11/08/22 09:59	11/09/22 16:03	1
Phenanthrene	ND		104		ug/Kg	☼	11/08/22 09:59	11/09/22 16:03	1
Pyrene	ND		104		ug/Kg	☼	11/08/22 09:59	11/09/22 16:03	1
Bis(2-ethylhexyl) phthalate	ND		104		ug/Kg	☼	11/08/22 09:59	11/09/22 16:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenceno-d5 (Surr)	*70*		*30 - 130*	*11/08/22 09:59*	*11/09/22 16:03*	*1*
Terphenyl-d14 (Surr)	*52*		*30 - 130*	*11/08/22 09:59*	*11/09/22 16:03*	*1*
2-Fluorobiphenyl (Surr)	*62*		*30 - 130*	*11/08/22 09:59*	*11/09/22 16:03*	*1*

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		128		ug/Kg	☼	11/08/22 15:04	11/09/22 21:48	1
PCB-1221	ND		128		ug/Kg	☼	11/08/22 15:04	11/09/22 21:48	1
PCB-1232	ND		128		ug/Kg	☼	11/08/22 15:04	11/09/22 21:48	1
PCB-1242	ND		128		ug/Kg	☼	11/08/22 15:04	11/09/22 21:48	1
PCB-1248	ND		128		ug/Kg	☼	11/08/22 15:04	11/09/22 21:48	1
PCB-1254	ND		128		ug/Kg	☼	11/08/22 15:04	11/09/22 21:48	1
PCB-1260	ND		128		ug/Kg	☼	11/08/22 15:04	11/09/22 21:48	1
PCB-1262	ND		128		ug/Kg	☼	11/08/22 15:04	11/09/22 21:48	1
PCB-1268	ND		128		ug/Kg	☼	11/08/22 15:04	11/09/22 21:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*21*	*S1-*	*30 - 150*	*11/08/22 15:04*	*11/09/22 21:48*	*1*
Tetrachloro-m-xylene	*21*	*S1-*	*30 - 150*	*11/08/22 15:04*	*11/09/22 21:48*	*1*
DCB Decachlorobiphenyl (Surr)	*19*	*S1-*	*30 - 150*	*11/08/22 15:04*	*11/09/22 21:48*	*1*
DCB Decachlorobiphenyl (Surr)	*18*	*S1-*	*30 - 150*	*11/08/22 15:04*	*11/09/22 21:48*	*1*

Method: MA DEP MAEPH2.1 - Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C9-C18 Aliphatics	ND		43.5		mg/Kg	☼	11/08/22 12:45	11/10/22 20:28	1
C19-C36 Aliphatics	**78.9**		43.5		mg/Kg	☼	11/08/22 12:45	11/10/22 20:28	1
C11-C22 Aromatics	ND		43.5		mg/Kg	☼	11/08/22 12:45	11/10/22 20:28	1
C11-C22 Aromatics (Adjusted)	ND		43.5		mg/Kg	☼	11/08/22 12:45	11/10/22 20:28	1
Naphthalene	ND		2.17		mg/Kg	☼	11/08/22 12:45	11/10/22 20:28	1
2-Methylnaphthalene	ND		2.17		mg/Kg	☼	11/08/22 12:45	11/10/22 20:28	1
Acenaphthylene	ND		2.17		mg/Kg	☼	11/08/22 12:45	11/10/22 20:28	1
Acenaphthene	ND		2.17		mg/Kg	☼	11/08/22 12:45	11/10/22 20:28	1
Fluorene	ND		2.17		mg/Kg	☼	11/08/22 12:45	11/10/22 20:28	1
Phenanthrene	ND		2.17		mg/Kg	☼	11/08/22 12:45	11/10/22 20:28	1
Anthracene	ND		2.17		mg/Kg	☼	11/08/22 12:45	11/10/22 20:28	1
Fluoranthene	ND		2.17		mg/Kg	☼	11/08/22 12:45	11/10/22 20:28	1
Pyrene	ND		2.17		mg/Kg	☼	11/08/22 12:45	11/10/22 20:28	1
Benzo[a]anthracene	ND		2.17		mg/Kg	☼	11/08/22 12:45	11/10/22 20:28	1
Chrysene	ND		2.17		mg/Kg	☼	11/08/22 12:45	11/10/22 20:28	1
Benzo[b]fluoranthene	ND		2.17		mg/Kg	☼	11/08/22 12:45	11/10/22 20:28	1
Benzo[k]fluoranthene	ND		2.17		mg/Kg	☼	11/08/22 12:45	11/10/22 20:28	1
Benzo[a]pyrene	ND		2.17		mg/Kg	☼	11/08/22 12:45	11/10/22 20:28	1

Client Sample ID: IMP-2
Date Collected: 11/07/22 10:35
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-1
Matrix: Solid
Percent Solids: 14.9

Method: MA DEP MAEPH2.1 - Massachusetts - Extractable Petroleum Hydrocarbons (GC) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	ND		2.17		mg/Kg	☼	11/08/22 12:45	11/10/22 20:28	1
Dibenz(a,h)anthracene	ND		2.17		mg/Kg	☼	11/08/22 12:45	11/10/22 20:28	1
Benzo[g,h,i]perylene	ND		2.17		mg/Kg	☼	11/08/22 12:45	11/10/22 20:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctadecane (Surr)	*40*		*40 - 140*	*11/08/22 12:45*	*11/10/22 20:28*	*1*
o-Terphenyl (Surr)	*75*		*40 - 140*	*11/08/22 12:45*	*11/10/22 20:28*	*1*
2-Fluorobiphenyl (Surr)	*119*		*40 - 140*	*11/08/22 12:45*	*11/10/22 20:28*	*1*

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		19.7		mg/Kg	☼	11/15/22 08:55	11/16/22 14:41	2
Cadmium	ND		5.26		mg/Kg	☼	11/15/22 08:55	11/16/22 14:41	2
Chromium	ND		13.1		mg/Kg	☼	11/15/22 08:55	11/16/22 14:41	2
Copper	ND		32.9		mg/Kg	☼	11/15/22 08:55	11/16/22 14:41	2
Lead	**62.1**		13.1		mg/Kg	☼	11/15/22 08:55	11/16/22 14:41	2
Nickel	ND		52.6		mg/Kg	☼	11/15/22 08:55	11/16/22 14:41	2
Zinc	**39.5**		39.4		mg/Kg	☼	11/15/22 08:55	11/16/22 14:41	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.114		mg/Kg	☼	11/30/22 00:09	11/30/22 07:13	1

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**85.1**		0.1		%			11/09/22 10:13	1
Percent Solids (EPA Moisture)	**14.9**		0.1		%			11/09/22 10:13	1

Method: ASTM D422 - Grain Size

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gravel	**0.0**				%			12/09/22 20:51	1
Sieve Size 3 inch - Percent Finer	**100.0**				% Passing			12/09/22 20:51	1
Sand	**50.4**				%			12/09/22 20:51	1
Sieve Size 2 inch - Percent Finer	**100.0**				% Passing			12/09/22 20:51	1
Coarse Sand	**3.4**				%			12/09/22 20:51	1
Sieve Size 1.5 inch - Percent Finer	**100.0**				% Passing			12/09/22 20:51	1
Medium Sand	**9.3**				%			12/09/22 20:51	1
Sieve Size 1 inch - Percent Finer	**100.0**				% Passing			12/09/22 20:51	1
Fine Sand	**37.7**				%			12/09/22 20:51	1
Sieve Size 0.75 inch - Percent Finer	**100.0**				% Passing			12/09/22 20:51	1
Sieve Size 0.375 inch - Percent Finer	**100.0**				% Passing			12/09/22 20:51	1
Silt	**38.1**				%			12/09/22 20:51	1
Clay	**11.5**				%			12/09/22 20:51	1
Sieve Size #4 - Percent Finer	**100.0**				% Passing			12/09/22 20:51	1
Sieve Size #10 - Percent Finer	**96.6**				% Passing			12/09/22 20:51	1
Sieve Size #20 - Percent Finer	**89.4**				% Passing			12/09/22 20:51	1
Sieve Size #40 - Percent Finer	**87.3**				% Passing			12/09/22 20:51	1
Sieve Size #60 - Percent Finer	**66.6**				% Passing			12/09/22 20:51	1
Sieve Size #80 - Percent Finer	**58.9**				% Passing			12/09/22 20:51	1

Client: Pare Corporation
Project/Site: MA Sediment Samples

Job ID: 620-8150-1

Client Sample ID: IMP-2
Date Collected: 11/07/22 10:35
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-1
Matrix: Solid
Percent Solids: 14.9

Method: ASTM D422 - Grain Size (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Sieve Size #100 - Percent Finer	55.6				% Passing			12/09/22 20:51	1
Sieve Size #200 - Percent Finer	49.6				% Passing			12/09/22 20:51	1
Hydrometer Reading 1 - Percent Finer	42.4				% Passing			12/09/22 20:51	1
Hydrometer Reading 2 - Percent Finer	23.4				% Passing			12/09/22 20:51	1
Hydrometer Reading 3 - Percent Finer	16.2				% Passing			12/09/22 20:51	1
Hydrometer Reading 4 - Percent Finer	16.2				% Passing			12/09/22 20:51	1
Hydrometer Reading 5 - Percent Finer	11.5				% Passing			12/09/22 20:51	1
Hydrometer Reading 6 - Percent Finer	8.3				% Passing			12/09/22 20:51	1
Hydrometer Reading 7 - Percent Finer	5.9				% Passing			12/09/22 20:51	1

Method: Local Method - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tot.Org.Carbon	124000		100		mg/kg		11/10/22 16:26	11/10/22 16:26	1

Client: Pare Corporation
Project/Site: MA Sediment Samples

Job ID: 620-8150-1

Client Sample ID: IMP-1
Date Collected: 11/07/22 11:20
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-2
Matrix: Solid
Percent Solids: 45.9

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichlorotrifluoroethane (Freon 113)	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Acetone	ND		103		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Acrylonitrile	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Benzene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Bromobenzene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Bromochloromethane	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Bromodichloromethane	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Bromoform	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Bromomethane	ND		20.6		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
2-Butanone (MEK)	ND	*+	20.6		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
n-Butylbenzene	ND		20.6		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
sec-Butylbenzene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
tert-Butylbenzene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Carbon disulfide	ND		20.6		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Carbon tetrachloride	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Chlorobenzene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Chloroethane	ND		20.6		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Chloroform	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Chloromethane	ND		20.6		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
2-Chlorotoluene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
4-Chlorotoluene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,2-Dibromo-3-Chloropropane	ND		20.6		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Dibromochloromethane	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,2-Dibromoethane (EDB)	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Dibromomethane	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,2-Dichlorobenzene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,3-Dichlorobenzene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,4-Dichlorobenzene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Dichlorodifluoromethane (Freon 12)	ND		20.6		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,1-Dichloroethane	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,2-Dichloroethane	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,1-Dichloroethene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
cis-1,2-Dichloroethene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
trans-1,2-Dichloroethene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,2-Dichloropropane	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,3-Dichloropropane	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
2,2-Dichloropropane	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,1-Dichloropropene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
cis-1,3-Dichloropropene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
trans-1,3-Dichloropropene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Ethylbenzene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Hexachlorobutadiene	ND		20.6		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
2-Hexanone (MBK)	ND		20.6		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Isopropylbenzene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
4-Isopropyltoluene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Methyl tert-butyl ether	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
4-Methyl-2-pentanone (MIBK)	ND		20.6		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Methylene Chloride	ND		20.6		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Naphthalene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1

Client Sample ID: IMP-1
Date Collected: 11/07/22 11:20
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-2
Matrix: Solid
Percent Solids: 45.9

Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Styrene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,1,1,2-Tetrachloroethane	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,1,2,2-Tetrachloroethane	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Tetrachloroethene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Toluene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,2,3-Trichlorobenzene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,2,4-Trichlorobenzene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,3,5-Trichlorobenzene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,1,1-Trichloroethane	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,1,2-Trichloroethane	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Trichloroethene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Trichlorofluoromethane (Freon 11)	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,2,3-Trichloropropane	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,2,4-Trimethylbenzene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,3,5-Trimethylbenzene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Vinyl chloride	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
m,p-Xylene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
o-Xylene	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Tetrahydrofuran	ND		20.6		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Ethyl ether	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Tert-amyl methyl ether	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Ethyl tert-butyl ether	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
di-Isopropyl ether	ND		10.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
tert-Butanol	ND		206		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
1,4-Dioxane	ND		206		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
trans-1,4-Dichloro-2-butene	ND		51.5		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1
Ethanol	ND		2060		ug/Kg	☼	11/08/22 09:23	11/08/22 16:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*70 - 130*	*11/08/22 09:23*	*11/08/22 16:26*	*1*
Toluene-d8 (Surr)	*98*		*70 - 130*	*11/08/22 09:23*	*11/08/22 16:26*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*	*11/08/22 09:23*	*11/08/22 16:26*	*1*
Dibromofluoromethane (Surr)	*104*		*70 - 130*	*11/08/22 09:23*	*11/08/22 16:26*	*1*

Method: SW846 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		33.9		ug/Kg	☼	11/08/22 09:59	11/09/22 16:32	1
Acenaphthylene	ND		33.9		ug/Kg	☼	11/08/22 09:59	11/09/22 16:32	1
1-Methylnaphthalene	ND		33.9		ug/Kg	☼	11/08/22 09:59	11/09/22 16:32	1
Anthracene	ND		33.9		ug/Kg	☼	11/08/22 09:59	11/09/22 16:32	1
Benzo[a]anthracene	ND		33.9		ug/Kg	☼	11/08/22 09:59	11/09/22 16:32	1
Benzo[a]pyrene	ND		33.9		ug/Kg	☼	11/08/22 09:59	11/09/22 16:32	1
Benzo[b]fluoranthene	ND		33.9		ug/Kg	☼	11/08/22 09:59	11/09/22 16:32	1
Benzo[g,h,i]perylene	ND		33.9		ug/Kg	☼	11/08/22 09:59	11/09/22 16:32	1
Benzo[k]fluoranthene	ND		33.9		ug/Kg	☼	11/08/22 09:59	11/09/22 16:32	1
Chrysene	ND		33.9		ug/Kg	☼	11/08/22 09:59	11/09/22 16:32	1
Dibenz(a,h)anthracene	ND		33.9		ug/Kg	☼	11/08/22 09:59	11/09/22 16:32	1
Fluoranthene	ND		33.9		ug/Kg	☼	11/08/22 09:59	11/09/22 16:32	1
Fluorene	ND		33.9		ug/Kg	☼	11/08/22 09:59	11/09/22 16:32	1

Client Sample ID: IMP-1
Date Collected: 11/07/22 11:20
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-2
Matrix: Solid
Percent Solids: 45.9

Method: SW846 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	ND		33.9		ug/Kg	☼	11/08/22 09:59	11/09/22 16:32	1
2-Methylnaphthalene	ND		33.9		ug/Kg	☼	11/08/22 09:59	11/09/22 16:32	1
Naphthalene	ND		33.9		ug/Kg	☼	11/08/22 09:59	11/09/22 16:32	1
Phenanthrene	ND		33.9		ug/Kg	☼	11/08/22 09:59	11/09/22 16:32	1
Pyrene	ND		33.9		ug/Kg	☼	11/08/22 09:59	11/09/22 16:32	1
Bis(2-ethylhexyl) phthalate	ND		33.9		ug/Kg	☼	11/08/22 09:59	11/09/22 16:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenceno-d5 (Surr)	*70*		*30 - 130*	*11/08/22 09:59*	*11/09/22 16:32*	*1*
Terphenyl-d14 (Surr)	*55*		*30 - 130*	*11/08/22 09:59*	*11/09/22 16:32*	*1*
2-Fluorobiphenyl (Surr)	*64*		*30 - 130*	*11/08/22 09:59*	*11/09/22 16:32*	*1*

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		42.6		ug/Kg	☼	11/08/22 15:04	11/09/22 22:05	1
PCB-1221	ND		42.6		ug/Kg	☼	11/08/22 15:04	11/09/22 22:05	1
PCB-1232	ND		42.6		ug/Kg	☼	11/08/22 15:04	11/09/22 22:05	1
PCB-1242	ND		42.6		ug/Kg	☼	11/08/22 15:04	11/09/22 22:05	1
PCB-1248	ND		42.6		ug/Kg	☼	11/08/22 15:04	11/09/22 22:05	1
PCB-1254	ND		42.6		ug/Kg	☼	11/08/22 15:04	11/09/22 22:05	1
PCB-1260	ND		42.6		ug/Kg	☼	11/08/22 15:04	11/09/22 22:05	1
PCB-1262	ND		42.6		ug/Kg	☼	11/08/22 15:04	11/09/22 22:05	1
PCB-1268	ND		42.6		ug/Kg	☼	11/08/22 15:04	11/09/22 22:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*49*		*30 - 150*	*11/08/22 15:04*	*11/09/22 22:05*	*1*
Tetrachloro-m-xylene	*47*		*30 - 150*	*11/08/22 15:04*	*11/09/22 22:05*	*1*
DCB Decachlorobiphenyl (Surr)	*42*		*30 - 150*	*11/08/22 15:04*	*11/09/22 22:05*	*1*
DCB Decachlorobiphenyl (Surr)	*39*		*30 - 150*	*11/08/22 15:04*	*11/09/22 22:05*	*1*

Method: MA DEP MAEPH2.1 - Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C9-C18 Aliphatics	ND		14.2		mg/Kg	☼	11/08/22 12:45	11/10/22 22:28	1
C19-C36 Aliphatics	**20.3**		14.2		mg/Kg	☼	11/08/22 12:45	11/10/22 22:28	1
C11-C22 Aromatics	ND		14.2		mg/Kg	☼	11/08/22 12:45	11/10/22 22:28	1
C11-C22 Aromatics (Adjusted)	ND		14.2		mg/Kg	☼	11/08/22 12:45	11/10/22 22:28	1
Naphthalene	ND		0.708		mg/Kg	☼	11/08/22 12:45	11/10/22 22:28	1
2-Methylnaphthalene	ND		0.708		mg/Kg	☼	11/08/22 12:45	11/10/22 22:28	1
Acenaphthylene	ND		0.708		mg/Kg	☼	11/08/22 12:45	11/10/22 22:28	1
Acenaphthene	ND		0.708		mg/Kg	☼	11/08/22 12:45	11/10/22 22:28	1
Fluorene	ND		0.708		mg/Kg	☼	11/08/22 12:45	11/10/22 22:28	1
Phenanthrene	ND		0.708		mg/Kg	☼	11/08/22 12:45	11/10/22 22:28	1
Anthracene	ND		0.708		mg/Kg	☼	11/08/22 12:45	11/10/22 22:28	1
Fluoranthene	ND		0.708		mg/Kg	☼	11/08/22 12:45	11/10/22 22:28	1
Pyrene	ND		0.708		mg/Kg	☼	11/08/22 12:45	11/10/22 22:28	1
Benzo[a]anthracene	ND		0.708		mg/Kg	☼	11/08/22 12:45	11/10/22 22:28	1
Chrysene	ND		0.708		mg/Kg	☼	11/08/22 12:45	11/10/22 22:28	1
Benzo[b]fluoranthene	ND		0.708		mg/Kg	☼	11/08/22 12:45	11/10/22 22:28	1
Benzo[k]fluoranthene	ND		0.708		mg/Kg	☼	11/08/22 12:45	11/10/22 22:28	1
Benzo[a]pyrene	ND		0.708		mg/Kg	☼	11/08/22 12:45	11/10/22 22:28	1

Client Sample ID: IMP-1
Date Collected: 11/07/22 11:20
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-2
Matrix: Solid
Percent Solids: 45.9

Method: MA DEP MAEPH2.1 - Massachusetts - Extractable Petroleum Hydrocarbons (GC) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	ND		0.708		mg/Kg	☼	11/08/22 12:45	11/10/22 22:28	1
Dibenz(a,h)anthracene	ND		0.708		mg/Kg	☼	11/08/22 12:45	11/10/22 22:28	1
Benzo[g,h,i]perylene	ND		0.708		mg/Kg	☼	11/08/22 12:45	11/10/22 22:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctadecane (Surr)	*49*		*40 - 140*	*11/08/22 12:45*	*11/10/22 22:28*	*1*
o-Terphenyl (Surr)	*75*		*40 - 140*	*11/08/22 12:45*	*11/10/22 22:28*	*1*
2-Fluorobiphenyl (Surr)	*123*		*40 - 140*	*11/08/22 12:45*	*11/10/22 22:28*	*1*

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		6.11		mg/Kg	☼	11/15/22 08:55	11/16/22 14:45	2
Cadmium	ND		1.63		mg/Kg	☼	11/15/22 08:55	11/16/22 14:45	2
Chromium	**5.98**		4.07		mg/Kg	☼	11/15/22 08:55	11/16/22 14:45	2
Copper	ND		10.2		mg/Kg	☼	11/15/22 08:55	11/16/22 14:45	2
Lead	**6.26**		4.07		mg/Kg	☼	11/15/22 08:55	11/16/22 14:45	2
Nickel	ND		16.3		mg/Kg	☼	11/15/22 08:55	11/16/22 14:45	2
Zinc	ND		12.2		mg/Kg	☼	11/15/22 08:55	11/16/22 14:45	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0337		mg/Kg	☼	11/30/22 00:09	11/30/22 07:15	1

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**54.1**		0.1		%			11/09/22 10:13	1
Percent Solids (EPA Moisture)	**45.9**		0.1		%			11/09/22 10:13	1

Method: ASTM D422 - Grain Size

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gravel	**42.9**				%			12/09/22 20:53	1
Sieve Size 3 inch - Percent Finer	**100.0**				% Passing			12/09/22 20:53	1
Sand	**47.3**				%			12/09/22 20:53	1
Sieve Size 2 inch - Percent Finer	**100.0**				% Passing			12/09/22 20:53	1
Coarse Sand	**11.9**				%			12/09/22 20:53	1
Sieve Size 1.5 inch - Percent Finer	**100.0**				% Passing			12/09/22 20:53	1
Medium Sand	**14.9**				%			12/09/22 20:53	1
Sieve Size 1 inch - Percent Finer	**100.0**				% Passing			12/09/22 20:53	1
Fine Sand	**20.5**				%			12/09/22 20:53	1
Sieve Size 0.75 inch - Percent Finer	**100.0**				% Passing			12/09/22 20:53	1
Sieve Size 0.375 inch - Percent Finer	**70.7**				% Passing			12/09/22 20:53	1
Silt	**4.5**				%			12/09/22 20:53	1
Clay	**5.2**				%			12/09/22 20:53	1
Sieve Size #4 - Percent Finer	**57.1**				% Passing			12/09/22 20:53	1
Sieve Size #10 - Percent Finer	**45.2**				% Passing			12/09/22 20:53	1
Sieve Size #20 - Percent Finer	**38.5**				% Passing			12/09/22 20:53	1
Sieve Size #40 - Percent Finer	**30.3**				% Passing			12/09/22 20:53	1
Sieve Size #60 - Percent Finer	**20.2**				% Passing			12/09/22 20:53	1
Sieve Size #80 - Percent Finer	**17.3**				% Passing			12/09/22 20:53	1

Client: Pare Corporation
Project/Site: MA Sediment Samples

Job ID: 620-8150-1

Client Sample ID: IMP-1
Date Collected: 11/07/22 11:20
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-2
Matrix: Solid
Percent Solids: 45.9

Method: ASTM D422 - Grain Size (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Sieve Size #100 - Percent Finer	13.7				% Passing			12/09/22 20:53	1
Sieve Size #200 - Percent Finer	9.8				% Passing			12/09/22 20:53	1
Hydrometer Reading 1 - Percent Finer	12.4				% Passing			12/09/22 20:53	1
Hydrometer Reading 2 - Percent Finer	7.0				% Passing			12/09/22 20:53	1
Hydrometer Reading 3 - Percent Finer	7.0				% Passing			12/09/22 20:53	1
Hydrometer Reading 4 - Percent Finer	6.1				% Passing			12/09/22 20:53	1
Hydrometer Reading 5 - Percent Finer	5.2				% Passing			12/09/22 20:53	1
Hydrometer Reading 6 - Percent Finer	3.1				% Passing			12/09/22 20:53	1
Hydrometer Reading 7 - Percent Finer	3.1				% Passing			12/09/22 20:53	1

Method: Local Method - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tot.Org.Carbon	221000		100		mg/kg		11/10/22 16:27	11/10/22 16:27	1

Client: Pare Corporation
Project/Site: MA Sediment Samples

Job ID: 620-8150-1

Client Sample ID: IMP-3
Date Collected: 11/07/22 12:00
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-3
Matrix: Solid
Percent Solids: 31.8

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichlorotrifluoroethane (Freon 113)	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Acetone	ND		121		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Acrylonitrile	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Benzene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Bromobenzene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Bromochloromethane	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Bromodichloromethane	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Bromoform	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Bromomethane	ND		24.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
2-Butanone (MEK)	ND	*+	24.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
n-Butylbenzene	ND		24.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
sec-Butylbenzene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
tert-Butylbenzene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Carbon disulfide	ND		24.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Carbon tetrachloride	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Chlorobenzene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Chloroethane	ND		24.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Chloroform	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Chloromethane	ND		24.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
2-Chlorotoluene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
4-Chlorotoluene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,2-Dibromo-3-Chloropropane	ND		24.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Dibromochloromethane	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,2-Dibromoethane (EDB)	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Dibromomethane	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,2-Dichlorobenzene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,3-Dichlorobenzene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,4-Dichlorobenzene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Dichlorodifluoromethane (Freon 12)	ND		24.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,1-Dichloroethane	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,2-Dichloroethane	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,1-Dichloroethene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
cis-1,2-Dichloroethene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
trans-1,2-Dichloroethene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,2-Dichloropropane	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,3-Dichloropropane	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
2,2-Dichloropropane	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,1-Dichloropropene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
cis-1,3-Dichloropropene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
trans-1,3-Dichloropropene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Ethylbenzene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Hexachlorobutadiene	ND		24.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
2-Hexanone (MBK)	ND		24.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Isopropylbenzene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
4-Isopropyltoluene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Methyl tert-butyl ether	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
4-Methyl-2-pentanone (MIBK)	ND		24.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Methylene Chloride	ND		24.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Naphthalene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1

Client Sample ID: IMP-3
Date Collected: 11/07/22 12:00
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-3
Matrix: Solid
Percent Solids: 31.8

Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Styrene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,1,1,2-Tetrachloroethane	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,1,2,2-Tetrachloroethane	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Tetrachloroethene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Toluene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,2,3-Trichlorobenzene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,2,4-Trichlorobenzene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,3,5-Trichlorobenzene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,1,1-Trichloroethane	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,1,2-Trichloroethane	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Trichloroethene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Trichlorofluoromethane (Freon 11)	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,2,3-Trichloropropane	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,2,4-Trimethylbenzene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,3,5-Trimethylbenzene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Vinyl chloride	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
m,p-Xylene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
o-Xylene	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Tetrahydrofuran	ND		24.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Ethyl ether	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Tert-amyl methyl ether	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Ethyl tert-butyl ether	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
di-Isopropyl ether	ND		12.1		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
tert-Butanol	ND		241		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
1,4-Dioxane	ND		241		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
trans-1,4-Dichloro-2-butene	ND		60.3		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1
Ethanol	ND		2410		ug/Kg	☼	11/08/22 09:23	11/08/22 16:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*70 - 130*	*11/08/22 09:23*	*11/08/22 16:52*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*	*11/08/22 09:23*	*11/08/22 16:52*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*70 - 130*	*11/08/22 09:23*	*11/08/22 16:52*	*1*
Dibromofluoromethane (Surr)	*102*		*70 - 130*	*11/08/22 09:23*	*11/08/22 16:52*	*1*

Method: SW846 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		49.1		ug/Kg	☼	11/08/22 09:59	11/09/22 17:01	1
Acenaphthylene	ND		49.1		ug/Kg	☼	11/08/22 09:59	11/09/22 17:01	1
1-Methylnaphthalene	ND		49.1		ug/Kg	☼	11/08/22 09:59	11/09/22 17:01	1
Anthracene	ND		49.1		ug/Kg	☼	11/08/22 09:59	11/09/22 17:01	1
Benzo[a]anthracene	ND		49.1		ug/Kg	☼	11/08/22 09:59	11/09/22 17:01	1
Benzo[a]pyrene	ND		49.1		ug/Kg	☼	11/08/22 09:59	11/09/22 17:01	1
Benzo[b]fluoranthene	ND		49.1		ug/Kg	☼	11/08/22 09:59	11/09/22 17:01	1
Benzo[g,h,i]perylene	ND		49.1		ug/Kg	☼	11/08/22 09:59	11/09/22 17:01	1
Benzo[k]fluoranthene	ND		49.1		ug/Kg	☼	11/08/22 09:59	11/09/22 17:01	1
Chrysene	ND		49.1		ug/Kg	☼	11/08/22 09:59	11/09/22 17:01	1
Dibenz(a,h)anthracene	ND		49.1		ug/Kg	☼	11/08/22 09:59	11/09/22 17:01	1
Fluoranthene	ND		49.1		ug/Kg	☼	11/08/22 09:59	11/09/22 17:01	1
Fluorene	ND		49.1		ug/Kg	☼	11/08/22 09:59	11/09/22 17:01	1

Client Sample ID: IMP-3
Date Collected: 11/07/22 12:00
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-3
Matrix: Solid
Percent Solids: 31.8

Method: SW846 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	ND		49.1		ug/Kg	☼	11/08/22 09:59	11/09/22 17:01	1
2-Methylnaphthalene	ND		49.1		ug/Kg	☼	11/08/22 09:59	11/09/22 17:01	1
Naphthalene	ND		49.1		ug/Kg	☼	11/08/22 09:59	11/09/22 17:01	1
Phenanthrene	ND		49.1		ug/Kg	☼	11/08/22 09:59	11/09/22 17:01	1
Pyrene	ND		49.1		ug/Kg	☼	11/08/22 09:59	11/09/22 17:01	1
Bis(2-ethylhexyl) phthalate	ND		49.1		ug/Kg	☼	11/08/22 09:59	11/09/22 17:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenceno-d5 (Surr)	*73*		*30 - 130*	*11/08/22 09:59*	*11/09/22 17:01*	*1*
Terphenyl-d14 (Surr)	*39*		*30 - 130*	*11/08/22 09:59*	*11/09/22 17:01*	*1*
2-Fluorobiphenyl (Surr)	*58*		*30 - 130*	*11/08/22 09:59*	*11/09/22 17:01*	*1*

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		61.7		ug/Kg	☼	11/08/22 15:04	11/09/22 22:22	1
PCB-1221	ND		61.7		ug/Kg	☼	11/08/22 15:04	11/09/22 22:22	1
PCB-1232	ND		61.7		ug/Kg	☼	11/08/22 15:04	11/09/22 22:22	1
PCB-1242	ND		61.7		ug/Kg	☼	11/08/22 15:04	11/09/22 22:22	1
PCB-1248	ND		61.7		ug/Kg	☼	11/08/22 15:04	11/09/22 22:22	1
PCB-1254	ND		61.7		ug/Kg	☼	11/08/22 15:04	11/09/22 22:22	1
PCB-1260	ND		61.7		ug/Kg	☼	11/08/22 15:04	11/09/22 22:22	1
PCB-1262	ND		61.7		ug/Kg	☼	11/08/22 15:04	11/09/22 22:22	1
PCB-1268	ND		61.7		ug/Kg	☼	11/08/22 15:04	11/09/22 22:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*31*		*30 - 150*	*11/08/22 15:04*	*11/09/22 22:22*	*1*
Tetrachloro-m-xylene	*33*		*30 - 150*	*11/08/22 15:04*	*11/09/22 22:22*	*1*
DCB Decachlorobiphenyl (Surr)	*22*	*S1-*	*30 - 150*	*11/08/22 15:04*	*11/09/22 22:22*	*1*
DCB Decachlorobiphenyl (Surr)	*27*	*S1-*	*30 - 150*	*11/08/22 15:04*	*11/09/22 22:22*	*1*

Method: MA DEP MAEPH2.1 - Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C9-C18 Aliphatics	ND		20.0		mg/Kg	☼	11/08/22 12:45	11/10/22 22:58	1
C19-C36 Aliphatics	**23.3**		20.0		mg/Kg	☼	11/08/22 12:45	11/10/22 22:58	1
C11-C22 Aromatics	ND		20.0		mg/Kg	☼	11/08/22 12:45	11/10/22 22:58	1
C11-C22 Aromatics (Adjusted)	ND		20.0		mg/Kg	☼	11/08/22 12:45	11/10/22 22:58	1
Naphthalene	ND		0.999		mg/Kg	☼	11/08/22 12:45	11/10/22 22:58	1
2-Methylnaphthalene	ND		0.999		mg/Kg	☼	11/08/22 12:45	11/10/22 22:58	1
Acenaphthylene	ND		0.999		mg/Kg	☼	11/08/22 12:45	11/10/22 22:58	1
Acenaphthene	ND		0.999		mg/Kg	☼	11/08/22 12:45	11/10/22 22:58	1
Fluorene	ND		0.999		mg/Kg	☼	11/08/22 12:45	11/10/22 22:58	1
Phenanthrene	ND		0.999		mg/Kg	☼	11/08/22 12:45	11/10/22 22:58	1
Anthracene	ND		0.999		mg/Kg	☼	11/08/22 12:45	11/10/22 22:58	1
Fluoranthene	ND		0.999		mg/Kg	☼	11/08/22 12:45	11/10/22 22:58	1
Pyrene	ND		0.999		mg/Kg	☼	11/08/22 12:45	11/10/22 22:58	1
Benzo[a]anthracene	ND		0.999		mg/Kg	☼	11/08/22 12:45	11/10/22 22:58	1
Chrysene	ND		0.999		mg/Kg	☼	11/08/22 12:45	11/10/22 22:58	1
Benzo[b]fluoranthene	ND		0.999		mg/Kg	☼	11/08/22 12:45	11/10/22 22:58	1
Benzo[k]fluoranthene	ND		0.999		mg/Kg	☼	11/08/22 12:45	11/10/22 22:58	1
Benzo[a]pyrene	ND		0.999		mg/Kg	☼	11/08/22 12:45	11/10/22 22:58	1

Client Sample ID: IMP-3
Date Collected: 11/07/22 12:00
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-3
Matrix: Solid
Percent Solids: 31.8

Method: MA DEP MAEPH2.1 - Massachusetts - Extractable Petroleum Hydrocarbons (GC) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	ND		0.999		mg/Kg	☼	11/08/22 12:45	11/10/22 22:58	1
Dibenz(a,h)anthracene	ND		0.999		mg/Kg	☼	11/08/22 12:45	11/10/22 22:58	1
Benzo[g,h,i]perylene	ND		0.999		mg/Kg	☼	11/08/22 12:45	11/10/22 22:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctadecane (Surr)	*42*		*40 - 140*	*11/08/22 12:45*	*11/10/22 22:58*	*1*
o-Terphenyl (Surr)	*67*		*40 - 140*	*11/08/22 12:45*	*11/10/22 22:58*	*1*
2-Fluorobiphenyl (Surr)	*124*		*40 - 140*	*11/08/22 12:45*	*11/10/22 22:58*	*1*

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**15.1**		8.64		mg/Kg	☼	11/15/22 08:55	11/16/22 14:49	2
Cadmium	ND		2.30		mg/Kg	☼	11/15/22 08:55	11/16/22 14:49	2
Chromium	**29.0**		5.76		mg/Kg	☼	11/15/22 08:55	11/16/22 14:49	2
Copper	ND		14.4		mg/Kg	☼	11/15/22 08:55	11/16/22 14:49	2
Lead	**26.0**		5.76		mg/Kg	☼	11/15/22 08:55	11/16/22 14:49	2
Nickel	ND		23.0		mg/Kg	☼	11/15/22 08:55	11/16/22 14:49	2
Zinc	**17.9**		17.3		mg/Kg	☼	11/15/22 08:55	11/16/22 14:49	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.0634**		0.0508		mg/Kg	☼	11/30/22 00:09	11/30/22 07:16	1

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**68.2**		0.1		%			11/09/22 10:13	1
Percent Solids (EPA Moisture)	**31.8**		0.1		%			11/09/22 10:13	1

Method: ASTM D422 - Grain Size

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gravel	**18.3**				%			12/09/22 20:55	1
Sieve Size 3 inch - Percent Finer	**100.0**				% Passing			12/09/22 20:55	1
Sand	**25.8**				%			12/09/22 20:55	1
Sieve Size 2 inch - Percent Finer	**100.0**				% Passing			12/09/22 20:55	1
Coarse Sand	**6.3**				%			12/09/22 20:55	1
Sieve Size 1.5 inch - Percent Finer	**100.0**				% Passing			12/09/22 20:55	1
Medium Sand	**4.3**				%			12/09/22 20:55	1
Sieve Size 1 inch - Percent Finer	**100.0**				% Passing			12/09/22 20:55	1
Fine Sand	**15.2**				%			12/09/22 20:55	1
Sieve Size 0.75 inch - Percent Finer	**100.0**				% Passing			12/09/22 20:55	1
Sieve Size 0.375 inch - Percent Finer	**86.3**				% Passing			12/09/22 20:55	1
Silt	**47.9**				%			12/09/22 20:55	1
Clay	**8.1**				%			12/09/22 20:55	1
Sieve Size #4 - Percent Finer	**81.7**				% Passing			12/09/22 20:55	1
Sieve Size #10 - Percent Finer	**75.4**				% Passing			12/09/22 20:55	1
Sieve Size #20 - Percent Finer	**71.9**				% Passing			12/09/22 20:55	1
Sieve Size #40 - Percent Finer	**71.1**				% Passing			12/09/22 20:55	1
Sieve Size #60 - Percent Finer	**64.9**				% Passing			12/09/22 20:55	1
Sieve Size #80 - Percent Finer	**62.7**				% Passing			12/09/22 20:55	1

Client: Pare Corporation
Project/Site: MA Sediment Samples

Job ID: 620-8150-1

Client Sample ID: IMP-3
Date Collected: 11/07/22 12:00
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-3
Matrix: Solid
Percent Solids: 31.8

Method: ASTM D422 - Grain Size (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Sieve Size #100 - Percent Finer	61.3				% Passing			12/09/22 20:55	1
Sieve Size #200 - Percent Finer	55.9				% Passing			12/09/22 20:55	1
Hydrometer Reading 1 - Percent Finer	15.0				% Passing			12/09/22 20:55	1
Hydrometer Reading 2 - Percent Finer	12.7				% Passing			12/09/22 20:55	1
Hydrometer Reading 3 - Percent Finer	10.4				% Passing			12/09/22 20:55	1
Hydrometer Reading 4 - Percent Finer	10.4				% Passing			12/09/22 20:55	1
Hydrometer Reading 5 - Percent Finer	8.1				% Passing			12/09/22 20:55	1
Hydrometer Reading 6 - Percent Finer	5.5				% Passing			12/09/22 20:55	1
Hydrometer Reading 7 - Percent Finer	4.4				% Passing			12/09/22 20:55	1

Method: Local Method - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tot.Org.Carbon	90100		100		mg/kg		11/10/22 16:29	11/10/22 16:29	1

Client: Pare Corporation
Project/Site: MA Sediment Samples

Job ID: 620-8150-1

Client Sample ID: DS-CPD
Date Collected: 11/07/22 12:45
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-4
Matrix: Solid
Percent Solids: 79.0

Method: SW846 8260C - Volatile Organic Compounds by GC/MS

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichlorotrifluoroethane (Freon 113)	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Acetone	ND		29.5		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Acrylonitrile	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Benzene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Bromobenzene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Bromochloromethane	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Bromodichloromethane	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Bromoform	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Bromomethane	ND		5.91		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
2-Butanone (MEK)	**7.45**	***+**	5.91		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
n-Butylbenzene	ND		5.91		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
sec-Butylbenzene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
tert-Butylbenzene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Carbon disulfide	ND		5.91		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Carbon tetrachloride	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Chlorobenzene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Chloroethane	ND		5.91		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Chloroform	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Chloromethane	ND		5.91		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
2-Chlorotoluene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
4-Chlorotoluene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,2-Dibromo-3-Chloropropane	ND		5.91		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Dibromochloromethane	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,2-Dibromoethane (EDB)	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Dibromomethane	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,2-Dichlorobenzene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,3-Dichlorobenzene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,4-Dichlorobenzene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Dichlorodifluoromethane (Freon 12)	ND		5.91		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,1-Dichloroethane	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,2-Dichloroethane	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,1-Dichloroethene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
cis-1,2-Dichloroethene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
trans-1,2-Dichloroethene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,2-Dichloropropane	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,3-Dichloropropane	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
2,2-Dichloropropane	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,1-Dichloropropene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
cis-1,3-Dichloropropene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
trans-1,3-Dichloropropene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Ethylbenzene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Hexachlorobutadiene	ND		5.91		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
2-Hexanone (MBK)	ND		5.91		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Isopropylbenzene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
4-Isopropyltoluene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Methyl tert-butyl ether	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
4-Methyl-2-pentanone (MIBK)	ND		5.91		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Methylene Chloride	ND		5.91		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Naphthalene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1

Client Sample ID: DS-CPD

Date Collected: 11/07/22 12:45
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-4

Matrix: Solid
Percent Solids: 79.0

Method: SW846 8260C - Volatile Organic Compounds by GC/MS (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Styrene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,1,1,2-Tetrachloroethane	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,1,2,2-Tetrachloroethane	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Tetrachloroethene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Toluene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,2,3-Trichlorobenzene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,2,4-Trichlorobenzene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,3,5-Trichlorobenzene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,1,1-Trichloroethane	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,1,2-Trichloroethane	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Trichloroethene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Trichlorofluoromethane (Freon 11)	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,2,3-Trichloropropane	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,2,4-Trimethylbenzene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,3,5-Trimethylbenzene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Vinyl chloride	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
m,p-Xylene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
o-Xylene	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Tetrahydrofuran	ND		5.91		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Ethyl ether	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Tert-amyl methyl ether	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Ethyl tert-butyl ether	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
di-Isopropyl ether	ND		2.95		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
tert-Butanol	ND		59.1		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
1,4-Dioxane	ND		59.1		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
trans-1,4-Dichloro-2-butene	ND		14.8		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1
Ethanol	ND		591		ug/Kg	☼	11/08/22 09:23	11/08/22 17:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*70 - 130*	*11/08/22 09:23*	*11/08/22 17:18*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*	*11/08/22 09:23*	*11/08/22 17:18*	*1*
1,2-Dichloroethane-d4 (Surr)	*103*		*70 - 130*	*11/08/22 09:23*	*11/08/22 17:18*	*1*
Dibromofluoromethane (Surr)	*103*		*70 - 130*	*11/08/22 09:23*	*11/08/22 17:18*	*1*

Method: SW846 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		19.9		ug/Kg	☼	11/08/22 09:59	11/09/22 17:30	1
Acenaphthylene	ND		19.9		ug/Kg	☼	11/08/22 09:59	11/09/22 17:30	1
1-Methylnaphthalene	ND		19.9		ug/Kg	☼	11/08/22 09:59	11/09/22 17:30	1
Anthracene	ND		19.9		ug/Kg	☼	11/08/22 09:59	11/09/22 17:30	1
Benzo[a]anthracene	ND		19.9		ug/Kg	☼	11/08/22 09:59	11/09/22 17:30	1
Benzo[a]pyrene	ND		19.9		ug/Kg	☼	11/08/22 09:59	11/09/22 17:30	1
Benzo[b]fluoranthene	ND		19.9		ug/Kg	☼	11/08/22 09:59	11/09/22 17:30	1
Benzo[g,h,i]perylene	ND		19.9		ug/Kg	☼	11/08/22 09:59	11/09/22 17:30	1
Benzo[k]fluoranthene	ND		19.9		ug/Kg	☼	11/08/22 09:59	11/09/22 17:30	1
Chrysene	ND		19.9		ug/Kg	☼	11/08/22 09:59	11/09/22 17:30	1
Dibenz(a,h)anthracene	ND		19.9		ug/Kg	☼	11/08/22 09:59	11/09/22 17:30	1
Fluoranthene	**20.0**		19.9		ug/Kg	☼	11/08/22 09:59	11/09/22 17:30	1
Fluorene	ND		19.9		ug/Kg	☼	11/08/22 09:59	11/09/22 17:30	1

Client Sample ID: DS-CPD

Date Collected: 11/07/22 12:45
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-4

Matrix: Solid
Percent Solids: 79.0

Method: SW846 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	ND		19.9		ug/Kg	☼	11/08/22 09:59	11/09/22 17:30	1
2-Methylnaphthalene	ND		19.9		ug/Kg	☼	11/08/22 09:59	11/09/22 17:30	1
Naphthalene	ND		19.9		ug/Kg	☼	11/08/22 09:59	11/09/22 17:30	1
Phenanthrene	ND		19.9		ug/Kg	☼	11/08/22 09:59	11/09/22 17:30	1
Pyrene	ND		19.9		ug/Kg	☼	11/08/22 09:59	11/09/22 17:30	1
Bis(2-ethylhexyl) phthalate	ND		19.9		ug/Kg	☼	11/08/22 09:59	11/09/22 17:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenceno-d5 (Surr)	*73*		*30 - 130*	*11/08/22 09:59*	*11/09/22 17:30*	*1*
Terphenyl-d14 (Surr)	*66*		*30 - 130*	*11/08/22 09:59*	*11/09/22 17:30*	*1*
2-Fluorobiphenyl (Surr)	*70*		*30 - 130*	*11/08/22 09:59*	*11/09/22 17:30*	*1*

Method: SW846 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		24.7		ug/Kg	☼	11/08/22 15:04	11/09/22 22:39	1
PCB-1221	ND		24.7		ug/Kg	☼	11/08/22 15:04	11/09/22 22:39	1
PCB-1232	ND		24.7		ug/Kg	☼	11/08/22 15:04	11/09/22 22:39	1
PCB-1242	ND		24.7		ug/Kg	☼	11/08/22 15:04	11/09/22 22:39	1
PCB-1248	ND		24.7		ug/Kg	☼	11/08/22 15:04	11/09/22 22:39	1
PCB-1254	ND		24.7		ug/Kg	☼	11/08/22 15:04	11/09/22 22:39	1
PCB-1260	ND		24.7		ug/Kg	☼	11/08/22 15:04	11/09/22 22:39	1
PCB-1262	ND		24.7		ug/Kg	☼	11/08/22 15:04	11/09/22 22:39	1
PCB-1268	ND		24.7		ug/Kg	☼	11/08/22 15:04	11/09/22 22:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*66*		*30 - 150*	*11/08/22 15:04*	*11/09/22 22:39*	*1*
Tetrachloro-m-xylene	*62*		*30 - 150*	*11/08/22 15:04*	*11/09/22 22:39*	*1*
DCB Decachlorobiphenyl (Surr)	*68*		*30 - 150*	*11/08/22 15:04*	*11/09/22 22:39*	*1*
DCB Decachlorobiphenyl (Surr)	*65*		*30 - 150*	*11/08/22 15:04*	*11/09/22 22:39*	*1*

Method: MA DEP MAEPH2.1 - Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C9-C18 Aliphatics	ND		8.36		mg/Kg	☼	11/08/22 12:45	11/10/22 23:28	1
C19-C36 Aliphatics	**29.0**		8.36		mg/Kg	☼	11/08/22 12:45	11/10/22 23:28	1
C11-C22 Aromatics	**11.3**		8.36		mg/Kg	☼	11/08/22 12:45	11/10/22 23:28	1
C11-C22 Aromatics (Adjusted)	**11.3**		8.36		mg/Kg	☼	11/08/22 12:45	11/10/22 23:28	1
Naphthalene	ND		0.417		mg/Kg	☼	11/08/22 12:45	11/10/22 23:28	1
2-Methylnaphthalene	ND		0.417		mg/Kg	☼	11/08/22 12:45	11/10/22 23:28	1
Acenaphthylene	ND		0.417		mg/Kg	☼	11/08/22 12:45	11/10/22 23:28	1
Acenaphthene	ND		0.417		mg/Kg	☼	11/08/22 12:45	11/10/22 23:28	1
Fluorene	ND		0.417		mg/Kg	☼	11/08/22 12:45	11/10/22 23:28	1
Phenanthrene	ND		0.417		mg/Kg	☼	11/08/22 12:45	11/10/22 23:28	1
Anthracene	ND		0.417		mg/Kg	☼	11/08/22 12:45	11/10/22 23:28	1
Fluoranthene	ND		0.417		mg/Kg	☼	11/08/22 12:45	11/10/22 23:28	1
Pyrene	ND		0.417		mg/Kg	☼	11/08/22 12:45	11/10/22 23:28	1
Benzo[a]anthracene	ND		0.417		mg/Kg	☼	11/08/22 12:45	11/10/22 23:28	1
Chrysene	ND		0.417		mg/Kg	☼	11/08/22 12:45	11/10/22 23:28	1
Benzo[b]fluoranthene	ND		0.417		mg/Kg	☼	11/08/22 12:45	11/10/22 23:28	1
Benzo[k]fluoranthene	ND		0.417		mg/Kg	☼	11/08/22 12:45	11/10/22 23:28	1
Benzo[a]pyrene	ND		0.417		mg/Kg	☼	11/08/22 12:45	11/10/22 23:28	1

Client Sample ID: DS-CPD

Date Collected: 11/07/22 12:45
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-4

Matrix: Solid
Percent Solids: 79.0

Method: MA DEP MAEPH2.1 - Massachusetts - Extractable Petroleum Hydrocarbons (GC) (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Indeno[1,2,3-cd]pyrene	ND		0.417		mg/Kg	☼	11/08/22 12:45	11/10/22 23:28	1
Dibenz(a,h)anthracene	ND		0.417		mg/Kg	☼	11/08/22 12:45	11/10/22 23:28	1
Benzo[g,h,i]perylene	ND		0.417		mg/Kg	☼	11/08/22 12:45	11/10/22 23:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctadecane (Surr)	*54*		*40 - 140*	*11/08/22 12:45*	*11/10/22 23:28*	*1*
o-Terphenyl (Surr)	*85*		*40 - 140*	*11/08/22 12:45*	*11/10/22 23:28*	*1*
2-Fluorobiphenyl (Surr)	*126*		*40 - 140*	*11/08/22 12:45*	*11/10/22 23:28*	*1*

Method: SW846 6010D - Metals (ICP)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	**17.0**		3.48		mg/Kg	☼	11/15/22 08:55	11/16/22 14:53	2
Cadmium	ND		0.929		mg/Kg	☼	11/15/22 08:55	11/16/22 14:53	2
Chromium	**12.0**		2.32		mg/Kg	☼	11/15/22 08:55	11/16/22 14:53	2
Copper	ND		5.80		mg/Kg	☼	11/15/22 08:55	11/16/22 14:53	2
Lead	**8.48**		2.32		mg/Kg	☼	11/15/22 08:55	11/16/22 14:53	2
Nickel	**9.42**		9.29		mg/Kg	☼	11/15/22 08:55	11/16/22 14:53	2
Zinc	**22.6**		6.96		mg/Kg	☼	11/15/22 08:55	11/16/22 14:53	2

Method: SW846 7471B - Mercury (CVAA)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0196		mg/Kg	☼	11/30/22 00:09	11/30/22 07:18	1

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture (EPA Moisture)	**21.0**		0.1		%			11/09/22 10:13	1
Percent Solids (EPA Moisture)	**79.0**		0.1		%			11/09/22 10:13	1

Method: ASTM D422 - Grain Size

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Gravel	**33.7**				%			12/09/22 20:57	1
Sieve Size 3 inch - Percent Finer	**100.0**				% Passing			12/09/22 20:57	1
Sand	**62.8**				%			12/09/22 20:57	1
Sieve Size 2 inch - Percent Finer	**100.0**				% Passing			12/09/22 20:57	1
Coarse Sand	**19.9**				%			12/09/22 20:57	1
Sieve Size 1.5 inch - Percent Finer	**100.0**				% Passing			12/09/22 20:57	1
Medium Sand	**28.8**				%			12/09/22 20:57	1
Sieve Size 1 inch - Percent Finer	**100.0**				% Passing			12/09/22 20:57	1
Fine Sand	**14.1**				%			12/09/22 20:57	1
Sieve Size 0.75 inch - Percent Finer	**100.0**				% Passing			12/09/22 20:57	1
Sieve Size 0.375 inch - Percent Finer	**82.3**				% Passing			12/09/22 20:57	1
Silt	**1.1**				%			12/09/22 20:57	1
Clay	**2.5**				%			12/09/22 20:57	1
Sieve Size #4 - Percent Finer	**66.3**				% Passing			12/09/22 20:57	1
Sieve Size #10 - Percent Finer	**46.4**				% Passing			12/09/22 20:57	1
Sieve Size #20 - Percent Finer	**32.7**				% Passing			12/09/22 20:57	1
Sieve Size #40 - Percent Finer	**17.6**				% Passing			12/09/22 20:57	1
Sieve Size #60 - Percent Finer	**8.7**				% Passing			12/09/22 20:57	1
Sieve Size #80 - Percent Finer	**6.9**				% Passing			12/09/22 20:57	1

Client: Pare Corporation
Project/Site: MA Sediment Samples

Job ID: 620-8150-1

Client Sample ID: DS-CPD
Date Collected: 11/07/22 12:45
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-4
Matrix: Solid
Percent Solids: 79.0

Method: ASTM D422 - Grain Size (Continued)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Sieve Size #100 - Percent Finer	5.2				% Passing			12/09/22 20:57	1
Sieve Size #200 - Percent Finer	3.6				% Passing			12/09/22 20:57	1
Hydrometer Reading 1 - Percent Finer	4.6				% Passing			12/09/22 20:57	1
Hydrometer Reading 2 - Percent Finer	3.5				% Passing			12/09/22 20:57	1
Hydrometer Reading 3 - Percent Finer	3.0				% Passing			12/09/22 20:57	1
Hydrometer Reading 4 - Percent Finer	3.0				% Passing			12/09/22 20:57	1
Hydrometer Reading 5 - Percent Finer	2.5				% Passing			12/09/22 20:57	1
Hydrometer Reading 6 - Percent Finer	1.3				% Passing			12/09/22 20:57	1
Hydrometer Reading 7 - Percent Finer	1.3				% Passing			12/09/22 20:57	1

Method: Local Method - General Subcontract Method

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tot.Org.Carbon	9870		100		mg/kg		11/10/22 16:33	11/10/22 16:33	1

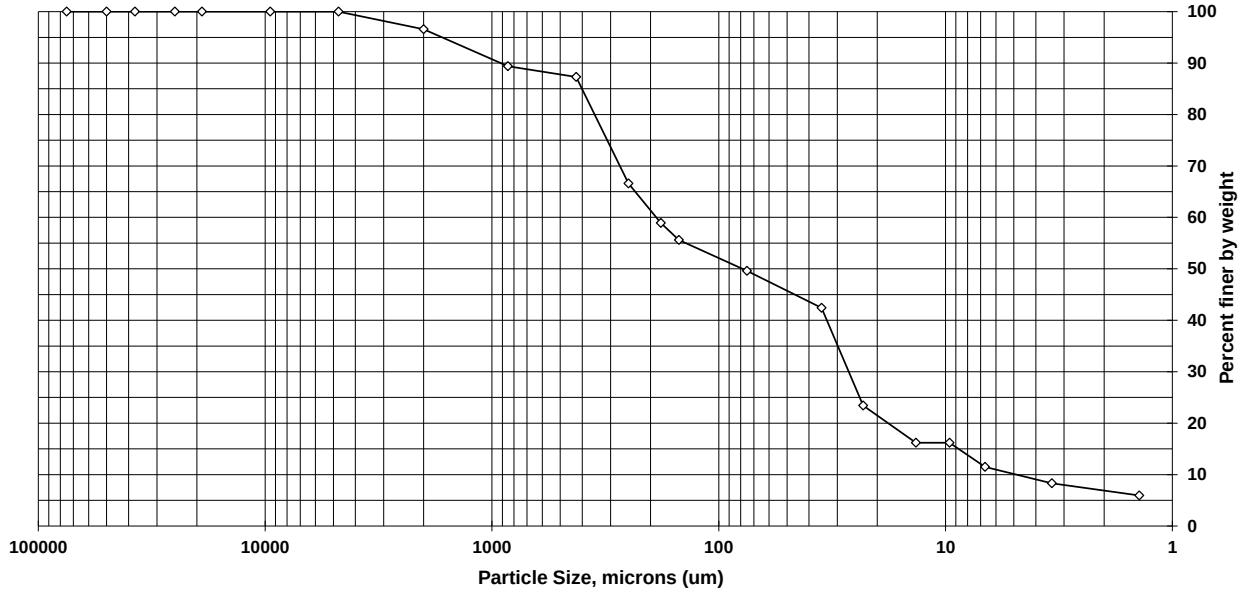
Particle Size of Soils by ASTM D422

Sample ID: IMP-2
Lab ID: 620-8150-G-1

Percent Solids: 17.6%
Specific Gravity: 2.650

Date Received: 11/7/2022
Start Date: 12/9/2022
End Date: 12/19/2022

Shape (> #10): rounded
Non-soil material: plant
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	100.0	0.0
#4	4750	100.0	0.0
#10	2000	96.6	3.4
#20	850	89.4	7.2
#40	425	87.3	2.1
#60	250	66.6	20.7
#80	180	58.9	7.7
#100	150	55.6	3.3
#200	75	49.6	6.0
Hyd1	35.2	42.4	7.2
Hyd2	23.1	23.4	19.0
Hyd3	13.5	16.2	7.2
Hyd4	9.6	16.2	0.0
Hyd5	6.7	11.5	4.7
Hyd6	3.4	8.3	3.2
Hyd7	1.4	5.9	2.4

Soil Classification	Percent of sample
Gravel	0.0
Sand	50.4
Coarse Sand	3.4
Medium Sand	9.3
Fine Sand	37.7
Silt	38.1
Clay	11.5

Particle Size of Soils by ASTM D422

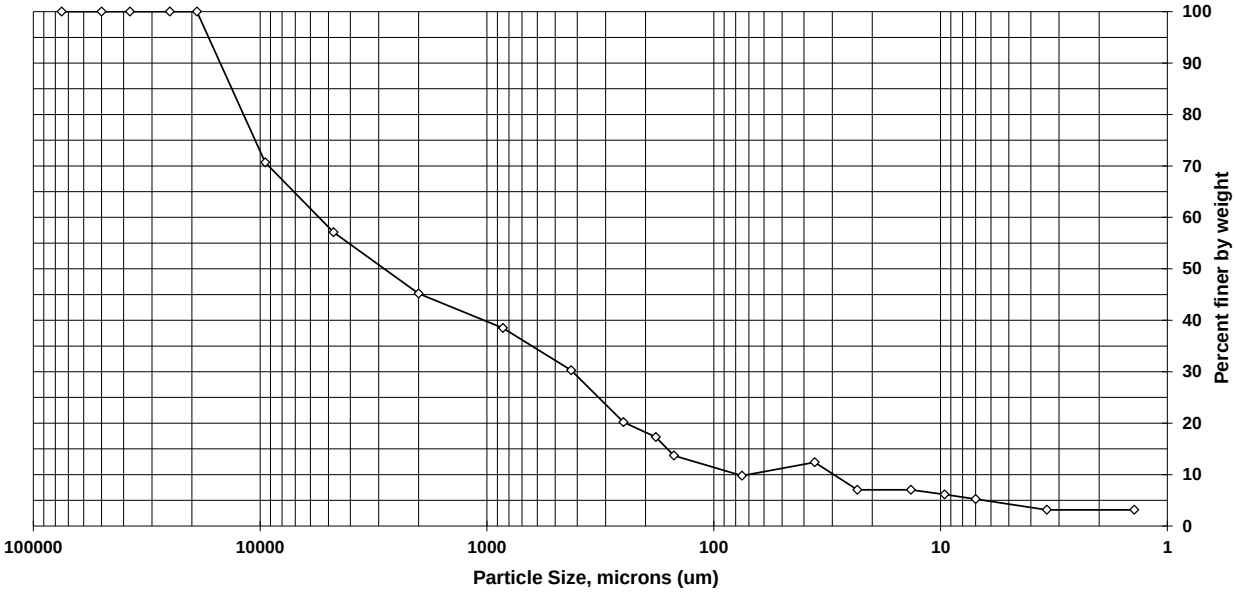
Sample ID: IMP-1
Lab ID: 620-8150-G-2

Percent Solids: 41.9%
Specific Gravity: 2.650

Date Received: 11/7/2022
Start Date: 12/9/2022
End Date: 12/19/2022

Shape (> #10): rounded

Non-soil material: plant
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	70.7	29.3
#4	4750	57.1	13.6
#10	2000	45.2	11.9
#20	850	38.5	6.7
#40	425	30.3	8.2
#60	250	20.2	10.1
#80	180	17.3	2.9
#100	150	13.7	3.6
#200	75	9.8	3.9
Hyd1	35.9	12.4	-2.6
Hyd2	23.3	7.0	5.4
Hyd3	13.5	7.0	0.0
Hyd4	9.6	6.1	0.9
Hyd5	7	5.2	0.9
Hyd6	3.4	3.1	2.1
Hyd7	1.4	3.1	0.0

Soil Classification	Percent of sample
Gravel	42.9
Sand	47.3
Coarse Sand	11.9
Medium Sand	14.9
Fine Sand	20.5
Silt	4.5
Clay	5.2

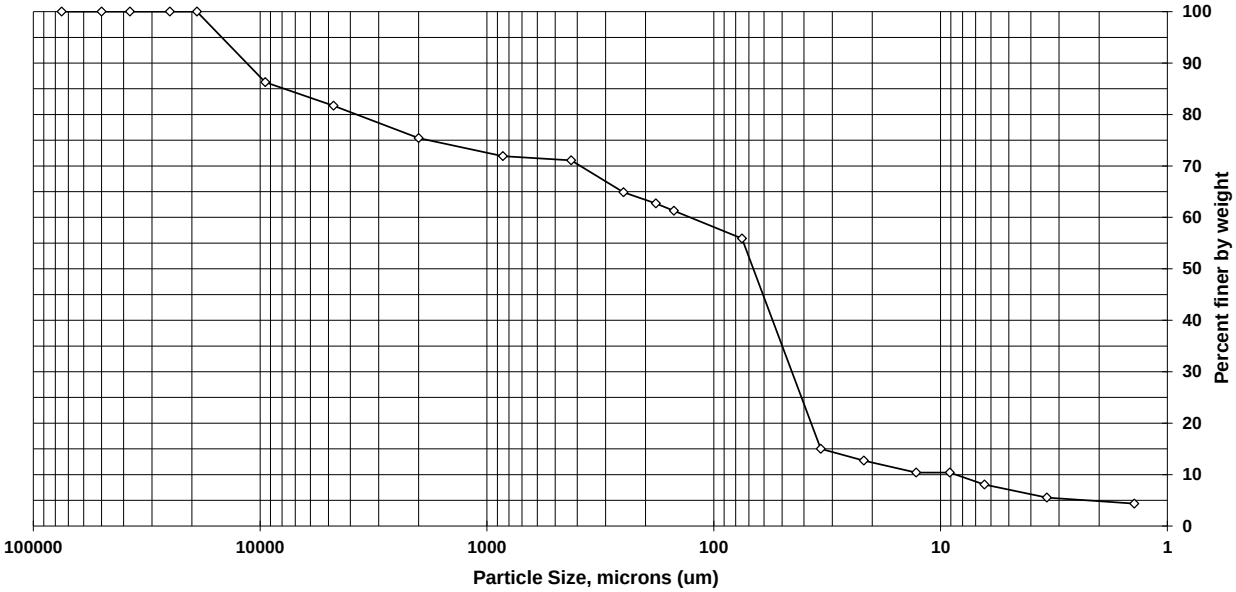
Particle Size of Soils by ASTM D422

Sample ID: IMP-3
Lab ID: 620-8150-G-3

Percent Solids: 65.5%
Specific Gravity: 2.650

Date Received: 11/7/2022
Start Date: 12/9/2022
End Date: 12/19/2022

Shape (> #10): rounded
Non-soil material: plant
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	86.3	13.7
#4	4750	81.7	4.6
#10	2000	75.4	6.3
#20	850	71.9	3.5
#40	425	71.1	0.8
#60	250	64.9	6.2
#80	180	62.7	2.2
#100	150	61.3	1.4
#200	75	55.9	5.4
Hyd1	33.7	15.0	40.9
Hyd2	21.8	12.7	2.3
Hyd3	12.8	10.4	2.3
Hyd4	9.1	10.4	0.0
Hyd5	6.4	8.1	2.4
Hyd6	3.4	5.5	2.5
Hyd7	1.4	4.4	1.2

Soil Classification	Percent of sample
Gravel	18.3
Sand	25.8
Coarse Sand	6.3
Medium Sand	4.3
Fine Sand	15.2
Silt	47.9
Clay	8.1

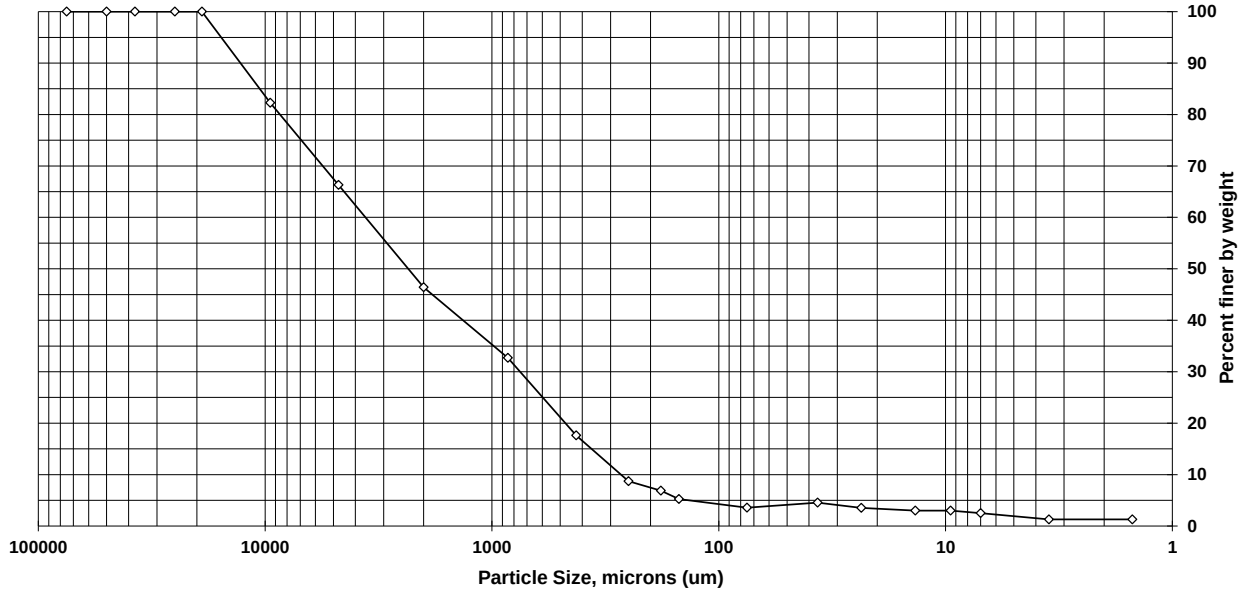
Particle Size of Soils by ASTM D422

Sample ID: DS-CPD
Lab ID: 620-8150-G-4

Percent Solids: 78.7%
Specific Gravity: 2.650

Date Received: 11/7/2022
Start Date: 12/9/2022
End Date: 12/19/2022

Shape (> #10): rounded
Non-soil material: plant
Hardness (> #10): hard



Sieve size	Particle size, um	Percent finer	Incremental percent
3 inch	75000	100.0	0.0
2 inch	50000	100.0	0.0
1.5 inch	37500	100.0	0.0
1 inch	25000	100.0	0.0
3/4 inch	19000	100.0	0.0
3/8 inch	9500	82.3	17.7
#4	4750	66.3	16.0
#10	2000	46.4	19.9
#20	850	32.7	13.7
#40	425	17.6	15.1
#60	250	8.7	8.9
#80	180	6.9	1.8
#100	150	5.2	1.6
#200	75	3.6	1.7
Hyd1	36.7	4.6	-1.0
Hyd2	23.5	3.5	1.0
Hyd3	13.6	3.0	0.5
Hyd4	9.5	3.0	0.0
Hyd5	7	2.5	0.5
Hyd6	3.5	1.3	1.2
Hyd7	1.5	1.3	0.0

Soil Classification	Percent of sample
Gravel	33.7
Sand	62.8
Coarse Sand	19.9
Medium Sand	28.8
Fine Sand	14.1
Silt	1.1
Clay	2.5

Sediment Grain Size - D422

Client	
Client Sample ID	IMP-2
Lab Sample ID	620-8150-G-1

Date Received	11/7/2022
Start Date	12/09/2022 20:51
End Date	12/19/2022 13:56

Dry Weight Determination

Tin Weight	0.95	g
Wet Sample + Tin	12.84	g
Dry Sample + Tin	3.04	g
% Moisture	82.42	%

Non-soil material:	plant
Shape (> #10):	rounded
Hardness (> #10):	hard

Date/Time in oven	12/09/2022 20:53
Date/Time out of oven	12/12/2022 14:43

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)	47.81	240.03	192.22
Sample Weight (Oven Dried)			33.8

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			1.16
Sample <#10			32.6
% Passing #10			17

Hydrometer Data	
Serial Number	542318
Calib. Date (mm/dd/yyyy)	12/10/2021
Low Temp (C)	17.0
Reading at Low Temp	1.0035
High Temp (C)	23.0
Reading at High Temp	1.0025
Hydrometer Cal Slope	-0.000166667
Hydrometer Cal Intercept	1.006333333
Default Soil Gravity	2.6500

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
3 inch	75000			0.00	g	100.0	Gravel	
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500			0.00	g	100.0	Gravel	
#4	4750			0.00	g	100.0	Gravel	
#10	2000	462.44	463.60	1.16	g	96.6	Sand	Coarse
#20	850	372.30	374.73	2.43	g	89.4	Sand	Medium
#40	425	360.67	361.39	0.72	g	87.3	Sand	Medium
#60	250	350.92	357.93	7.01	g	66.6	Sand	Fine
#80	180	318.23	320.82	2.59	g	58.9	Sand	Fine
#100	150	327.35	328.45	1.10	g	55.6	Sand	Fine
#200	75	313.36	315.40	2.04	g	49.6	Sand	Fine
				0.00	g	49.6		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	33.8

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0120	19.5	35.2	42.4	Silt	
5	5	1.0080	19.5	23.1	23.4	Silt	
15	15	1.0065	19.5	13.5	16.2	Silt	
30	30	1.0065	19.5	9.6	16.2	Silt	
60	63	1.0055	19.5	6.7	11.5	Silt	
250	253	1.0050	18.5	3.4	8.32	Clay	
1440	1400	1.0045	18.5	1.4	5.94	Clay	

Sediment Grain Size - D422

Client	
Client Sample ID	IMP-1
Lab Sample ID	620-8150-G-2

Date Received	11/7/2022
Start Date	12/09/2022 20:53
End Date	12/19/2022 14:08

Dry Weight Determination

Tin Weight	0.96	g
Wet Sample + Tin	15.13	g
Dry Sample + Tin	6.89	g
% Moisture	58.15	%

Non-soil material:	plant
Shape (> #10):	rounded
Hardness (> #10):	hard

Date/Time in oven	12/09/2022 20:55
Date/Time out of oven	12/12/2022 14:43

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)	47.83	261.36	213.53
Sample Weight (Oven Dried)			89.4

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			49
Sample <#10			40.4
% Passing #10			18.9

Hydrometer Data

Serial Number	542318
Calib. Date (mm/dd/yyyy)	12/10/2021
Low Temp (C)	17.0
Reading at Low Temp	1.0035
High Temp (C)	23.0
Reading at High Temp	1.0025
Hydrometer Cal Slope	-0.000166667
Hydrometer Cal Intercept	1.006333333
Default Soil Gravity	2.6500

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
3 inch	75000			0.00	g	100.0	Gravel	
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500	447.12	473.33	26.21	g	70.7	Gravel	
#4	4750	487.89	500.01	12.12	g	57.1	Gravel	
#10	2000	462.44	473.10	10.66	g	45.2	Sand	Coarse
#20	850	376.84	382.84	6.00	g	38.5	Sand	Medium
#40	425	365.22	372.56	7.34	g	30.3	Sand	Medium
#60	250	347.19	356.24	9.05	g	20.2	Sand	Fine
#80	180	336.35	338.92	2.57	g	17.3	Sand	Fine
#100	150	326.75	329.99	3.24	g	13.7	Sand	Fine
#200	75	312.00	315.51	3.51	g	9.8	Sand	Fine
				0.00	g	9.8		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	89.4

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0100	19.5	35.9	12.4	Silt	
5	5	1.0070	19.5	23.3	7.04	Silt	
15	15	1.0070	19.5	13.5	7.04	Silt	
30	30	1.0065	19.5	9.6	6.14	Silt	
60	57	1.0060	19.5	7	5.24	Silt	
250	247	1.0050	18.5	3.4	3.14	Clay	
1440	1394	1.0050	18.5	1.4	3.14	Clay	

Sediment Grain Size - D422

Client	
Client Sample ID	IMP-3
Lab Sample ID	620-8150-G-3

Date Received	11/7/2022
Start Date	12/09/2022 20:55
End Date	12/19/2022 14:13

Dry Weight Determination

Tin Weight	1.00	g
Wet Sample + Tin	41.94	g
Dry Sample + Tin	27.81	g
% Moisture	34.51	%

Non-soil material:	plant
Shape (> #10):	rounded
Hardness (> #10):	hard

Date/Time in oven	12/09/2022 20:57
Date/Time out of oven	12/12/2022 14:44

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)	47.84	258.81	210.97
Sample Weight (Oven Dried)			138

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			34
Sample <#10			104
% Passing #10			49.3

Hydrometer Data

Serial Number	542318
Calib. Date (mm/dd/yyyy)	12/10/2021
Low Temp (C)	17.0
Reading at Low Temp	1.0035
High Temp (C)	23.0
Reading at High Temp	1.0025
Hydrometer Cal Slope	-0.000166667
Hydrometer Cal Intercept	1.006333333
Default Soil Gravity	2.6500

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample		% Finer	Classification	Sub Class
3 inch	75000			0.00	g	100.0	Gravel	
2 inch	50000			0.00	g	100.0	Gravel	
1.5 inch	37500			0.00	g	100.0	Gravel	
1 inch	25000			0.00	g	100.0	Gravel	
3/4 inch	19000			0.00	g	100.0	Gravel	
3/8 inch	9500	447.12	466.05	18.93	g	86.3	Gravel	
#4	4750	487.89	494.28	6.39	g	81.7	Gravel	
#10	2000	462.44	471.14	8.70	g	75.4	Sand	Coarse
#20	850	372.30	377.18	4.88	g	71.9	Sand	Medium
#40	425	360.67	361.83	1.16	g	71.1	Sand	Medium
#60	250	350.92	359.43	8.51	g	64.9	Sand	Fine
#80	180	318.23	321.22	2.99	g	62.7	Sand	Fine
#100	150	327.35	329.32	1.97	g	61.3	Sand	Fine
#200	75	313.36	320.87	7.51	g	55.9	Sand	Fine
				0.00	g	55.9		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	138

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0160	19.5	33.7	15	Silt	
5	5	1.0140	19.5	21.8	12.7	Silt	
15	15	1.0120	19.5	12.8	10.4	Silt	
30	30	1.0120	19.5	9.1	10.4	Silt	
60	63	1.0100	19.5	6.4	8.05	Silt	
250	241	1.0080	18.5	3.4	5.53	Clay	
1440	1388	1.0070	18.5	1.4	4.36	Clay	

Sediment Grain Size - D422

Client	
Client Sample ID	DS-CPD
Lab Sample ID	620-8150-G-4

Date Received	11/7/2022
Start Date	12/09/2022 20:57
End Date	12/19/2022 14:17

Dry Weight Determination

Tin Weight	1.01	g
Wet Sample + Tin	36.75	g
Dry Sample + Tin	29.12	g
% Moisture	21.35	%

Non-soil material:	plant
Shape (> #10):	rounded
Hardness (> #10):	hard

Date/Time in oven	12/09/2022 20:59
Date/Time out of oven	12/12/2022 14:44

Sample Weights	Tare (g)	Pan+Samp (g)	Samp (g)
Sample Weight (Wet)	44.07	242.42	198.35
Sample Weight (Oven Dried)			156

Sample Split (oven dried)	Tare (g)	Pan+Samp (g)	Samp (g)
Sample >=#10			83.8
Sample <#10			72.2
% Passing #10			36.4

Hydrometer Data

Serial Number	542318
Calib. Date (mm/dd/yyyy)	12/10/2021
Low Temp (C)	17.0
Reading at Low Temp	1.0035
High Temp (C)	23.0
Reading at High Temp	1.0025
Hydrometer Cal Slope	-0.000166667
Hydrometer Cal Intercept	1.006333333
Default Soil Gravity	2.6500

Gravel/Sand Fraction (Sieves)

Sample Fraction	Size (um)	Pan Tare (g)	Pan+Sample (g)	Sample	% Finer	Classification	Sub Class
3 inch	75000			0.00 g	100.0	Gravel	
2 inch	50000			0.00 g	100.0	Gravel	
1.5 inch	37500			0.00 g	100.0	Gravel	
1 inch	25000			0.00 g	100.0	Gravel	
3/4 inch	19000			0.00 g	100.0	Gravel	
3/8 inch	9500	447.12	474.81	27.69 g	82.3	Gravel	
#4	4750	487.89	512.88	24.99 g	66.3	Gravel	
#10	2000	462.44	493.51	31.07 g	46.4	Sand	Coarse
#20	850	376.84	398.24	21.40 g	32.7	Sand	Medium
#40	425	365.22	388.81	23.59 g	17.6	Sand	Medium
#60	250	347.19	361.08	13.89 g	8.7	Sand	Fine
#80	180	336.35	339.19	2.84 g	6.9	Sand	Fine
#100	150	326.75	329.32	2.57 g	5.2	Sand	Fine
#200	75	312.00	314.62	2.62 g	3.6	Sand	Fine
				0.00 g	3.6		

Adjusted Hydrometer Sample Mass

Hydrometer Sample Mass (g)	156

Silt/Clay Fraction (Hydrometer Test)

Hydrometer Test Time (min)	Actual	Spec. Gravity	Temp C	Particle Size (Micron)	% Finer	Classification	Sub Class
2	2	1.0075	19.5	36.7	4.55	Silt	
5	5	1.0065	19.5	23.5	3.52	Silt	
15	15	1.0060	19.5	13.6	3	Silt	
30	31	1.0060	19.5	9.5	3	Silt	
60	57	1.0055	19.5	7	2.49	Silt	
250	235	1.0045	18.5	3.5	1.29	Clay	
1440	1382	1.0045	18.5	1.5	1.29	Clay	

Surrogate Summary

Client: Pare Corporation
Project/Site: MA Sediment Samples

Job ID: 620-8150-1

Method: 8260C - Volatile Organic Compounds by GC/MS

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		BFB	TOL	DCA	DBFM
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)	(70-130)
620-8150-1	IMP-2	91	99	105	110
620-8150-2	IMP-1	93	98	101	104
620-8150-3	IMP-3	96	100	101	102
620-8150-4	DS-CPD	94	99	103	103
LCS 620-17179/1-A	Lab Control Sample	99	101	93	98
LCS 620-17474/1-A	Lab Control Sample	102	104	107	108
LCSD 620-17179/2-A	Lab Control Sample Dup	97	102	93	101
LCSD 620-17474/2-A	Lab Control Sample Dup	103	105	108	108
MB 620-17179/3-A	Method Blank	100	101	98	100
MB 620-17474/3-A	Method Blank	105	103	111	109

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
TOL = Toluene-d8 (Surr)
DCA = 1,2-Dichloroethane-d4 (Surr)
DBFM = Dibromofluoromethane (Surr)

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		NBZ	TPHL	FBP
Lab Sample ID	Client Sample ID	(30-130)	(30-130)	(30-130)
620-8150-1	IMP-2	70	52	62
620-8150-2	IMP-1	70	55	64
620-8150-3	IMP-3	73	39	58
620-8150-4	DS-CPD	73	66	70
LCS 620-17110/2-A	Lab Control Sample	71	70	76
LCSD 620-17110/3-A	Lab Control Sample Dup	69	70	74
MB 620-17110/1-A	Method Blank	65	67	69

Surrogate Legend

NBZ = Nitrobenceno-d5 (Surr)
TPHL = Terphenyl-d14 (Surr)
FBP = 2-Fluorobiphenyl (Surr)

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		TCX1	TCX2	DCB1	DCB2
Lab Sample ID	Client Sample ID	(30-150)	(30-150)	(30-150)	(30-150)
620-8150-1	IMP-2	21 S1-	21 S1-	19 S1-	18 S1-
620-8150-2	IMP-1	49	47	42	39
620-8150-3	IMP-3	31	33	22 S1-	27 S1-
620-8150-4	DS-CPD	66	62	68	65
LCS 620-17205/2-A	Lab Control Sample	69	68	71	72
LCSD 620-17205/3-A	Lab Control Sample Dup	62	61	72	74
MB 620-17205/1-A	Method Blank	68	65	76	72

Surrogate Legend

TCX = Tetrachloro-m-xylene

Surrogate Summary

Client: Pare Corporation
Job ID: 620-8150-1
Project/Site: MA Sediment Samples

DCB = DCB Decachlorobiphenyl (Surr)

Method: MAEPH2.1 - Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		1COD1	OTPH1	FBP1
Lab Sample ID	Client Sample ID	(40-140)	(40-140)	(40-140)
620-8150-1	IMP-2	40	75	119
620-8150-2	IMP-1	49	75	123
620-8150-3	IMP-3	42	67	124
620-8150-4	DS-CPD	54	85	126
LCS 620-17195/2-B	Lab Control Sample	57	71	123
LCSD 620-17195/3-B	Lab Control Sample Dup	54	72	124
MB 620-17195/1-B	Method Blank	65	71	129

Surrogate Legend

1COD = 1-Chlorooctadecane (Surr)
OTPH = o-Terphenyl (Surr)
FBP = 2-Fluorobiphenyl (Surr)

Method: 8260C - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 620-17179/3-A
Matrix: Solid
Analysis Batch: 17180

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 17179

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichlorotrifluoroethane (Freon 113)	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Acetone	ND		50.0		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Acrylonitrile	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Benzene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Bromobenzene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Bromochloromethane	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Bromodichloromethane	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Bromoform	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Bromomethane	ND		10.0		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
2-Butanone (MEK)	ND		10.0		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
n-Butylbenzene	ND		10.0		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
sec-Butylbenzene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
tert-Butylbenzene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Carbon disulfide	ND		10.0		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Carbon tetrachloride	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Chlorobenzene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Chloroethane	ND		10.0		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Chloroform	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Chloromethane	ND		10.0		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
2-Chlorotoluene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
4-Chlorotoluene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Dibromochloromethane	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,2-Dibromoethane (EDB)	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Dibromomethane	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,2-Dichlorobenzene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,3-Dichlorobenzene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,4-Dichlorobenzene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Dichlorodifluoromethane (Freon 12)	ND		10.0		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,1-Dichloroethane	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,2-Dichloroethane	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,1-Dichloroethene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
cis-1,2-Dichloroethene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
trans-1,2-Dichloroethene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,2-Dichloropropane	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,3-Dichloropropane	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
2,2-Dichloropropane	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,1-Dichloropropene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
cis-1,3-Dichloropropene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
trans-1,3-Dichloropropene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Ethylbenzene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Hexachlorobutadiene	ND		10.0		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
2-Hexanone (MBK)	ND		10.0		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Isopropylbenzene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
4-Isopropyltoluene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Methyl tert-butyl ether	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Methylene Chloride	ND		10.0		ug/Kg		11/08/22 09:23	11/08/22 12:45	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 620-17179/3-A
Matrix: Solid
Analysis Batch: 17180

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 17179

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
N-Propylbenzene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Styrene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,1,1,2-Tetrachloroethane	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,1,2,2-Tetrachloroethane	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Tetrachloroethene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Toluene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,2,3-Trichlorobenzene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,2,4-Trichlorobenzene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,3,5-Trichlorobenzene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,1,1-Trichloroethane	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,1,2-Trichloroethane	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Trichloroethene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Trichlorofluoromethane (Freon 11)	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,2,3-Trichloropropane	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,2,4-Trimethylbenzene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,3,5-Trimethylbenzene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Vinyl chloride	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
m,p-Xylene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
o-Xylene	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Tetrahydrofuran	ND		10.0		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Ethyl ether	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Tert-amyl methyl ether	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Ethyl tert-butyl ether	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
di-Isopropyl ether	ND		5.00		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
tert-Butanol	ND		100		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
1,4-Dioxane	ND		100		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
trans-1,4-Dichloro-2-butene	ND		25.0		ug/Kg		11/08/22 09:23	11/08/22 12:45	1
Ethanol	ND		1000		ug/Kg		11/08/22 09:23	11/08/22 12:45	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*70 - 130*	*11/08/22 09:23*	*11/08/22 12:45*	*1*
Toluene-d8 (Surr)	*101*		*70 - 130*	*11/08/22 09:23*	*11/08/22 12:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*	*11/08/22 09:23*	*11/08/22 12:45*	*1*
Dibromofluoromethane (Surr)	*100*		*70 - 130*	*11/08/22 09:23*	*11/08/22 12:45*	*1*

Lab Sample ID: LCS 620-17179/1-A
Matrix: Solid
Analysis Batch: 17180

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17179

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,1,2-Trichlorotrifluoroethane (Freon 113)			20.0	20.28		ug/Kg		101	70 - 130		
Acetone			20.0	24.21	J	ug/Kg		121	70 - 130		
Acrylonitrile			20.0	22.65		ug/Kg		113	70 - 130		
Benzene			20.0	21.02		ug/Kg		105	70 - 130		
Bromobenzene			20.0	20.29		ug/Kg		101	70 - 130		
Bromochloromethane			20.0	20.64		ug/Kg		103	70 - 130		
Bromodichloromethane			20.0	19.36		ug/Kg		97	70 - 130		

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 620-17179/1-A
Matrix: Solid
Analysis Batch: 17180

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17179

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Bromoform	20.0	19.01		ug/Kg		95	70 - 130
Bromomethane	20.0	18.08		ug/Kg		90	70 - 130
2-Butanone (MEK)	20.0	25.98		ug/Kg		130	70 - 130
n-Butylbenzene	20.0	20.83		ug/Kg		104	70 - 130
sec-Butylbenzene	20.0	21.06		ug/Kg		105	70 - 130
tert-Butylbenzene	20.0	21.13		ug/Kg		106	70 - 130
Carbon disulfide	20.0	20.37		ug/Kg		102	70 - 130
Carbon tetrachloride	20.0	18.78		ug/Kg		94	70 - 130
Chlorobenzene	20.0	20.76		ug/Kg		104	70 - 130
Chloroethane	20.0	19.22		ug/Kg		96	70 - 130
Chloroform	20.0	19.57		ug/Kg		98	70 - 130
Chloromethane	20.0	20.89		ug/Kg		104	70 - 130
2-Chlorotoluene	20.0	18.87		ug/Kg		94	70 - 130
4-Chlorotoluene	20.0	20.26		ug/Kg		101	70 - 130
1,2-Dibromo-3-Chloropropane	20.0	20.43		ug/Kg		102	70 - 130
Dibromochloromethane	20.0	19.78		ug/Kg		99	70 - 130
1,2-Dibromoethane (EDB)	20.0	21.43		ug/Kg		107	70 - 130
Dibromomethane	20.0	19.86		ug/Kg		99	70 - 130
1,2-Dichlorobenzene	20.0	20.52		ug/Kg		103	70 - 130
1,3-Dichlorobenzene	20.0	20.41		ug/Kg		102	70 - 130
1,4-Dichlorobenzene	20.0	20.30		ug/Kg		102	70 - 130
Dichlorodifluoromethane (Freon 12)	20.0	15.90		ug/Kg		80	70 - 130
1,1-Dichloroethane	20.0	20.61		ug/Kg		103	70 - 130
1,2-Dichloroethane	20.0	19.52		ug/Kg		98	70 - 130
1,1-Dichloroethene	20.0	20.57		ug/Kg		103	70 - 130
cis-1,2-Dichloroethene	20.0	21.20		ug/Kg		106	70 - 130
trans-1,2-Dichloroethene	20.0	20.69		ug/Kg		103	70 - 130
1,2-Dichloropropane	20.0	21.52		ug/Kg		108	70 - 130
1,3-Dichloropropane	20.0	20.98		ug/Kg		105	70 - 130
2,2-Dichloropropane	20.0	19.68		ug/Kg		98	70 - 130
1,1-Dichloropropene	20.0	20.77		ug/Kg		104	70 - 130
cis-1,3-Dichloropropene	20.0	20.43		ug/Kg		102	70 - 130
trans-1,3-Dichloropropene	20.0	20.47		ug/Kg		102	70 - 130
Ethylbenzene	20.0	20.67		ug/Kg		103	70 - 130
Hexachlorobutadiene	20.0	18.82		ug/Kg		94	70 - 130
2-Hexanone (MBK)	20.0	22.67		ug/Kg		113	70 - 130
Isopropylbenzene	20.0	20.92		ug/Kg		105	70 - 130
4-Isopropyltoluene	20.0	20.99		ug/Kg		105	70 - 130
Methyl tert-butyl ether	20.0	20.51		ug/Kg		103	70 - 130
4-Methyl-2-pentanone (MIBK)	20.0	23.45		ug/Kg		117	70 - 130
Methylene Chloride	20.0	21.54		ug/Kg		108	70 - 130
Naphthalene	20.0	21.00		ug/Kg		105	70 - 130
N-Propylbenzene	20.0	20.84		ug/Kg		104	70 - 130
Styrene	20.0	21.06		ug/Kg		105	70 - 130
1,1,1,2-Tetrachloroethane	20.0	19.42		ug/Kg		97	70 - 130
1,1,2,2-Tetrachloroethane	20.0	20.50		ug/Kg		102	70 - 130
Tetrachloroethene	20.0	20.82		ug/Kg		104	70 - 130
Toluene	20.0	21.59		ug/Kg		108	70 - 130

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 620-17179/1-A
Matrix: Solid
Analysis Batch: 17180

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17179

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,2,3-Trichlorobenzene			20.0	19.32		ug/Kg		97	70 - 130		
1,2,4-Trichlorobenzene			20.0	19.28		ug/Kg		96	70 - 130		
1,3,5-Trichlorobenzene			20.0	19.60		ug/Kg		98	70 - 130		
1,1,1-Trichloroethane			20.0	19.39		ug/Kg		97	70 - 130		
1,1,2-Trichloroethane			20.0	21.14		ug/Kg		106	70 - 130		
Trichloroethene			20.0	20.49		ug/Kg		102	70 - 130		
Trichlorofluoromethane (Freon 11)			20.0	17.74		ug/Kg		89	70 - 130		
1,2,3-Trichloropropane			20.0	20.45		ug/Kg		102	70 - 130		
1,2,4-Trimethylbenzene			20.0	20.44		ug/Kg		102	70 - 130		
1,3,5-Trimethylbenzene			20.0	20.66		ug/Kg		103	70 - 130		
Vinyl chloride			20.0	20.77		ug/Kg		104	70 - 130		
m,p-Xylene			20.0	20.29		ug/Kg		101	70 - 130		
o-Xylene			20.0	20.48		ug/Kg		102	70 - 130		
Tetrahydrofuran			20.0	20.40		ug/Kg		102	70 - 130		
Ethyl ether			20.0	20.17		ug/Kg		101	70 - 130		
Tert-amyl methyl ether			20.0	20.58		ug/Kg		103	70 - 130		
Ethyl tert-butyl ether			20.0	20.66		ug/Kg		103	70 - 130		
di-Isopropyl ether			20.0	21.61		ug/Kg		108	70 - 130		
tert-Butanol			200	221.5		ug/Kg		111	70 - 130		
1,4-Dioxane			200	223.1		ug/Kg		112	70 - 130		
trans-1,4-Dichloro-2-butene			20.0	21.27	J	ug/Kg		106	70 - 130		
Ethanol			400	457.9	J	ug/Kg		114	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*99*		*70 - 130*
Toluene-d8 (Surr)	*101*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*
Dibromofluoromethane (Surr)	*98*		*70 - 130*

Lab Sample ID: LCSD 620-17179/2-A
Matrix: Solid
Analysis Batch: 17180

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 17179

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,2-Trichlorotrifluoroethane (Freon 113)			20.0	20.11		ug/Kg		101	70 - 130	1	30
Acetone			20.0	22.76	J	ug/Kg		114	70 - 130	6	30
Acrylonitrile			20.0	22.93		ug/Kg		115	70 - 130	1	30
Benzene			20.0	20.77		ug/Kg		104	70 - 130	1	30
Bromobenzene			20.0	20.17		ug/Kg		101	70 - 130	1	30
Bromochloromethane			20.0	21.07		ug/Kg		105	70 - 130	2	30
Bromodichloromethane			20.0	19.51		ug/Kg		98	70 - 130	1	30
Bromoform			20.0	19.47		ug/Kg		97	70 - 130	2	30
Bromomethane			20.0	18.76		ug/Kg		94	70 - 130	4	30
2-Butanone (MEK)			20.0	27.87	*+	ug/Kg		139	70 - 130	7	30
n-Butylbenzene			20.0	20.00		ug/Kg		100	70 - 130	4	30
sec-Butylbenzene			20.0	20.75		ug/Kg		104	70 - 130	1	30
tert-Butylbenzene			20.0	21.55		ug/Kg		108	70 - 130	2	30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 620-17179/2-A
Matrix: Solid
Analysis Batch: 17180

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 17179

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Carbon disulfide			20.0	20.02		ug/Kg		100	70 - 130	2	30
Carbon tetrachloride			20.0	19.09		ug/Kg		95	70 - 130	2	30
Chlorobenzene			20.0	20.43		ug/Kg		102	70 - 130	2	30
Chloroethane			20.0	20.76		ug/Kg		104	70 - 130	8	30
Chloroform			20.0	19.66		ug/Kg		98	70 - 130	0	30
Chloromethane			20.0	20.31		ug/Kg		102	70 - 130	3	30
2-Chlorotoluene			20.0	20.00		ug/Kg		100	70 - 130	6	30
4-Chlorotoluene			20.0	19.79		ug/Kg		99	70 - 130	2	30
1,2-Dibromo-3-Chloropropane			20.0	21.83		ug/Kg		109	70 - 130	7	30
Dibromochloromethane			20.0	20.18		ug/Kg		101	70 - 130	2	30
1,2-Dibromoethane (EDB)			20.0	21.72		ug/Kg		109	70 - 130	1	30
Dibromomethane			20.0	20.44		ug/Kg		102	70 - 130	3	30
1,2-Dichlorobenzene			20.0	20.53		ug/Kg		103	70 - 130	0	30
1,3-Dichlorobenzene			20.0	20.36		ug/Kg		102	70 - 130	0	30
1,4-Dichlorobenzene			20.0	19.88		ug/Kg		99	70 - 130	2	30
Dichlorodifluoromethane (Freon 12)			20.0	15.64		ug/Kg		78	70 - 130	2	30
1,1-Dichloroethane			20.0	20.14		ug/Kg		101	70 - 130	2	30
1,2-Dichloroethane			20.0	19.56		ug/Kg		98	70 - 130	0	30
1,1-Dichloroethene			20.0	20.11		ug/Kg		101	70 - 130	2	30
cis-1,2-Dichloroethene			20.0	20.92		ug/Kg		105	70 - 130	1	30
trans-1,2-Dichloroethene			20.0	20.72		ug/Kg		104	70 - 130	0	30
1,2-Dichloropropane			20.0	20.91		ug/Kg		105	70 - 130	3	30
1,3-Dichloropropane			20.0	21.35		ug/Kg		107	70 - 130	2	30
2,2-Dichloropropane			20.0	19.40		ug/Kg		97	70 - 130	1	30
1,1-Dichloropropene			20.0	20.48		ug/Kg		102	70 - 130	1	30
cis-1,3-Dichloropropene			20.0	20.59		ug/Kg		103	70 - 130	1	30
trans-1,3-Dichloropropene			20.0	20.42		ug/Kg		102	70 - 130	0	30
Ethylbenzene			20.0	20.37		ug/Kg		102	70 - 130	1	30
Hexachlorobutadiene			20.0	18.47		ug/Kg		92	70 - 130	2	30
2-Hexanone (MBK)			20.0	22.83		ug/Kg		114	70 - 130	1	30
Isopropylbenzene			20.0	20.39		ug/Kg		102	70 - 130	3	30
4-Isopropyltoluene			20.0	20.42		ug/Kg		102	70 - 130	3	30
Methyl tert-butyl ether			20.0	20.59		ug/Kg		103	70 - 130	0	30
4-Methyl-2-pentanone (MIBK)			20.0	23.46		ug/Kg		117	70 - 130	0	30
Methylene Chloride			20.0	21.29		ug/Kg		106	70 - 130	1	30
Naphthalene			20.0	21.61		ug/Kg		108	70 - 130	3	30
N-Propylbenzene			20.0	20.45		ug/Kg		102	70 - 130	2	30
Styrene			20.0	20.70		ug/Kg		104	70 - 130	2	30
1,1,1,2-Tetrachloroethane			20.0	19.69		ug/Kg		98	70 - 130	1	30
1,1,2,2-Tetrachloroethane			20.0	21.12		ug/Kg		106	70 - 130	3	30
Tetrachloroethene			20.0	20.81		ug/Kg		104	70 - 130	0	30
Toluene			20.0	21.36		ug/Kg		107	70 - 130	1	30
1,2,3-Trichlorobenzene			20.0	19.83		ug/Kg		99	70 - 130	3	30
1,2,4-Trichlorobenzene			20.0	19.76		ug/Kg		99	70 - 130	3	30
1,3,5-Trichlorobenzene			20.0	19.42		ug/Kg		97	70 - 130	1	30
1,1,1-Trichloroethane			20.0	19.55		ug/Kg		98	70 - 130	1	30
1,1,2-Trichloroethane			20.0	21.40		ug/Kg		107	70 - 130	1	30
Trichloroethene			20.0	20.14		ug/Kg		101	70 - 130	2	30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 620-17179/2-A
Matrix: Solid
Analysis Batch: 17180

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 17179

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Trichlorofluoromethane (Freon 11)			20.0	18.18		ug/Kg		91	70 - 130	2	30
1,2,3-Trichloropropane			20.0	19.98		ug/Kg		100	70 - 130	2	30
1,2,4-Trimethylbenzene			20.0	20.53		ug/Kg		103	70 - 130	0	30
1,3,5-Trimethylbenzene			20.0	20.27		ug/Kg		101	70 - 130	2	30
Vinyl chloride			20.0	19.74		ug/Kg		99	70 - 130	5	30
m,p-Xylene			20.0	20.22		ug/Kg		101	70 - 130	0	30
o-Xylene			20.0	20.19		ug/Kg		101	70 - 130	1	30
Tetrahydrofuran			20.0	20.64		ug/Kg		103	70 - 130	1	30
Ethyl ether			20.0	21.17		ug/Kg		106	70 - 130	5	30
Tert-amyl methyl ether			20.0	21.27		ug/Kg		106	70 - 130	3	30
Ethyl tert-butyl ether			20.0	21.05		ug/Kg		105	70 - 130	2	30
di-Isopropyl ether			20.0	21.80		ug/Kg		109	70 - 130	1	30
tert-Butanol			200	234.3		ug/Kg		117	70 - 130	6	30
1,4-Dioxane			200	243.5		ug/Kg		122	70 - 130	9	30
trans-1,4-Dichloro-2-butene			20.0	20.46	J	ug/Kg		102	70 - 130	4	30
Ethanol			400	502.9	J	ug/Kg		126	70 - 130	9	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*70 - 130*
Toluene-d8 (Surr)	*102*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*
Dibromofluoromethane (Surr)	*101*		*70 - 130*

Lab Sample ID: MB 620-17474/3-A
Matrix: Solid
Analysis Batch: 17475

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 17474

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichlorotrifluoroethane (Freon 113)	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Acetone	ND		50.0		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Acrylonitrile	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Benzene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Bromobenzene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Bromochloromethane	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Bromodichloromethane	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Bromoform	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Bromomethane	ND		10.0		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
2-Butanone (MEK)	ND		10.0		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
n-Butylbenzene	ND		10.0		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
sec-Butylbenzene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
tert-Butylbenzene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Carbon disulfide	ND		10.0		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Carbon tetrachloride	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Chlorobenzene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Chloroethane	ND		10.0		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Chloroform	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Chloromethane	ND		10.0		ug/Kg		11/16/22 10:52	11/16/22 14:15	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 620-17474/3-A
Matrix: Solid
Analysis Batch: 17475

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 17474

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2-Chlorotoluene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
4-Chlorotoluene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,2-Dibromo-3-Chloropropane	ND		10.0		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Dibromochloromethane	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,2-Dibromoethane (EDB)	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Dibromomethane	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,2-Dichlorobenzene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,3-Dichlorobenzene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,4-Dichlorobenzene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Dichlorodifluoromethane (Freon 12)	ND		10.0		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,1-Dichloroethane	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,2-Dichloroethane	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,1-Dichloroethene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
cis-1,2-Dichloroethene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
trans-1,2-Dichloroethene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,2-Dichloropropane	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,3-Dichloropropane	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
2,2-Dichloropropane	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,1-Dichloropropene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
cis-1,3-Dichloropropene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
trans-1,3-Dichloropropene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Ethylbenzene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Hexachlorobutadiene	ND		10.0		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
2-Hexanone (MBK)	ND		10.0		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Isopropylbenzene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
4-Isopropyltoluene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Methyl tert-butyl ether	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
4-Methyl-2-pentanone (MIBK)	ND		10.0		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Methylene Chloride	ND		10.0		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Naphthalene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
N-Propylbenzene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Styrene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,1,1,2-Tetrachloroethane	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,1,2,2-Tetrachloroethane	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Tetrachloroethene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Toluene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,2,3-Trichlorobenzene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,2,4-Trichlorobenzene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,3,5-Trichlorobenzene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,1,1-Trichloroethane	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,1,2-Trichloroethane	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Trichloroethene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Trichlorofluoromethane (Freon 11)	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,2,3-Trichloropropane	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,2,4-Trimethylbenzene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,3,5-Trimethylbenzene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Vinyl chloride	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
m,p-Xylene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
o-Xylene	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: MB 620-17474/3-A
Matrix: Solid
Analysis Batch: 17475

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 17474

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	ND		10.0		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Ethyl ether	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Tert-amyl methyl ether	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Ethyl tert-butyl ether	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
di-Isopropyl ether	ND		5.00		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
tert-Butanol	ND		100		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
1,4-Dioxane	ND		100		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
trans-1,4-Dichloro-2-butene	ND		25.0		ug/Kg		11/16/22 10:52	11/16/22 14:15	1
Ethanol	ND		1000		ug/Kg		11/16/22 10:52	11/16/22 14:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*70 - 130*	*11/16/22 10:52*	*11/16/22 14:15*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*	*11/16/22 10:52*	*11/16/22 14:15*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 130*	*11/16/22 10:52*	*11/16/22 14:15*	*1*
Dibromofluoromethane (Surr)	*109*		*70 - 130*	*11/16/22 10:52*	*11/16/22 14:15*	*1*

Lab Sample ID: LCS 620-17474/1-A
Matrix: Solid
Analysis Batch: 17475

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17474

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,1,2-Trichlorotrifluoroethane (Freon 113)	20.0	23.50		ug/Kg		117	70 - 130
Acetone	20.0	24.80	J	ug/Kg		124	70 - 130
Acrylonitrile	20.0	23.22		ug/Kg		116	70 - 130
Benzene	20.0	22.86		ug/Kg		114	70 - 130
Bromobenzene	20.0	22.94		ug/Kg		115	70 - 130
Bromochloromethane	20.0	23.94		ug/Kg		120	70 - 130
Bromodichloromethane	20.0	24.32		ug/Kg		122	70 - 130
Bromoform	20.0	23.08		ug/Kg		115	70 - 130
Bromomethane	20.0	19.10		ug/Kg		95	70 - 130
2-Butanone (MEK)	20.0	25.11		ug/Kg		126	70 - 130
n-Butylbenzene	20.0	21.74		ug/Kg		109	70 - 130
sec-Butylbenzene	20.0	23.35		ug/Kg		117	70 - 130
tert-Butylbenzene	20.0	25.11		ug/Kg		126	70 - 130
Carbon disulfide	20.0	21.18		ug/Kg		106	70 - 130
Carbon tetrachloride	20.0	24.62		ug/Kg		123	70 - 130
Chlorobenzene	20.0	22.29		ug/Kg		111	70 - 130
Chloroethane	20.0	20.15		ug/Kg		101	70 - 130
Chloroform	20.0	24.03		ug/Kg		120	70 - 130
Chloromethane	20.0	14.59		ug/Kg		73	70 - 130
2-Chlorotoluene	20.0	22.63		ug/Kg		113	70 - 130
4-Chlorotoluene	20.0	22.48		ug/Kg		112	70 - 130
1,2-Dibromo-3-Chloropropane	20.0	21.60		ug/Kg		108	70 - 130
Dibromochloromethane	20.0	24.06		ug/Kg		120	70 - 130
1,2-Dibromoethane (EDB)	20.0	23.78		ug/Kg		119	70 - 130
Dibromomethane	20.0	23.93		ug/Kg		120	70 - 130
1,2-Dichlorobenzene	20.0	21.47		ug/Kg		107	70 - 130
1,3-Dichlorobenzene	20.0	22.94		ug/Kg		115	70 - 130

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 620-17474/1-A
Matrix: Solid
Analysis Batch: 17475

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17474

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dichlorobenzene	20.0	21.75		ug/Kg		109	70 - 130
Dichlorodifluoromethane (Freon 12)	20.0	10.10	*-	ug/Kg		51	70 - 130
1,1-Dichloroethane	20.0	22.87		ug/Kg		114	70 - 130
1,2-Dichloroethane	20.0	24.78		ug/Kg		124	70 - 130
1,1-Dichloroethene	20.0	22.10		ug/Kg		110	70 - 130
cis-1,2-Dichloroethene	20.0	22.77		ug/Kg		114	70 - 130
trans-1,2-Dichloroethene	20.0	23.10		ug/Kg		116	70 - 130
1,2-Dichloropropane	20.0	22.67		ug/Kg		113	70 - 130
1,3-Dichloropropane	20.0	23.80		ug/Kg		119	70 - 130
2,2-Dichloropropane	20.0	24.15		ug/Kg		121	70 - 130
1,1-Dichloropropene	20.0	23.56		ug/Kg		118	70 - 130
cis-1,3-Dichloropropene	20.0	23.41		ug/Kg		117	70 - 130
trans-1,3-Dichloropropene	20.0	24.71		ug/Kg		124	70 - 130
Ethylbenzene	20.0	22.26		ug/Kg		111	70 - 130
Hexachlorobutadiene	20.0	21.87		ug/Kg		109	70 - 130
2-Hexanone (MBK)	20.0	23.85		ug/Kg		119	70 - 130
Isopropylbenzene	20.0	22.66		ug/Kg		113	70 - 130
4-Isopropyltoluene	20.0	22.11		ug/Kg		111	70 - 130
Methyl tert-butyl ether	20.0	23.73		ug/Kg		119	70 - 130
4-Methyl-2-pentanone (MIBK)	20.0	24.54		ug/Kg		123	70 - 130
Methylene Chloride	20.0	23.51		ug/Kg		118	70 - 130
Naphthalene	20.0	21.06		ug/Kg		105	70 - 130
N-Propylbenzene	20.0	23.25		ug/Kg		116	70 - 130
Styrene	20.0	22.22		ug/Kg		111	70 - 130
1,1,1,2-Tetrachloroethane	20.0	22.46		ug/Kg		112	70 - 130
1,1,2,2-Tetrachloroethane	20.0	22.75		ug/Kg		114	70 - 130
Tetrachloroethene	20.0	24.58		ug/Kg		123	70 - 130
Toluene	20.0	23.41		ug/Kg		117	70 - 130
1,2,3-Trichlorobenzene	20.0	21.35		ug/Kg		107	70 - 130
1,2,4-Trichlorobenzene	20.0	22.93		ug/Kg		115	70 - 130
1,3,5-Trichlorobenzene	20.0	21.60		ug/Kg		108	70 - 130
1,1,1-Trichloroethane	20.0	24.66		ug/Kg		123	70 - 130
1,1,2-Trichloroethane	20.0	24.61		ug/Kg		123	70 - 130
Trichloroethene	20.0	23.68		ug/Kg		118	70 - 130
Trichlorofluoromethane (Freon 11)	20.0	23.02		ug/Kg		115	70 - 130
1,2,3-Trichloropropane	20.0	22.80		ug/Kg		114	70 - 130
1,2,4-Trimethylbenzene	20.0	22.90		ug/Kg		114	70 - 130
1,3,5-Trimethylbenzene	20.0	23.12		ug/Kg		116	70 - 130
Vinyl chloride	20.0	16.88		ug/Kg		84	70 - 130
m,p-Xylene	20.0	21.99		ug/Kg		110	70 - 130
o-Xylene	20.0	22.07		ug/Kg		110	70 - 130
Tetrahydrofuran	20.0	21.52		ug/Kg		108	70 - 130
Ethyl ether	20.0	21.64		ug/Kg		108	70 - 130
Tert-amyl methyl ether	20.0	23.56		ug/Kg		118	70 - 130
Ethyl tert-butyl ether	20.0	23.38		ug/Kg		117	70 - 130
di-Isopropyl ether	20.0	22.06		ug/Kg		110	70 - 130
tert-Butanol	200	248.9		ug/Kg		124	70 - 130

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCS 620-17474/1-A
Matrix: Solid
Analysis Batch: 17475

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17474

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,4-Dioxane	200	216.8		ug/Kg		108	70 - 130
trans-1,4-Dichloro-2-butene	20.0	26.00		ug/Kg		130	70 - 130
Ethanol	400	423.3	J	ug/Kg		106	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*102*		*70 - 130*
Toluene-d8 (Surr)	*104*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 130*
Dibromofluoromethane (Surr)	*108*		*70 - 130*

Lab Sample ID: LCSD 620-17474/2-A
Matrix: Solid
Analysis Batch: 17475

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 17474

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1,2-Trichlorotrifluoroethane (Freon 113)	20.0	22.80		ug/Kg		114	70 - 130	3	30
Acetone	20.0	24.63	J	ug/Kg		123	70 - 130	1	30
Acrylonitrile	20.0	23.08		ug/Kg		115	70 - 130	1	30
Benzene	20.0	21.81		ug/Kg		109	70 - 130	5	30
Bromobenzene	20.0	21.57		ug/Kg		108	70 - 130	6	30
Bromochloromethane	20.0	23.40		ug/Kg		117	70 - 130	2	30
Bromodichloromethane	20.0	22.99		ug/Kg		115	70 - 130	6	30
Bromoform	20.0	23.00		ug/Kg		115	70 - 130	0	30
Bromomethane	20.0	18.04		ug/Kg		90	70 - 130	6	30
2-Butanone (MEK)	20.0	25.78		ug/Kg		129	70 - 130	3	30
n-Butylbenzene	20.0	20.40		ug/Kg		102	70 - 130	6	30
sec-Butylbenzene	20.0	22.32		ug/Kg		112	70 - 130	5	30
tert-Butylbenzene	20.0	24.19		ug/Kg		121	70 - 130	4	30
Carbon disulfide	20.0	20.39		ug/Kg		102	70 - 130	4	30
Carbon tetrachloride	20.0	24.00		ug/Kg		120	70 - 130	3	30
Chlorobenzene	20.0	21.11		ug/Kg		106	70 - 130	5	30
Chloroethane	20.0	19.64		ug/Kg		98	70 - 130	3	30
Chloroform	20.0	22.79		ug/Kg		114	70 - 130	5	30
Chloromethane	20.0	14.03		ug/Kg		70	70 - 130	4	30
2-Chlorotoluene	20.0	21.41		ug/Kg		107	70 - 130	6	30
4-Chlorotoluene	20.0	21.47		ug/Kg		107	70 - 130	5	30
1,2-Dibromo-3-Chloropropane	20.0	22.00		ug/Kg		110	70 - 130	2	30
Dibromochloromethane	20.0	23.56		ug/Kg		118	70 - 130	2	30
1,2-Dibromoethane (EDB)	20.0	23.31		ug/Kg		117	70 - 130	2	30
Dibromomethane	20.0	23.11		ug/Kg		116	70 - 130	3	30
1,2-Dichlorobenzene	20.0	20.80		ug/Kg		104	70 - 130	3	30
1,3-Dichlorobenzene	20.0	21.95		ug/Kg		110	70 - 130	4	30
1,4-Dichlorobenzene	20.0	20.12		ug/Kg		101	70 - 130	8	30
Dichlorodifluoromethane (Freon 12)	20.0	10.02	*-	ug/Kg		50	70 - 130	1	30
1,1-Dichloroethane	20.0	22.00		ug/Kg		110	70 - 130	4	30
1,2-Dichloroethane	20.0	23.87		ug/Kg		119	70 - 130	4	30
1,1-Dichloroethene	20.0	21.33		ug/Kg		107	70 - 130	4	30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 620-17474/2-A
Matrix: Solid
Analysis Batch: 17475

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 17474

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
cis-1,2-Dichloroethene	20.0	21.28		ug/Kg		106	70 - 130	7	30
trans-1,2-Dichloroethene	20.0	21.52		ug/Kg		108	70 - 130	7	30
1,2-Dichloropropane	20.0	21.46		ug/Kg		107	70 - 130	5	30
1,3-Dichloropropane	20.0	23.22		ug/Kg		116	70 - 130	2	30
2,2-Dichloropropane	20.0	23.05		ug/Kg		115	70 - 130	5	30
1,1-Dichloropropene	20.0	23.00		ug/Kg		115	70 - 130	2	30
cis-1,3-Dichloropropene	20.0	22.64		ug/Kg		113	70 - 130	3	30
trans-1,3-Dichloropropene	20.0	23.40		ug/Kg		117	70 - 130	5	30
Ethylbenzene	20.0	21.33		ug/Kg		107	70 - 130	4	30
Hexachlorobutadiene	20.0	20.63		ug/Kg		103	70 - 130	6	30
2-Hexanone (MBK)	20.0	24.29		ug/Kg		121	70 - 130	2	30
Isopropylbenzene	20.0	21.97		ug/Kg		110	70 - 130	3	30
4-Isopropyltoluene	20.0	20.54		ug/Kg		103	70 - 130	7	30
Methyl tert-butyl ether	20.0	23.23		ug/Kg		116	70 - 130	2	30
4-Methyl-2-pentanone (MIBK)	20.0	24.82		ug/Kg		124	70 - 130	1	30
Methylene Chloride	20.0	22.66		ug/Kg		113	70 - 130	4	30
Naphthalene	20.0	21.59		ug/Kg		108	70 - 130	2	30
N-Propylbenzene	20.0	21.87		ug/Kg		109	70 - 130	6	30
Styrene	20.0	21.55		ug/Kg		108	70 - 130	3	30
1,1,1,2-Tetrachloroethane	20.0	22.04		ug/Kg		110	70 - 130	2	30
1,1,2,2-Tetrachloroethane	20.0	22.20		ug/Kg		111	70 - 130	2	30
Tetrachloroethene	20.0	23.79		ug/Kg		119	70 - 130	3	30
Toluene	20.0	22.79		ug/Kg		114	70 - 130	3	30
1,2,3-Trichlorobenzene	20.0	20.70		ug/Kg		104	70 - 130	3	30
1,2,4-Trichlorobenzene	20.0	21.85		ug/Kg		109	70 - 130	5	30
1,3,5-Trichlorobenzene	20.0	20.19		ug/Kg		101	70 - 130	7	30
1,1,1-Trichloroethane	20.0	23.79		ug/Kg		119	70 - 130	4	30
1,1,2-Trichloroethane	20.0	23.06		ug/Kg		115	70 - 130	6	30
Trichloroethene	20.0	23.24		ug/Kg		116	70 - 130	2	30
Trichlorofluoromethane (Freon 11)	20.0	21.69		ug/Kg		108	70 - 130	6	30
1,2,3-Trichloropropane	20.0	22.74		ug/Kg		114	70 - 130	0	30
1,2,4-Trimethylbenzene	20.0	21.81		ug/Kg		109	70 - 130	5	30
1,3,5-Trimethylbenzene	20.0	21.66		ug/Kg		108	70 - 130	7	30
Vinyl chloride	20.0	16.16		ug/Kg		81	70 - 130	4	30
m,p-Xylene	20.0	21.40		ug/Kg		107	70 - 130	3	30
o-Xylene	20.0	21.22		ug/Kg		106	70 - 130	4	30
Tetrahydrofuran	20.0	19.48		ug/Kg		97	70 - 130	10	30
Ethyl ether	20.0	21.57		ug/Kg		108	70 - 130	0	30
Tert-amyl methyl ether	20.0	22.43		ug/Kg		112	70 - 130	5	30
Ethyl tert-butyl ether	20.0	22.18		ug/Kg		111	70 - 130	5	30
di-Isopropyl ether	20.0	21.35		ug/Kg		107	70 - 130	3	30
tert-Butanol	200	244.6		ug/Kg		122	70 - 130	2	30
1,4-Dioxane	200	240.8		ug/Kg		120	70 - 130	11	30
trans-1,4-Dichloro-2-butene	20.0	25.52		ug/Kg		128	70 - 130	2	30
Ethanol	400	427.2	J	ug/Kg		107	70 - 130	1	30

Method: 8260C - Volatile Organic Compounds by GC/MS (Continued)

Lab Sample ID: LCSD 620-17474/2-A
Matrix: Solid
Analysis Batch: 17475

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 17474

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*103*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*
Dibromofluoromethane (Surr)	*108*		*70 - 130*

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH

Lab Sample ID: MB 620-17110/1-A
Matrix: Solid
Analysis Batch: 17243

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 17110

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	ND		16.0		ug/Kg		11/08/22 10:02	11/09/22 13:38	1
Acenaphthylene	ND		16.0		ug/Kg		11/08/22 10:02	11/09/22 13:38	1
1-Methylnaphthalene	ND		16.0		ug/Kg		11/08/22 10:02	11/09/22 13:38	1
Anthracene	ND		16.0		ug/Kg		11/08/22 10:02	11/09/22 13:38	1
Benzo[a]anthracene	ND		16.0		ug/Kg		11/08/22 10:02	11/09/22 13:38	1
Benzo[a]pyrene	ND		16.0		ug/Kg		11/08/22 10:02	11/09/22 13:38	1
Benzo[b]fluoranthene	ND		16.0		ug/Kg		11/08/22 10:02	11/09/22 13:38	1
Benzo[g,h,i]perylene	ND		16.0		ug/Kg		11/08/22 10:02	11/09/22 13:38	1
Benzo[k]fluoranthene	ND		16.0		ug/Kg		11/08/22 10:02	11/09/22 13:38	1
Chrysene	ND		16.0		ug/Kg		11/08/22 10:02	11/09/22 13:38	1
Dibenz(a,h)anthracene	ND		16.0		ug/Kg		11/08/22 10:02	11/09/22 13:38	1
Fluoranthene	ND		16.0		ug/Kg		11/08/22 10:02	11/09/22 13:38	1
Fluorene	ND		16.0		ug/Kg		11/08/22 10:02	11/09/22 13:38	1
Indeno[1,2,3-cd]pyrene	ND		16.0		ug/Kg		11/08/22 10:02	11/09/22 13:38	1
2-Methylnaphthalene	ND		16.0		ug/Kg		11/08/22 10:02	11/09/22 13:38	1
Naphthalene	ND		16.0		ug/Kg		11/08/22 10:02	11/09/22 13:38	1
Phenanthrene	ND		16.0		ug/Kg		11/08/22 10:02	11/09/22 13:38	1
Pyrene	ND		16.0		ug/Kg		11/08/22 10:02	11/09/22 13:38	1
Bis(2-ethylhexyl) phthalate	ND		16.0		ug/Kg		11/08/22 10:02	11/09/22 13:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenceno-d5 (Surr)	*65*		*30 - 130*	*11/08/22 10:02*	*11/09/22 13:38*	*1*
Terphenyl-d14 (Surr)	*67*		*30 - 130*	*11/08/22 10:02*	*11/09/22 13:38*	*1*
2-Fluorobiphenyl (Surr)	*69*		*30 - 130*	*11/08/22 10:02*	*11/09/22 13:38*	*1*

Lab Sample ID: LCS 620-17110/2-A
Matrix: Solid
Analysis Batch: 17243

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17110

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Acenaphthene			167	116.5		ug/Kg		70	40 - 140		
Acenaphthylene			167	118.1		ug/Kg		71	40 - 140		
1-Methylnaphthalene			167	127.4		ug/Kg		76	40 - 140		
Anthracene			167	116.9		ug/Kg		70	40 - 140		
Benzo[a]anthracene			167	140.5		ug/Kg		84	40 - 140		
Benzo[a]pyrene			167	118.0		ug/Kg		71	40 - 140		

Method: 8270D_LL_PAH - Semivolatile Organic Compounds (GC/MS) Low level PAH (Continued)

Lab Sample ID: LCS 620-17110/2-A
Matrix: Solid
Analysis Batch: 17243

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17110

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzo[b]fluoranthene			167	135.5		ug/Kg		81	40 - 140		
Benzo[g,h,i]perylene			167	117.5		ug/Kg		70	40 - 140		
Benzo[k]fluoranthene			167	104.2		ug/Kg		63	40 - 140		
Chrysene			167	132.8		ug/Kg		80	40 - 140		
Dibenz(a,h)anthracene			167	110.8		ug/Kg		66	40 - 140		
Fluoranthene			167	122.1		ug/Kg		73	40 - 140		
Fluorene			167	113.9		ug/Kg		68	40 - 140		
Indeno[1,2,3-cd]pyrene			167	111.0		ug/Kg		67	40 - 140		
2-Methylnaphthalene			167	125.5		ug/Kg		75	40 - 140		
Naphthalene			167	107.4		ug/Kg		64	30 - 140		
Phenanthrene			167	115.1		ug/Kg		69	40 - 140		
Pyrene			167	133.3		ug/Kg		80	40 - 140		
Bis(2-ethylhexyl) phthalate			167	152.2		ug/Kg		91	40 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenceno-d5 (Surr)	*71*		*30 - 130*
Terphenyl-d14 (Surr)	*70*		*30 - 130*
2-Fluorobiphenyl (Surr)	*76*		*30 - 130*

Lab Sample ID: LCSD 620-17110/3-A
Matrix: Solid
Analysis Batch: 17243

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 17110

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthene			167	117.8		ug/Kg		71	40 - 140	1	30
Acenaphthylene			167	118.4		ug/Kg		71	40 - 140	0	30
1-Methylnaphthalene			167	127.2		ug/Kg		76	40 - 140	0	30
Anthracene			167	120.9		ug/Kg		73	40 - 140	3	30
Benzo[a]anthracene			167	147.0		ug/Kg		88	40 - 140	5	30
Benzo[a]pyrene			167	126.7		ug/Kg		76	40 - 140	7	30
Benzo[b]fluoranthene			167	143.4		ug/Kg		86	40 - 140	6	30
Benzo[g,h,i]perylene			167	123.3		ug/Kg		74	40 - 140	5	30
Benzo[k]fluoranthene			167	108.7		ug/Kg		65	40 - 140	4	30
Chrysene			167	139.1		ug/Kg		83	40 - 140	5	30
Dibenz(a,h)anthracene			167	120.3		ug/Kg		72	40 - 140	8	30
Fluoranthene			167	126.6		ug/Kg		76	40 - 140	4	30
Fluorene			167	114.8		ug/Kg		69	40 - 140	1	30
Indeno[1,2,3-cd]pyrene			167	114.6		ug/Kg		69	40 - 140	3	30
2-Methylnaphthalene			167	123.9		ug/Kg		74	40 - 140	1	30
Naphthalene			167	108.4		ug/Kg		65	30 - 140	1	30
Phenanthrene			167	116.8		ug/Kg		70	40 - 140	1	30
Pyrene			167	137.0		ug/Kg		82	40 - 140	3	30
Bis(2-ethylhexyl) phthalate			167	158.1		ug/Kg		95	40 - 140	4	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Nitrobenceno-d5 (Surr)	*69*		*30 - 130*
Terphenyl-d14 (Surr)	*70*		*30 - 130*
2-Fluorobiphenyl (Surr)	*74*		*30 - 130*

Method: 8082A - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 620-17205/1-A
Matrix: Solid
Analysis Batch: 17245

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 17205

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		20.0		ug/Kg		11/08/22 15:04	11/09/22 20:56	1
PCB-1221	ND		20.0		ug/Kg		11/08/22 15:04	11/09/22 20:56	1
PCB-1232	ND		20.0		ug/Kg		11/08/22 15:04	11/09/22 20:56	1
PCB-1242	ND		20.0		ug/Kg		11/08/22 15:04	11/09/22 20:56	1
PCB-1248	ND		20.0		ug/Kg		11/08/22 15:04	11/09/22 20:56	1
PCB-1254	ND		20.0		ug/Kg		11/08/22 15:04	11/09/22 20:56	1
PCB-1260	ND		20.0		ug/Kg		11/08/22 15:04	11/09/22 20:56	1
PCB-1262	ND		20.0		ug/Kg		11/08/22 15:04	11/09/22 20:56	1
PCB-1268	ND		20.0		ug/Kg		11/08/22 15:04	11/09/22 20:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*68*		*30 - 150*	*11/08/22 15:04*	*11/09/22 20:56*	*1*
Tetrachloro-m-xylene	*65*		*30 - 150*	*11/08/22 15:04*	*11/09/22 20:56*	*1*
DCB Decachlorobiphenyl (Surr)	*76*		*30 - 150*	*11/08/22 15:04*	*11/09/22 20:56*	*1*
DCB Decachlorobiphenyl (Surr)	*72*		*30 - 150*	*11/08/22 15:04*	*11/09/22 20:56*	*1*

Lab Sample ID: LCS 620-17205/2-A
Matrix: Solid
Analysis Batch: 17245

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17205

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
PCB-1016			167	114.7		ug/Kg		69	61 - 112		
PCB-1016			167	123.5		ug/Kg		74	61 - 112		
PCB-1260			167	116.9		ug/Kg		70	63 - 105		
PCB-1260			167	119.3		ug/Kg		72	63 - 105		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*69*		*30 - 150*
Tetrachloro-m-xylene	*68*		*30 - 150*
DCB Decachlorobiphenyl (Surr)	*71*		*30 - 150*
DCB Decachlorobiphenyl (Surr)	*72*		*30 - 150*

Lab Sample ID: LCSD 620-17205/3-A
Matrix: Solid
Analysis Batch: 17245

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 17205

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
PCB-1016			167	110.1		ug/Kg		66	61 - 112	4	30
PCB-1016			167	113.1		ug/Kg		68	61 - 112	9	30
PCB-1260			167	113.2		ug/Kg		68	63 - 105	3	30
PCB-1260			167	117.1		ug/Kg		70	63 - 105	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*62*		*30 - 150*
Tetrachloro-m-xylene	*61*		*30 - 150*
DCB Decachlorobiphenyl (Surr)	*72*		*30 - 150*
DCB Decachlorobiphenyl (Surr)	*74*		*30 - 150*

Method: MAEPH2.1 - Massachusetts - Extractable Petroleum Hydrocarbons (GC)

Lab Sample ID: MB 620-17195/1-B
Matrix: Solid
Analysis Batch: 17233

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 17195

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
C9-C18 Aliphatics	ND		6.67		mg/Kg		11/08/22 12:45	11/10/22 18:27	1
C19-C36 Aliphatics	ND		6.67		mg/Kg		11/08/22 12:45	11/10/22 18:27	1
C11-C22 Aromatics	ND		6.67		mg/Kg		11/08/22 12:45	11/10/22 18:27	1
C11-C22 Aromatics (Adjusted)	ND		6.67		mg/Kg		11/08/22 12:45	11/10/22 18:27	1
Naphthalene	ND		0.333		mg/Kg		11/08/22 12:45	11/10/22 18:27	1
2-Methylnaphthalene	ND		0.333		mg/Kg		11/08/22 12:45	11/10/22 18:27	1
Acenaphthylene	ND		0.333		mg/Kg		11/08/22 12:45	11/10/22 18:27	1
Acenaphthene	ND		0.333		mg/Kg		11/08/22 12:45	11/10/22 18:27	1
Fluorene	ND		0.333		mg/Kg		11/08/22 12:45	11/10/22 18:27	1
Phenanthrene	ND		0.333		mg/Kg		11/08/22 12:45	11/10/22 18:27	1
Anthracene	ND		0.333		mg/Kg		11/08/22 12:45	11/10/22 18:27	1
Fluoranthene	ND		0.333		mg/Kg		11/08/22 12:45	11/10/22 18:27	1
Pyrene	ND		0.333		mg/Kg		11/08/22 12:45	11/10/22 18:27	1
Benzo[a]anthracene	ND		0.333		mg/Kg		11/08/22 12:45	11/10/22 18:27	1
Chrysene	ND		0.333		mg/Kg		11/08/22 12:45	11/10/22 18:27	1
Benzo[b]fluoranthene	ND		0.333		mg/Kg		11/08/22 12:45	11/10/22 18:27	1
Benzo[k]fluoranthene	ND		0.333		mg/Kg		11/08/22 12:45	11/10/22 18:27	1
Benzo[a]pyrene	ND		0.333		mg/Kg		11/08/22 12:45	11/10/22 18:27	1
Indeno[1,2,3-cd]pyrene	ND		0.333		mg/Kg		11/08/22 12:45	11/10/22 18:27	1
Dibenz(a,h)anthracene	ND		0.333		mg/Kg		11/08/22 12:45	11/10/22 18:27	1
Benzo[g,h,i]perylene	ND		0.333		mg/Kg		11/08/22 12:45	11/10/22 18:27	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1-Chlorooctadecane (Surr)	*65*		*40 - 140*	*11/08/22 12:45*	*11/10/22 18:27*	*1*
o-Terphenyl (Surr)	*71*		*40 - 140*	*11/08/22 12:45*	*11/10/22 18:27*	*1*
2-Fluorobiphenyl (Surr)	*129*		*40 - 140*	*11/08/22 12:45*	*11/10/22 18:27*	*1*

Lab Sample ID: LCS 620-17195/2-B
Matrix: Solid
Analysis Batch: 17233

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17195

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
C9-C18 Aliphatics	8.00	ND		mg/Kg		71	40 - 140
C19-C36 Aliphatics	10.7	9.374		mg/Kg		88	40 - 140
C11-C22 Aromatics	22.7	20.04		mg/Kg		88	40 - 140
Naphthalene	1.33	0.8939		mg/Kg		67	40 - 140
2-Methylnaphthalene	1.33	1.026		mg/Kg		77	40 - 140
Acenaphthylene	1.33	1.129		mg/Kg		85	40 - 140
Acenaphthene	1.33	0.9588		mg/Kg		72	40 - 140
Fluorene	1.33	0.9291		mg/Kg		70	40 - 140
Phenanthrene	1.33	0.6611		mg/Kg		50	40 - 140
Anthracene	1.33	0.8303		mg/Kg		62	40 - 140
Fluoranthene	1.33	1.027		mg/Kg		77	40 - 140
Pyrene	1.33	1.205		mg/Kg		90	40 - 140
Benzo[a]anthracene	1.33	0.7793		mg/Kg		58	40 - 140
Chrysene	1.33	1.255		mg/Kg		94	40 - 140
Benzo[b]fluoranthene	1.33	0.7728		mg/Kg		58	40 - 140
Benzo[k]fluoranthene	1.33	1.061		mg/Kg		80	40 - 140

Method: MAEPH2.1 - Massachusetts - Extractable Petroleum Hydrocarbons (GC) (Continued)

Lab Sample ID: LCS 620-17195/2-B
Matrix: Solid
Analysis Batch: 17233

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 17195

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benzo[a]pyrene			1.33	1.158		mg/Kg		87	40 - 140		
Indeno[1,2,3-cd]pyrene			1.33	0.8801		mg/Kg		66	40 - 140		
Dibenz(a,h)anthracene			1.33	1.249		mg/Kg		94	40 - 140		
Benzo[g,h,i]perylene			1.33	1.335		mg/Kg		100	40 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1-Chlorooctadecane (Surr)	*57*		*40 - 140*
o-Terphenyl (Surr)	*71*		*40 - 140*
2-Fluorobiphenyl (Surr)	*123*		*40 - 140*

Lab Sample ID: LCSD 620-17195/3-B
Matrix: Solid
Analysis Batch: 17233

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 17195

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
C9-C18 Aliphatics			8.00	ND		mg/Kg		72	40 - 140	1	25
C19-C36 Aliphatics			10.7	9.276		mg/Kg		87	40 - 140	1	25
C11-C22 Aromatics			22.7	20.82		mg/Kg		92	40 - 140	4	25
Naphthalene			1.33	0.8903		mg/Kg		67	40 - 140	0	25
2-Methylnaphthalene			1.33	1.038		mg/Kg		78	40 - 140	1	25
Acenaphthylene			1.33	1.036		mg/Kg		78	40 - 140	9	25
Acenaphthene			1.33	0.9663		mg/Kg		72	40 - 140	1	25
Fluorene			1.33	0.9189		mg/Kg		69	40 - 140	1	25
Phenanthrene			1.33	0.7392		mg/Kg		55	40 - 140	11	25
Anthracene			1.33	0.9779		mg/Kg		73	40 - 140	16	25
Fluoranthene			1.33	1.060		mg/Kg		80	40 - 140	3	25
Pyrene			1.33	1.245		mg/Kg		93	40 - 140	3	25
Benzo[a]anthracene			1.33	0.8030		mg/Kg		60	40 - 140	3	25
Chrysene			1.33	1.302		mg/Kg		98	40 - 140	4	25
Benzo[b]fluoranthene			1.33	0.8108		mg/Kg		61	40 - 140	5	25
Benzo[k]fluoranthene			1.33	1.090		mg/Kg		82	40 - 140	3	25
Benzo[a]pyrene			1.33	1.207		mg/Kg		90	40 - 140	4	25
Indeno[1,2,3-cd]pyrene			1.33	0.9540		mg/Kg		72	40 - 140	8	25
Dibenz(a,h)anthracene			1.33	1.283		mg/Kg		96	40 - 140	3	25
Benzo[g,h,i]perylene			1.33	1.345		mg/Kg		101	40 - 140	1	25

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1-Chlorooctadecane (Surr)	*54*		*40 - 140*
o-Terphenyl (Surr)	*72*		*40 - 140*
2-Fluorobiphenyl (Surr)	*124*		*40 - 140*

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 460-877934/1-A
Matrix: Solid
Analysis Batch: 878221

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 877934

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		1.50		mg/Kg		11/15/22 08:55	11/16/22 14:26	1
Cadmium	ND		0.400		mg/Kg		11/15/22 08:55	11/16/22 14:26	1
Chromium	ND		1.00		mg/Kg		11/15/22 08:55	11/16/22 14:26	1
Copper	ND		2.50		mg/Kg		11/15/22 08:55	11/16/22 14:26	1
Lead	ND		1.00		mg/Kg		11/15/22 08:55	11/16/22 14:26	1
Nickel	ND		4.00		mg/Kg		11/15/22 08:55	11/16/22 14:26	1
Zinc	ND		3.00		mg/Kg		11/15/22 08:55	11/16/22 14:26	1

Lab Sample ID: LCSSRM 460-877934/2-A
Matrix: Solid
Analysis Batch: 878221

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 877934

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic			112	109.3		mg/Kg		97.6	82.0 - 118.8		
Cadmium			196	194.5		mg/Kg		99.2	82.1 - 118.4		
Chromium			103	101.6		mg/Kg		98.6	80.8 - 118.4		
Copper			70.4	68.50		mg/Kg		97.3	83.4 - 116.6		
Lead			73.2	73.32		mg/Kg		100.2	82.8 - 117.3		
Nickel			249	251.4		mg/Kg		101.0	81.9 - 118.1		
Zinc			360	357.2		mg/Kg		99.2	79.7 - 120.3		

Method: 7471B - Mercury (CVAA)

Lab Sample ID: MB 460-880423/10-A
Matrix: Solid
Analysis Batch: 880460

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 880423

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.0170		mg/Kg		11/30/22 00:09	11/30/22 03:52	1

Lab Sample ID: LCSSRM 460-880423/11-A ^40
Matrix: Solid
Analysis Batch: 880460

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 880423

Analyte			Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec Limits		
Mercury			13.2	16.54		mg/Kg		125.3	58.0 - 142.4		

Client: Pare Corporation
Project/Site: MA Sediment Samples

Job ID: 620-8150-1

Method: Moisture - Percent Moisture

Lab Sample ID: 620-8150-1 DU
Matrix: Solid
Analysis Batch: 17231

Client Sample ID: IMP-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Percent Moisture	85.1			85.3		%				0.2	5
Percent Solids	14.9			14.7		%				1	5

Method: Local Method - General Subcontract Method

Lab Sample ID: CM80625-BLK
Matrix: SOLID
Analysis Batch: 651510A

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 651510A_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tot.Org.Carbon	ND		100		mg/kg		11/10/22 16:26	11/10/22 16:26	

GC/MS VOA

Pre Prep Batch: 17149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-8150-1	IMP-2	Total/NA	Solid	Frozen Preserve	
620-8150-2	IMP-1	Total/NA	Solid	Frozen Preserve	
620-8150-3	IMP-3	Total/NA	Solid	Frozen Preserve	
620-8150-4	DS-CPD	Total/NA	Solid	Frozen Preserve	

Prep Batch: 17179

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-8150-2	IMP-1	Total/NA	Solid	5035	17149
620-8150-3	IMP-3	Total/NA	Solid	5035	17149
620-8150-4	DS-CPD	Total/NA	Solid	5035	17149
MB 620-17179/3-A	Method Blank	Total/NA	Solid	5035	
LCS 620-17179/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 620-17179/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 17180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-8150-2	IMP-1	Total/NA	Solid	8260C	17179
620-8150-3	IMP-3	Total/NA	Solid	8260C	17179
620-8150-4	DS-CPD	Total/NA	Solid	8260C	17179
MB 620-17179/3-A	Method Blank	Total/NA	Solid	8260C	17179
LCS 620-17179/1-A	Lab Control Sample	Total/NA	Solid	8260C	17179
LCSD 620-17179/2-A	Lab Control Sample Dup	Total/NA	Solid	8260C	17179

Prep Batch: 17474

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-8150-1	IMP-2	Total/NA	Solid	5035	17149
MB 620-17474/3-A	Method Blank	Total/NA	Solid	5035	
LCS 620-17474/1-A	Lab Control Sample	Total/NA	Solid	5035	
LCSD 620-17474/2-A	Lab Control Sample Dup	Total/NA	Solid	5035	

Analysis Batch: 17475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-8150-1	IMP-2	Total/NA	Solid	8260C	17474
MB 620-17474/3-A	Method Blank	Total/NA	Solid	8260C	17474
LCS 620-17474/1-A	Lab Control Sample	Total/NA	Solid	8260C	17474
LCSD 620-17474/2-A	Lab Control Sample Dup	Total/NA	Solid	8260C	17474

GC/MS Semi VOA

Prep Batch: 17110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-8150-1	IMP-2	Total/NA	Solid	3546	
620-8150-2	IMP-1	Total/NA	Solid	3546	
620-8150-3	IMP-3	Total/NA	Solid	3546	
620-8150-4	DS-CPD	Total/NA	Solid	3546	
MB 620-17110/1-A	Method Blank	Total/NA	Solid	3546	
LCS 620-17110/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 620-17110/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	

GC/MS Semi VOA

Analysis Batch: 17243

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-8150-1	IMP-2	Total/NA	Solid	8270D_LL_PAH	17110
620-8150-2	IMP-1	Total/NA	Solid	8270D_LL_PAH	17110
620-8150-3	IMP-3	Total/NA	Solid	8270D_LL_PAH	17110
620-8150-4	DS-CPD	Total/NA	Solid	8270D_LL_PAH	17110
MB 620-17110/1-A	Method Blank	Total/NA	Solid	8270D_LL_PAH	17110
LCS 620-17110/2-A	Lab Control Sample	Total/NA	Solid	8270D_LL_PAH	17110
LCSD 620-17110/3-A	Lab Control Sample Dup	Total/NA	Solid	8270D_LL_PAH	17110

GC Semi VOA

Prep Batch: 17195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-8150-1	IMP-2	Total/NA	Solid	3546	
620-8150-2	IMP-1	Total/NA	Solid	3546	
620-8150-3	IMP-3	Total/NA	Solid	3546	
620-8150-4	DS-CPD	Total/NA	Solid	3546	
MB 620-17195/1-B	Method Blank	Total/NA	Solid	3546	
LCS 620-17195/2-B	Lab Control Sample	Total/NA	Solid	3546	
LCSD 620-17195/3-B	Lab Control Sample Dup	Total/NA	Solid	3546	

Prep Batch: 17205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-8150-1	IMP-2	Total/NA	Solid	3546	
620-8150-2	IMP-1	Total/NA	Solid	3546	
620-8150-3	IMP-3	Total/NA	Solid	3546	
620-8150-4	DS-CPD	Total/NA	Solid	3546	
MB 620-17205/1-A	Method Blank	Total/NA	Solid	3546	
LCS 620-17205/2-A	Lab Control Sample	Total/NA	Solid	3546	
LCSD 620-17205/3-A	Lab Control Sample Dup	Total/NA	Solid	3546	

Analysis Batch: 17233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-8150-1	IMP-2	Total/NA	Solid	MAEPH2.1	17252
620-8150-2	IMP-1	Total/NA	Solid	MAEPH2.1	17252
620-8150-3	IMP-3	Total/NA	Solid	MAEPH2.1	17252
620-8150-4	DS-CPD	Total/NA	Solid	MAEPH2.1	17252
MB 620-17195/1-B	Method Blank	Total/NA	Solid	MAEPH2.1	17252
LCS 620-17195/2-B	Lab Control Sample	Total/NA	Solid	MAEPH2.1	17252
LCSD 620-17195/3-B	Lab Control Sample Dup	Total/NA	Solid	MAEPH2.1	17252

Analysis Batch: 17245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-8150-1	IMP-2	Total/NA	Solid	8082A	17205
620-8150-2	IMP-1	Total/NA	Solid	8082A	17205
620-8150-3	IMP-3	Total/NA	Solid	8082A	17205
620-8150-4	DS-CPD	Total/NA	Solid	8082A	17205
MB 620-17205/1-A	Method Blank	Total/NA	Solid	8082A	17205
LCS 620-17205/2-A	Lab Control Sample	Total/NA	Solid	8082A	17205
LCSD 620-17205/3-A	Lab Control Sample Dup	Total/NA	Solid	8082A	17205

GC Semi VOA

Fraction Batch: 17252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-8150-1	IMP-2	Total/NA	Solid	MA EPH Frac	17195
620-8150-2	IMP-1	Total/NA	Solid	MA EPH Frac	17195
620-8150-3	IMP-3	Total/NA	Solid	MA EPH Frac	17195
620-8150-4	DS-CPD	Total/NA	Solid	MA EPH Frac	17195
MB 620-17195/1-B	Method Blank	Total/NA	Solid	MA EPH Frac	17195
LCS 620-17195/2-B	Lab Control Sample	Total/NA	Solid	MA EPH Frac	17195
LCSD 620-17195/3-B	Lab Control Sample Dup	Total/NA	Solid	MA EPH Frac	17195

Metals

Prep Batch: 877934

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-8150-1	IMP-2	Total/NA	Solid	3050B	
620-8150-2	IMP-1	Total/NA	Solid	3050B	
620-8150-3	IMP-3	Total/NA	Solid	3050B	
620-8150-4	DS-CPD	Total/NA	Solid	3050B	
MB 460-877934/1-A	Method Blank	Total/NA	Solid	3050B	
LCSSRM 460-877934/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Analysis Batch: 878221

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-8150-1	IMP-2	Total/NA	Solid	6010D	877934
620-8150-2	IMP-1	Total/NA	Solid	6010D	877934
620-8150-3	IMP-3	Total/NA	Solid	6010D	877934
620-8150-4	DS-CPD	Total/NA	Solid	6010D	877934
MB 460-877934/1-A	Method Blank	Total/NA	Solid	6010D	877934
LCSSRM 460-877934/2-A	Lab Control Sample	Total/NA	Solid	6010D	877934

Prep Batch: 880423

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-8150-1	IMP-2	Total/NA	Solid	7471B	
620-8150-2	IMP-1	Total/NA	Solid	7471B	
620-8150-3	IMP-3	Total/NA	Solid	7471B	
620-8150-4	DS-CPD	Total/NA	Solid	7471B	
MB 460-880423/10-A	Method Blank	Total/NA	Solid	7471B	
LCSSRM 460-880423/11-A ^	Lab Control Sample	Total/NA	Solid	7471B	

Analysis Batch: 880460

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-8150-1	IMP-2	Total/NA	Solid	7471B	880423
620-8150-2	IMP-1	Total/NA	Solid	7471B	880423
620-8150-3	IMP-3	Total/NA	Solid	7471B	880423
620-8150-4	DS-CPD	Total/NA	Solid	7471B	880423
MB 460-880423/10-A	Method Blank	Total/NA	Solid	7471B	880423
LCSSRM 460-880423/11-A ^	Lab Control Sample	Total/NA	Solid	7471B	880423

General Chemistry

Analysis Batch: 17231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-8150-1	IMP-2	Total/NA	Solid	Moisture	
620-8150-2	IMP-1	Total/NA	Solid	Moisture	

General Chemistry (Continued)

Analysis Batch: 17231 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-8150-3	IMP-3	Total/NA	Solid	Moisture	
620-8150-4	DS-CPD	Total/NA	Solid	Moisture	
620-8150-1 DU	IMP-2	Total/NA	Solid	Moisture	

Geotechnical

Analysis Batch: 186878

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-8150-1	IMP-2	Total/NA	Solid	D422	
620-8150-2	IMP-1	Total/NA	Solid	D422	
620-8150-3	IMP-3	Total/NA	Solid	D422	
620-8150-4	DS-CPD	Total/NA	Solid	D422	

Subcontract

Analysis Batch: 651510A

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-8150-1	IMP-2	Total/NA	Solid	Local Method	651510A_P
620-8150-2	IMP-1	Total/NA	Solid	Local Method	651510A_P
620-8150-3	IMP-3	Total/NA	Solid	Local Method	651510A_P
620-8150-4	DS-CPD	Total/NA	Solid	Local Method	651510A_P
CM80625-BLK	Method Blank	Total/NA	SOLID	Local Method	651510A_P
CM80625-LCS	Lab Control Sample	Total/NA	SOLID	Local Method	651510A_P

Prep Batch: 651510A_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-8150-1	IMP-2	Total/NA	Solid	SW9060A mod	
620-8150-2	IMP-1	Total/NA	Solid	SW9060A mod	
620-8150-3	IMP-3	Total/NA	Solid	SW9060A mod	
620-8150-4	DS-CPD	Total/NA	Solid	SW9060A mod	
CM80625-BLK	Method Blank	Total/NA	SOLID	SW9060A mod	
CM80625-LCS	Lab Control Sample	Total/NA	SOLID	SW9060A mod	

Client Sample ID: IMP-2
Date Collected: 11/07/22 10:35
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	17231	DWC	EET NE	11/09/22 10:13
Total/NA	Analysis	D422		1	186878	MAP	EET BUR	12/09/22 20:51
Total/NA	Prep	SW9060A mod		1	651510A_P		PEL, Inc	11/10/22 16:26
Total/NA	Analysis	Local Method		1	651510A	CT007	PEL, Inc	11/10/22 16:26

Client Sample ID: IMP-2
Date Collected: 11/07/22 10:35
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-1
Matrix: Solid
Percent Solids: 14.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Pre Prep	Frozen Preserve			17149	KFS	EET NE	11/07/22 17:51
Total/NA	Prep	5035			17474	CLR	EET NE	11/16/22 10:52
Total/NA	Analysis	8260C		1	17475	CLR	EET NE	11/16/22 15:39
Total/NA	Prep	3546			17110	BMS	EET NE	11/08/22 09:59
Total/NA	Analysis	8270D_LL_PAH		1	17243	JS	EET NE	11/09/22 16:03
Total/NA	Prep	3546			17205	BMS	EET NE	11/08/22 15:04
Total/NA	Analysis	8082A		1	17245	SFL	EET NE	11/09/22 21:48
Total/NA	Prep	3546			17195	BMS	EET NE	11/08/22 12:45
Total/NA	Fraction	MA EPH Frac			17252	EDJ	EET NE	11/09/22 14:13
Total/NA	Analysis	MAEPH2.1		1	17233	JS	EET NE	11/10/22 20:28
Total/NA	Prep	3050B			877934	NNW	EET EDI	11/15/22 08:55
Total/NA	Analysis	6010D		2	878221	CDC	EET EDI	11/16/22 14:41
Total/NA	Prep	7471B			880423	TJS	EET EDI	11/30/22 00:09
Total/NA	Analysis	7471B		1	880460	TJS	EET EDI	11/30/22 07:13

Client Sample ID: IMP-1
Date Collected: 11/07/22 11:20
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	17231	DWC	EET NE	11/09/22 10:13
Total/NA	Analysis	D422		1	186878	MAP	EET BUR	12/09/22 20:53
Total/NA	Prep	SW9060A mod		1	651510A_P		PEL, Inc	11/10/22 16:27
Total/NA	Analysis	Local Method		1	651510A	CT007	PEL, Inc	11/10/22 16:27

Client Sample ID: IMP-1
Date Collected: 11/07/22 11:20
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-2
Matrix: Solid
Percent Solids: 45.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Pre Prep	Frozen Preserve			17149	KFS	EET NE	11/07/22 17:51
Total/NA	Prep	5035			17179	CLR	EET NE	11/08/22 09:23
Total/NA	Analysis	8260C		1	17180	CLR	EET NE	11/08/22 16:26
Total/NA	Prep	3546			17110	BMS	EET NE	11/08/22 09:59
Total/NA	Analysis	8270D_LL_PAH		1	17243	JS	EET NE	11/09/22 16:32

Lab Chronicle

Client: Pare Corporation
Project/Site: MA Sediment Samples

Job ID: 620-8150-1

Client Sample ID: IMP-1

Date Collected: 11/07/22 11:20
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-2

Matrix: Solid
Percent Solids: 45.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3546			17205	BMS	EET NE	11/08/22 15:04
Total/NA	Analysis	8082A		1	17245	SFL	EET NE	11/09/22 22:05
Total/NA	Prep	3546			17195	BMS	EET NE	11/08/22 12:45
Total/NA	Fraction	MA EPH Frac			17252	EDJ	EET NE	11/09/22 14:13
Total/NA	Analysis	MAEPH2.1		1	17233	JS	EET NE	11/10/22 22:28
Total/NA	Prep	3050B			877934	NNW	EET EDI	11/15/22 08:55
Total/NA	Analysis	6010D		2	878221	CDC	EET EDI	11/16/22 14:45
Total/NA	Prep	7471B			880423	TJS	EET EDI	11/30/22 00:09
Total/NA	Analysis	7471B		1	880460	TJS	EET EDI	11/30/22 07:15

Client Sample ID: IMP-3

Date Collected: 11/07/22 12:00
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-3

Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	17231	DWC	EET NE	11/09/22 10:13
Total/NA	Analysis	D422		1	186878	MAP	EET BUR	12/09/22 20:55
Total/NA	Prep	SW9060A mod		1	651510A_P		PEL, Inc	11/10/22 16:29
Total/NA	Analysis	Local Method		1	651510A	CT007	PEL, Inc	11/10/22 16:29

Client Sample ID: IMP-3

Date Collected: 11/07/22 12:00
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-3

Matrix: Solid
Percent Solids: 31.8

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Pre Prep	Frozen Preserve			17149	KFS	EET NE	11/07/22 17:51
Total/NA	Prep	5035			17179	CLR	EET NE	11/08/22 09:23
Total/NA	Analysis	8260C		1	17180	CLR	EET NE	11/08/22 16:52
Total/NA	Prep	3546			17110	BMS	EET NE	11/08/22 09:59
Total/NA	Analysis	8270D_LL_PAH		1	17243	JS	EET NE	11/09/22 17:01
Total/NA	Prep	3546			17205	BMS	EET NE	11/08/22 15:04
Total/NA	Analysis	8082A		1	17245	SFL	EET NE	11/09/22 22:22
Total/NA	Prep	3546			17195	BMS	EET NE	11/08/22 12:45
Total/NA	Fraction	MA EPH Frac			17252	EDJ	EET NE	11/09/22 14:13
Total/NA	Analysis	MAEPH2.1		1	17233	JS	EET NE	11/10/22 22:58
Total/NA	Prep	3050B			877934	NNW	EET EDI	11/15/22 08:55
Total/NA	Analysis	6010D		2	878221	CDC	EET EDI	11/16/22 14:49
Total/NA	Prep	7471B			880423	TJS	EET EDI	11/30/22 00:09
Total/NA	Analysis	7471B		1	880460	TJS	EET EDI	11/30/22 07:16

Lab Chronicle

Client: Pare Corporation
Project/Site: MA Sediment Samples

Job ID: 620-8150-1

Client Sample ID: DS-CPD
Date Collected: 11/07/22 12:45
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	17231	DWC	EET NE	11/09/22 10:13
Total/NA	Analysis	D422		1	186878	MAP	EET BUR	12/09/22 20:57
Total/NA	Prep	SW9060A mod		1	651510A_P		PEL, Inc	11/10/22 16:33
Total/NA	Analysis	Local Method		1	651510A	CT007	PEL, Inc	11/10/22 16:33

Client Sample ID: DS-CPD
Date Collected: 11/07/22 12:45
Date Received: 11/07/22 16:42

Lab Sample ID: 620-8150-4
Matrix: Solid
Percent Solids: 79.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Pre Prep	Frozen Preserve			17149	KFS	EET NE	11/07/22 17:51
Total/NA	Prep	5035			17179	CLR	EET NE	11/08/22 09:23
Total/NA	Analysis	8260C		1	17180	CLR	EET NE	11/08/22 17:18
Total/NA	Prep	3546			17110	BMS	EET NE	11/08/22 09:59
Total/NA	Analysis	8270D_LL_PAH		1	17243	JS	EET NE	11/09/22 17:30
Total/NA	Prep	3546			17205	BMS	EET NE	11/08/22 15:04
Total/NA	Analysis	8082A		1	17245	SFL	EET NE	11/09/22 22:39
Total/NA	Prep	3546			17195	BMS	EET NE	11/08/22 12:45
Total/NA	Fraction	MA EPH Frac			17252	EDJ	EET NE	11/09/22 14:13
Total/NA	Analysis	MAEPH2.1		1	17233	JS	EET NE	11/10/22 23:28
Total/NA	Prep	3050B			877934	NNW	EET EDI	11/15/22 08:55
Total/NA	Analysis	6010D		2	878221	CDC	EET EDI	11/16/22 14:53
Total/NA	Prep	7471B			880423	TJS	EET EDI	11/30/22 00:09
Total/NA	Analysis	7471B		1	880460	TJS	EET EDI	11/30/22 07:18

Laboratory References:

EET BUR = Eurofins Burlington, 530 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

EET EDI = Eurofins Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900

EET NE = Eurofins New England, 646 Camp Ave, North Kingstown, RI 02852, TEL (413)789-9018

PEL, Inc = Phoenix Environmental Laboratories, Inc., 587 East Middle Turnpike, Manchester, CT 06040, TEL (860)645-8726

Accreditation/Certification Summary

Client: Pare Corporation
Project/Site: MA Sediment Samples

Job ID: 620-8150-1

Laboratory: Eurofins New England

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Rhode Island	State	LAI00368	12-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8082A	3546	Solid	PCB-1016
8082A	3546	Solid	PCB-1221
8082A	3546	Solid	PCB-1232
8082A	3546	Solid	PCB-1242
8082A	3546	Solid	PCB-1248
8082A	3546	Solid	PCB-1254
8082A	3546	Solid	PCB-1260
8082A	3546	Solid	PCB-1262
8082A	3546	Solid	PCB-1268
8260C	5035	Solid	1,1,1,2-Tetrachloroethane
8260C	5035	Solid	1,1,1-Trichloroethane
8260C	5035	Solid	1,1,2,2-Tetrachloroethane
8260C	5035	Solid	1,1,2-Trichloroethane
8260C	5035	Solid	1,1,2-Trichlorotrifluoroethane (Freon 113)
8260C	5035	Solid	1,1-Dichloroethane
8260C	5035	Solid	1,1-Dichloroethene
8260C	5035	Solid	1,1-Dichloropropene
8260C	5035	Solid	1,2,3-Trichlorobenzene
8260C	5035	Solid	1,2,3-Trichloropropane
8260C	5035	Solid	1,2,4-Trichlorobenzene
8260C	5035	Solid	1,2,4-Trimethylbenzene
8260C	5035	Solid	1,2-Dibromo-3-Chloropropane
8260C	5035	Solid	1,2-Dibromoethane (EDB)
8260C	5035	Solid	1,2-Dichlorobenzene
8260C	5035	Solid	1,2-Dichloroethane
8260C	5035	Solid	1,2-Dichloropropane
8260C	5035	Solid	1,3,5-Trichlorobenzene
8260C	5035	Solid	1,3,5-Trimethylbenzene
8260C	5035	Solid	1,3-Dichlorobenzene
8260C	5035	Solid	1,3-Dichloropropane
8260C	5035	Solid	1,4-Dichlorobenzene
8260C	5035	Solid	1,4-Dioxane
8260C	5035	Solid	2,2-Dichloropropane
8260C	5035	Solid	2-Butanone (MEK)
8260C	5035	Solid	2-Chlorotoluene
8260C	5035	Solid	2-Hexanone (MBK)
8260C	5035	Solid	4-Chlorotoluene
8260C	5035	Solid	4-Isopropyltoluene
8260C	5035	Solid	4-Methyl-2-pentanone (MIBK)
8260C	5035	Solid	Acetone
8260C	5035	Solid	Acrylonitrile
8260C	5035	Solid	Benzene
8260C	5035	Solid	Bromobenzene
8260C	5035	Solid	Bromochloromethane
8260C	5035	Solid	Bromodichloromethane

Laboratory: Eurofins New England (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260C	5035	Solid	Bromoform
8260C	5035	Solid	Bromomethane
8260C	5035	Solid	Carbon disulfide
8260C	5035	Solid	Carbon tetrachloride
8260C	5035	Solid	Chlorobenzene
8260C	5035	Solid	Chloroethane
8260C	5035	Solid	Chloroform
8260C	5035	Solid	Chloromethane
8260C	5035	Solid	cis-1,2-Dichloroethene
8260C	5035	Solid	cis-1,3-Dichloropropene
8260C	5035	Solid	Dibromochloromethane
8260C	5035	Solid	Dibromomethane
8260C	5035	Solid	Dichlorodifluoromethane (Freon 12)
8260C	5035	Solid	di-Isopropyl ether
8260C	5035	Solid	Ethanol
8260C	5035	Solid	Ethyl ether
8260C	5035	Solid	Ethyl tert-butyl ether
8260C	5035	Solid	Ethylbenzene
8260C	5035	Solid	Hexachlorobutadiene
8260C	5035	Solid	Isopropylbenzene
8260C	5035	Solid	m,p-Xylene
8260C	5035	Solid	Methyl tert-butyl ether
8260C	5035	Solid	Methylene Chloride
8260C	5035	Solid	Naphthalene
8260C	5035	Solid	n-Butylbenzene
8260C	5035	Solid	N-Propylbenzene
8260C	5035	Solid	o-Xylene
8260C	5035	Solid	sec-Butylbenzene
8260C	5035	Solid	Styrene
8260C	5035	Solid	Tert-amyl methyl ether
8260C	5035	Solid	tert-Butanol
8260C	5035	Solid	tert-Butylbenzene
8260C	5035	Solid	Tetrachloroethene
8260C	5035	Solid	Tetrahydrofuran
8260C	5035	Solid	Toluene
8260C	5035	Solid	trans-1,2-Dichloroethene
8260C	5035	Solid	trans-1,3-Dichloropropene
8260C	5035	Solid	trans-1,4-Dichloro-2-butene
8260C	5035	Solid	Trichloroethene
8260C	5035	Solid	Trichlorofluoromethane (Freon 11)
8260C	5035	Solid	Vinyl chloride
8270D_LL_PAH	3546	Solid	1-Methylnaphthalene
8270D_LL_PAH	3546	Solid	2-Methylnaphthalene
8270D_LL_PAH	3546	Solid	Acenaphthene
8270D_LL_PAH	3546	Solid	Acenaphthylene
8270D_LL_PAH	3546	Solid	Anthracene
8270D_LL_PAH	3546	Solid	Benzo[a]anthracene

Accreditation/Certification Summary

Client: Pare Corporation
Job ID: 620-8150-1
Project/Site: MA Sediment Samples

Laboratory: Eurofins New England (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8270D_LL_PAH	3546	Solid	Benzo[a]pyrene
8270D_LL_PAH	3546	Solid	Benzo[b]fluoranthene
8270D_LL_PAH	3546	Solid	Benzo[g,h,i]perylene
8270D_LL_PAH	3546	Solid	Benzo[k]fluoranthene
8270D_LL_PAH	3546	Solid	Bis(2-ethylhexyl) phthalate
8270D_LL_PAH	3546	Solid	Chrysene
8270D_LL_PAH	3546	Solid	Dibenz(a,h)anthracene
8270D_LL_PAH	3546	Solid	Fluoranthene
8270D_LL_PAH	3546	Solid	Fluorene
8270D_LL_PAH	3546	Solid	Indeno[1,2,3-cd]pyrene
8270D_LL_PAH	3546	Solid	Naphthalene
8270D_LL_PAH	3546	Solid	Phenanthrene
8270D_LL_PAH	3546	Solid	Pyrene
MAEPH2.1	3546	Solid	2-Methylnaphthalene
MAEPH2.1	3546	Solid	Acenaphthene
MAEPH2.1	3546	Solid	Acenaphthylene
MAEPH2.1	3546	Solid	Anthracene
MAEPH2.1	3546	Solid	Benzo[a]anthracene
MAEPH2.1	3546	Solid	Benzo[a]pyrene
MAEPH2.1	3546	Solid	Benzo[b]fluoranthene
MAEPH2.1	3546	Solid	Benzo[g,h,i]perylene
MAEPH2.1	3546	Solid	Benzo[k]fluoranthene
MAEPH2.1	3546	Solid	C11-C22 Aromatics
MAEPH2.1	3546	Solid	C11-C22 Aromatics (Adjusted)
MAEPH2.1	3546	Solid	C19-C36 Aliphatics
MAEPH2.1	3546	Solid	C9-C18 Aliphatics
MAEPH2.1	3546	Solid	Chrysene
MAEPH2.1	3546	Solid	Dibenz(a,h)anthracene
MAEPH2.1	3546	Solid	Fluoranthene
MAEPH2.1	3546	Solid	Fluorene
MAEPH2.1	3546	Solid	Indeno[1,2,3-cd]pyrene
MAEPH2.1	3546	Solid	Naphthalene
MAEPH2.1	3546	Solid	Phenanthrene
MAEPH2.1	3546	Solid	Pyrene
Moisture		Solid	Percent Moisture
Moisture		Solid	Percent Solids

Laboratory: Eurofins Burlington

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
ANAB	Dept. of Defense ELAP	L2336	02-25-23
Connecticut	State	PH-0751	09-30-23
DE Haz. Subst. Cleanup Act (HSCA)	State	N/A	05-17-23
Florida	NELAP	E87467	06-30-23
Minnesota	NELAP	050-999-436	12-31-22
New Hampshire	NELAP	2006	12-18-22

Accreditation/Certification Summary

Client: Pare Corporation
Job ID: 620-8150-1
Project/Site: MA Sediment Samples

Laboratory: Eurofins Burlington (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
New Jersey	NELAP	VT972	06-30-23
New York	NELAP	10391	04-01-23
Pennsylvania	NELAP	68-00489	04-30-23
Rhode Island	State	LAO00298	12-30-22
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-17-00272	10-30-23
Vermont	State	VT4000	02-10-23
Virginia	NELAP	460209	12-14-22
Wisconsin	State	399133350	08-31-23

Laboratory: Eurofins Edison

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Connecticut	State	PH-0200	11-10-22 *
DE Haz. Subst. Cleanup Act (HSCA)	State	N/A	01-01-23
Massachusetts	State	M-NJ312	06-30-23
New Jersey	NELAP	12028	06-30-23
New York	NELAP	11452	04-01-23
Pennsylvania	NELAP	68-00522	02-28-23
Rhode Island	State	LAO00376	12-31-22
USDA	US Federal Programs	P330-20-00244	11-03-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Pare Corporation
Project/Site: MA Sediment Samples

Job ID: 620-8150-1

Method	Method Description	Protocol	Laboratory
8260C	Volatile Organic Compounds by GC/MS	SW846	EET NE
8270D_LL_PAH	Semivolatile Organic Compounds (GC/MS) Low level PAH	SW846	EET NE
8082A	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	EET NE
MAEPH2.1	Massachusetts - Extractable Petroleum Hydrocarbons (GC)	MA DEP	EET NE
6010D	Metals (ICP)	SW846	EET EDI
7471B	Mercury (CVAA)	SW846	EET EDI
Moisture	Percent Moisture	EPA	EET NE
D422	Grain Size	ASTM	EET BUR
Subcontract	TOC	None	PEL, Inc
3050B	Preparation, Metals	SW846	EET EDI
3546	Microwave Extraction	SW846	EET NE
5035	Closed System Purge and Trap	SW846	EET NE
7471B	Preparation, Mercury	SW846	EET EDI
Frozen Preserve	Freezing Samples	None	EET NE
MA EPH Frac	Massachusetts - Extractable Petroleum Hydrocarbon Fractionation	MA DEP	EET NE

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
MA DEP = Massachusetts Department Of Environmental Protection
None = None
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

EET BUR = Eurofins Burlington, 530 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990
EET EDI = Eurofins Edison, 777 New Durham Road, Edison, NJ 08817, TEL (732)549-3900
EET NE = Eurofins New England, 646 Camp Ave, North Kingstown, RI 02852, TEL (413)789-9018
PEL, Inc = Phoenix Environmental Laboratories, Inc., 587 East Middle Turnpike, Manchester, CT 06040, TEL (860)645-8726

Sample Summary

Client: Pare Corporation
Project/Site: MA Sediment Samples

Job ID: 620-8150-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
620-8150-1	IMP-2	Solid	11/07/22 10:35	11/07/22 16:42
620-8150-2	IMP-1	Solid	11/07/22 11:20	11/07/22 16:42
620-8150-3	IMP-3	Solid	11/07/22 12:00	11/07/22 16:42
620-8150-4	DS-CPD	Solid	11/07/22 12:45	11/07/22 16:42

8190

620-8150 Chain of Custody

Chain of Custody Record

eurofins | Environment Testing America

	Sampler: MATTHEW DaSILVA	Lab PM: Huntley, Agnes R	Carrier Tracking No(s):	COC No: 620-6367-849 1
Client Contact: Harsha Prasad	Phone:	E-Mail: Agnes.Huntley@et.eurofinsus com	State of Origin: RHODE MA	Page: Page 1 of 1
Company: Pare Corporation	PWSID:			Job #: 22116 00

Address: 8 Blackstone Valley Place	Due Date Requested.	
City: Lincoln	TAT Requested (days): STANDARD	
State, Zip: RI 02865	Compliance Project: Δ Yes Δ No	
Phone: 401-334-4100(Tel)	PO #: Purchase Order not required	
Email: HPrasad@parecorp com	WO #:	
Project Name: Carpenters Pond Sediment	Project #: 62001735	
Site: CARPENTERS POND	SSOW#:	

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	D422 - Grain Size (Sieve and Hydrometer)	8082A, 8270D_LL_PAH	6010D, 7471B	MAEPH2 1, Moisture	SUBCONTRACT - Local Method	8260C - 8260 Standard List										Total Number of containers	Special Instructions/Note:
Preservation Code:							N	N	N	N	N	J											
01 IMP-2	11/7/22	10 35	C	Solid			X	X	X	X	X	X										8	
02 IMP-1	11/7/22	11 20	C	Solid			↓	↓	↓	↓	↓	↓										8	
03 IMP 3	11/7/22	12 00	C	Solid			↓	↓	↓	↓	↓	↓										8	
04 DS-CPD	11/7/22	12 45	C	Solid			↓	↓	↓	↓	↓	↓										8	

Page 70 of 76

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return To Client ☑ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by:	Date:	Time	Method of Shipment:

Relinquished by:	Date/Time: 11/7 4:42	Company	Received by:	Date/Time: 11/7/22 16:42	Company EVE
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: 3.6 +0.1 3.7 #6 Iced

Ver: 06/08/2021

12/20/2022

Eurofins New England
646 Camp Ave
North Kingstown, RI 02852
Phone 413-789-9018

Chain of Custody Record

620-8150 Chain of Custody

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler	Lab PM: Huntley, Agnes R		COC No: 620-7119 1
Client Contact: Shipping/Receiving	Phone	E-Mail: Agnes Huntley@et.eurofinsus.com	State of Origin: Massachusetts	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc		Accreditations Required (See note): State - Rhode Island		Job #: 620-8150-1
Address: 530 Community Drive, Suite 11,	Due Date Requested: 11/15/2022			
City: South Burlington	TAT Requested (days):			
State, Zip: VT, 05403				
Phone: 802-660-1990(Tel) 802-660-1919(Fax)	PO #:			
Email	WO #:			
Project Name: MA Sediment Samples	Project #: 62001735			
Site	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	D422/ Grain Size (Sieve and Hydrometer)	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
IMP-2 (620-8150-1)	11/7/22	10 35 Eastern		Solid			X	1	
IMP-1 (620-8150-2)	11/7/22	11 20 Eastern		Solid			X	1	
IMP-3 (620-8150-3)	11/7/22	12 00 Eastern		Solid			X	1	
DS-CPD (620-8150-4)	11/7/22	12 45 Eastern		Solid			X	1	

Note Since laboratory accreditations are subject to change, Eurofins Environment Testing Northeast, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories This sample shipment is forwarded under chain-of-custody If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northeast, LLC laboratory or other instructions will be provided Any changes to accreditation status should be brought to Eurofins Environment Testing Northeast, LLC attention immediately If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing Northeast, LLC

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested I, II, III, IV, Other (specify) Primary Deliverable Rank. 2	Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment:

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
[signature]	11/7/22 17:19	ENE	FedEx		
Relinquished by	Date/Time	Company	Received by [signature]	Date/Time 11/8/2022 1030	Company ETH Burl
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.	Cooler Temperature(s) °C and Other Remarks

Ver: 06/08/2021

ORIGIN ID:NCOA (413) 789-9018
SAMPLE RECEIVING
EUROFINS ENVIRONMENTAL TESTING NE
646 CAMP AVENUE

NORTH KINGSTOWN, RI 02852
UNITED STATES US

SHIP DATE: 07NOV22
ACTWGT: 50.00 LB
CAD: 108821262/INET4530

BILL SENDER

TO SAMPLE RECEIVING
TEST AMERICA - BURLINGTON, VT
30 COMMUNITY DR
STE 11
SOUTH BURLINGTON VT 05403
(802) 660-1990 REF WORKSHARE 11 7
INV
PO DEPT

581J4/07F5/FE2D

FedEx Express

J224222101801uw

TUE - 08 NOV 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7704 2575 2073

XE BTVA

05403
VT-US BTV

Eurofins New England
646 Camp Ave
North Kingstown, RI 02852
Phone: 413-789-9018

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Huntley, Agnes R	Carrier Tracking No(s):	COC No: 620-7118.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Agnes.Huntley@et.eurofinsus.com	State of Origin: Massachusetts	Page: Page 1 of 1
Company: Eurofins Environment Testing Northeast,		Accreditations Required (See note): State - Rhode Island		Job #: 620-8150-1
Address: 777 New Durham Road, ,	Due Date Requested: 11/15/2022			
City: Edison	TAT Requested (days):			
State, Zip: NJ, 08817				
Phone: 732-549-3900(Tel) 732-549-3679(Fax)	PO #:			
Email:	WO #:			
Project Name: MA Sediment Samples	Project #: 62001735			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	6010D/3050B As, Cd, Cr, Cu, Pb, Ni, Zn	7471B/7471B_Prep Hg	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
IMP-2 (620-8150-1)	11/7/22	10:35 Eastern		Solid			X	X	1	
IMP-1 (620-8150-2)	11/7/22	11:20 Eastern		Solid			X	X	1	
IMP-3 (620-8150-3)	11/7/22	12:00 Eastern		Solid			X	X	1	
DS-CPD (620-8150-4)	11/7/22	12:45 Eastern		Solid			X	X	1	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northeast, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing Northeast, LLC.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1		11/7/22 17:18	ENE	FedEx		
2				Angela Cascella via FedEx	11/8/22 09:30	ETA ECI
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.: Present	Cooler Temperature(s) °C and Other Remarks: 0.4/0.4 IR#9

Ver: 06/08/2021

Login Sample Receipt Checklist

Client: Pare Corporation

Job Number: 620-8150-1

Login Number: 8150
List Number: 1
Creator: Makhoul, Elie

List Source: Eurofins New England

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Pare Corporation

Job Number: 620-8150-1

Login Number: 8150
List Number: 3
Creator: Reynolds, Jamie K

List Source: Eurofins Burlington
List Creation: 11/08/22 12:56 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	Lab does not accept radioactive samples.
The cooler's custody seal, if present, is intact.	True	Seal present with no number.
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	4.1ºC
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	Check done at department level as required.

Login Sample Receipt Checklist

Client: Pare Corporation

Job Number: 620-8150-1

Login Number: 8150
List Number: 2
Creator: Armbruster, Chris

List Source: Eurofins Edison
List Creation: 11/08/22 11:59 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.4°C IR9
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ANALYTICAL REPORT

Lab Number:	L2314638
Client:	Pare Engineering Corporation 8 Blackstone Valley Place Lincoln, RI 02865
ATTN:	Matthew DaSilva
Phone:	(401) 334-4100
Project Name:	CARPENTER POND
Project Number:	22116.00
Report Date:	04/11/23

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA030), NH NELAP (2062), CT (PH-0141), DoD (L2474), FL (E87814), IL (200081), LA (85084), ME (MA00030), MD (350), NJ (MA015), NY (11627), NC (685), OH (CL106), PA (68-02089), RI (LAO00299), TX (T104704419), VT (VT-0015), VA (460194), WA (C954), US Army Corps of Engineers, USDA (Permit #P330-17-00150), USFWS (Permit #206964).

320 Forbes Boulevard, Mansfield, MA 02048-1806
508-822-9300 (Fax) 508-822-3288 800-624-9220 - www.alphalab.com

Project Name: CARPENTER POND
Project Number: 22116.00

Lab Number: L2314638
Report Date: 04/11/23

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2314638-01	IMP-2	SOIL	DUDLEY, MA	03/21/23 00:00	03/21/23
L2314638-02	FIELD BLANK	WATER	DUDLEY, MA	03/21/23 00:00	03/21/23

Project Name: CARPENTER POND **Lab Number:** L2314638

Project Number: 22116.00 **Report Date:** 04/11/23

MADEP MCP Response Action Analytical Report Certification

This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	N/A
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

For any questions answered "No", please refer to the case narrative section on the following page(s).

Please note that sample matrix information is located in the Sample Results section of this report.

Project Name:	CARPENTER POND	**Lab Number:**	L2314638
Project Number:	22116.00	**Report Date:**	04/11/23

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	CARPENTER POND	**Lab Number:**	L2314638
Project Number:	22116.00	**Report Date:**	04/11/23

Case Narrative (continued)

Sample Receipt

L2314638-02: A sample identified as "FIELD BLANK" was received, but not listed on the Chain of Custody. At the client's request, this sample was analyzed.

MCP Related Narratives

1,4-Dioxane by 8270-SIM

L2314638-01D: The sample has elevated detection limits due to the dilution required by the sample matrix.

Non-MCP Related Narratives

Perfluorinated Alkyl Acids by Isotope Dilution

L2314638-01: Extracted Internal Standard recoveries were outside the acceptance criteria for individual analytes. Please refer to the surrogate section of the report for details.

L2314638-01: The MeOH fraction of the extraction is reported for perfluorooctanesulfonamide (fosa) due to better extraction efficiency of the perfluoro[13c8]octanesulfonamide (m8fosa) Extracted Internal Standard.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Kelly O'Neill

Title: Technical Director/Representative Date: 04/11/23

QC OUTLIER SUMMARY REPORT

Project Name: CARPENTER POND
Project Number: 22116.00
Lab Number: L2314638
Report Date: 04/11/23

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab								
LCMSMS-ID	IMP-2	L2314638-01	Perfluoro[13C4]Butanoic Acid (MPFBA)	Surrogate	43	61-135	-	- - not applicable - -
LCMSMS-ID	IMP-2	L2314638-01	Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	Surrogate	46	58-150	-	- - not applicable - -
LCMSMS-ID	IMP-2	L2314638-01	Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	Surrogate	73	74-139	-	- - not applicable - -
LCMSMS-ID	IMP-2	L2314638-01	Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	Surrogate	41	66-128	-	- - not applicable - -
LCMSMS-ID	IMP-2	L2314638-01	Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	Surrogate	45	71-129	-	- - not applicable - -
LCMSMS-ID	IMP-2	L2314638-01	Perfluoro[13C8]Octanoic Acid (M8PFOA)	Surrogate	56	75-130	-	- - not applicable - -
LCMSMS-ID	IMP-2	L2314638-01	Perfluoro[13C9]Nonanoic Acid (M9PFNA)	Surrogate	61	72-140	-	- - not applicable - -
LCMSMS-ID	IMP-2	L2314638-01	Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	Surrogate	67	75-130	-	- - not applicable - -
LCMSMS-ID	IMP-2	L2314638-01	Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	Surrogate	51	54-150	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-04)	WG1764624-3	Perfluoro[13C4]Butanoic Acid (MPFBA)	Surrogate	4	61-135	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-04)	WG1764624-3	Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	Surrogate	3	58-150	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-04)	WG1764624-3	Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	Surrogate	4	66-128	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-04)	WG1764624-3	Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	Surrogate	9	71-129	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-04)	WG1764624-3	Perfluoro[13C8]Octanoic Acid (M8PFOA)	Surrogate	17	75-130	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-04)	WG1764624-3	Perfluoro[13C9]Nonanoic Acid (M9PFNA)	Surrogate	27	72-140	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-04)	WG1764624-3	Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	Surrogate	38	75-130	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-04)	WG1764624-3	N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	Surrogate	7	31-134	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-04)	WG1764624-3	Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	Surrogate	48	61-155	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-04)	WG1764624-3	N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	Surrogate	13	34-137	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-04)	WG1764624-3	Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	Surrogate	46	54-150	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-08)	WG1764624-4	Perfluoro[13C4]Butanoic Acid (MPFBA)	Surrogate	16	61-135	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-08)	WG1764624-4	Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	Surrogate	22	58-150	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-08)	WG1764624-4	Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	Surrogate	69	74-139	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-08)	WG1764624-4	Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	Surrogate	29	66-128	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-08)	WG1764624-4	Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	Surrogate	36	71-129	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-08)	WG1764624-4	Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	Surrogate	75	78-139	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-08)	WG1764624-4	Perfluoro[13C8]Octanoic Acid (M8PFOA)	Surrogate	49	75-130	-	- - not applicable - -

QC OUTLIER SUMMARY REPORT

Project Name: CARPENTER POND
Project Number: 22116.00

Lab Number: L2314638
Report Date: 04/11/23

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
LCMSMS-ID	Batch QC (L2314960-08)	WG1764624-4	Perfluoro[13C9]Nonanoic Acid (M9PFNA)	Surrogate	50	72-140	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-08)	WG1764624-4	Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	Surrogate	75	79-136	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-08)	WG1764624-4	Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	Surrogate	55	75-130	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-08)	WG1764624-4	N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	Surrogate	15	31-134	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-08)	WG1764624-4	Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	Surrogate	58	61-155	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-08)	WG1764624-4	N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	Surrogate	15	34-137	-	- - not applicable - -
LCMSMS-ID	Batch QC (L2314960-08)	WG1764624-4	Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	Surrogate	47	54-150	-	- - not applicable - -

ORGANICS

SEMIVOLATILES

Project Name: CARPENTER POND
Project Number: 22116.00
Lab Number: L2314638
Report Date: 04/11/23

SAMPLE RESULTS

Lab ID: L2314638-01
Client ID: IMP-2
Sample Location: DUDLEY, MA

Date Collected: 03/21/23 00:00
Date Received: 03/21/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/11/23 10:44
Analyst: AC
Percent Solids: 25%

Extraction Method: ALPHA 23528
Extraction Date: 04/10/23 11:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/g	1.95	--	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/g	1.95	--	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	0.974	--	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/g	3.90	--	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/g	1.95	--	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/g	3.90	--	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/g	0.974	--	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	0.974	--	1
Perfluorooctanoic Acid (PFOA)	ND		ng/g	0.974	--	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/g	1.95	--	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/g	1.95	--	1
Perfluorononanoic Acid (PFNA)	ND		ng/g	0.974	--	1
Perfluorooctanesulfonic Acid (PFOS)	1.15	F	ng/g	0.974	--	1
Perfluorodecanoic Acid (PFDA)	ND		ng/g	0.974	--	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/g	1.95	--	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/g	3.90	--	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	1.95	--	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/g	1.95	--	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/g	1.95	--	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	1.95	--	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	1.95	--	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	1.95	--	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/g	1.95	--	1

Project Name: CARPENTER POND **Lab Number:** L2314638

Project Number: 22116.00 **Report Date:** 04/11/23

SAMPLE RESULTS

Lab ID: L2314638-01 Date Collected: 03/21/23 00:00

Client ID: IMP-2 Date Received: 03/21/23

Sample Location: DUDLEY, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	**43**	Q	61-135
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	**46**	Q	58-150
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	**73**	Q	74-139
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	86		14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	**41**	Q	66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	**45**	Q	71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	80		78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	**56**	Q	75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	94		20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	**61**	Q	72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	80		79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	**67**	Q	75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	111		19-175
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	52		31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	66		61-155
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	47		34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	**51**	Q	54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	43		24-159

Project Name: CARPENTER POND
Project Number: 22116.00
Lab Number: L2314638
Report Date: 04/11/23

SAMPLE RESULTS

Lab ID: L2314638-01
Client ID: IMP-2
Sample Location: DUDLEY, MA

Date Collected: 03/21/23 00:00
Date Received: 03/21/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/11/23 15:38
Analyst: JW
Percent Solids: 25%

Extraction Method: ALPHA 23528
Extraction Date: 04/10/23 11:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorooctanesulfonamide (FOSA)	ND		ng/g	1.95	--	1

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	47		5-117

Project Name: CARPENTER POND
Lab Number: L2314638
Project Number: 22116.00
Report Date: 04/11/23

SAMPLE RESULTS

Lab ID: L2314638-01 D
Client ID: IMP-2
Sample Location: DUDLEY, MA

Date Collected: 03/21/23 00:00
Date Received: 03/21/23
Field Prep: Not Specified

Sample Depth:
Matrix: Soil
Analytical Method: 141,8270E-SIM
Analytical Date: 03/27/23 16:00
Analyst: TPR
Percent Solids: 25%

Extraction Method: EPA 3570
Extraction Date: 03/23/23 10:27

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP 1,4 Dioxane by 8270E-SIM - Mansfield Lab						
1,4-Dioxane	ND		ug/kg	326	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	62		15-110

Project Name: CARPENTER POND
Project Number: 22116.00
Lab Number: L2314638
Report Date: 04/11/23

SAMPLE RESULTS

Lab ID: L2314638-02
Client ID: FIELD BLANK
Sample Location: DUDLEY, MA

Date Collected: 03/21/23 00:00
Date Received: 03/21/23
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/07/23 04:17
Analyst: AC

Extraction Method: ALPHA 23528
Extraction Date: 04/04/23 12:14

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						
Perfluorobutanoic Acid (PFBA)	ND		ng/l	1.86	--	1
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	1.86	--	1
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	1.86	--	1
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	1.86	--	1
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	1.86	--	1
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	1.86	--	1
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	1.86	--	1
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	1.86	--	1
Perfluorooctanoic Acid (PFOA)	ND		ng/l	1.86	--	1
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	1.86	--	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	1.86	--	1
Perfluorononanoic Acid (PFNA)	ND		ng/l	1.86	--	1
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	1.86	--	1
Perfluorodecanoic Acid (PFDA)	ND		ng/l	1.86	--	1
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	1.86	--	1
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	1.86	--	1
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	1.86	--	1
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	1.86	--	1
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	1.86	--	1
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	1.86	--	1
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	1.86	--	1
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	1.86	--	1
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	1.86	--	1
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	1.86	--	1

Project Name: CARPENTER POND **Lab Number:** L2314638

Project Number: 22116.00 **Report Date:** 04/11/23

SAMPLE RESULTS

Lab ID: L2314638-02 Date Collected: 03/21/23 00:00

Client ID: FIELD BLANK Date Received: 03/21/23

Sample Location: DUDLEY, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab						

Surrogate (Extracted Internal Standard)	% Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	95		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	108		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	93		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	89		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	92		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	92		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	96		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	92		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	86		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	95		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	91		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	91		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	97		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	73		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	87		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	46		5-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	83		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	73		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	79		22-136

Project Name: CARPENTER POND
Project Number: 22116.00
Lab Number: L2314638
Report Date: 04/11/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 141,8270E-SIM
Analytical Date: 03/27/23 14:39
Analyst: TPR

Extraction Method: EPA 3570
Extraction Date: 03/23/23 10:27

Parameter	Result	Qualifier	Units	RL	MDL
MCP 1,4 Dioxane by 8270E-SIM - Mansfield Lab for sample(s): 01 Batch: WG1758004-1					
1,4-Dioxane	ND		ug/kg	8.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,4-Dioxane-d8	72		15-110

Project Name: CARPENTER POND
Project Number: 22116.00
Lab Number: L2314638
Report Date: 04/11/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/06/23 23:35
Analyst: AC

Extraction Method: ALPHA 23528
Extraction Date: 04/04/23 11:55

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 02 Batch: WG1762567-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/l	2.00	--
Perfluoropentanoic Acid (PFPeA)	ND		ng/l	2.00	--
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/l	2.00	--
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/l	2.00	--
Perfluorohexanoic Acid (PFHxA)	ND		ng/l	2.00	--
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/l	2.00	--
Perfluoroheptanoic Acid (PFHpA)	ND		ng/l	2.00	--
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/l	2.00	--
Perfluorooctanoic Acid (PFOA)	ND		ng/l	2.00	--
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/l	2.00	--
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/l	2.00	--
Perfluorononanoic Acid (PFNA)	ND		ng/l	2.00	--
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/l	2.00	--
Perfluorodecanoic Acid (PFDA)	ND		ng/l	2.00	--
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/l	2.00	--
Perfluorononanesulfonic Acid (PFNS)	ND		ng/l	2.00	--
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/l	2.00	--
Perfluoroundecanoic Acid (PFUnA)	ND		ng/l	2.00	--
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/l	2.00	--
Perfluorooctanesulfonamide (FOSA)	ND		ng/l	2.00	--
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/l	2.00	--
Perfluorododecanoic Acid (PFDoA)	ND		ng/l	2.00	--
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/l	2.00	--
Perfluorotetradecanoic Acid (PFTA)	ND		ng/l	2.00	--

Project Name: CARPENTER POND
Project Number: 22116.00
Lab Number: L2314638
Report Date: 04/11/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/06/23 23:35
Analyst: AC

Extraction Method: ALPHA 23528
Extraction Date: 04/04/23 11:55

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 02 Batch: WG1762567-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	91		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	100		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	95		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	92		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	89		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	91		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	97		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	92		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	93		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	90		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	89		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	87		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	91		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	84		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	89		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	36		5-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	84		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	75		48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	61		22-136

Project Name: CARPENTER POND
Project Number: 22116.00
Lab Number: L2314638
Report Date: 04/11/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/11/23 10:11
Analyst: AC

Extraction Method: ALPHA 23528
Extraction Date: 04/10/23 11:30

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01 Batch: WG1764624-1					
Perfluorobutanoic Acid (PFBA)	ND		ng/g	0.500	--
Perfluoropentanoic Acid (PFPeA)	ND		ng/g	0.500	--
Perfluorobutanesulfonic Acid (PFBS)	ND		ng/g	0.250	--
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND		ng/g	1.00	--
Perfluorohexanoic Acid (PFHxA)	ND		ng/g	0.500	--
Perfluoropentanesulfonic Acid (PFPeS)	ND		ng/g	1.00	--
Perfluoroheptanoic Acid (PFHpA)	ND		ng/g	0.250	--
Perfluorohexanesulfonic Acid (PFHxS)	ND		ng/g	0.250	--
Perfluorooctanoic Acid (PFOA)	ND		ng/g	0.250	--
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND		ng/g	0.500	--
Perfluoroheptanesulfonic Acid (PFHpS)	ND		ng/g	0.500	--
Perfluorononanoic Acid (PFNA)	ND		ng/g	0.250	--
Perfluorooctanesulfonic Acid (PFOS)	ND		ng/g	0.250	--
Perfluorodecanoic Acid (PFDA)	ND		ng/g	0.250	--
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND		ng/g	0.500	--
Perfluorononanesulfonic Acid (PFNS)	ND		ng/g	1.00	--
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND		ng/g	0.500	--
Perfluoroundecanoic Acid (PFUnA)	ND		ng/g	0.500	--
Perfluorodecanesulfonic Acid (PFDS)	ND		ng/g	0.500	--
Perfluorooctanesulfonamide (FOSA)	ND		ng/g	0.500	--
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND		ng/g	0.500	--
Perfluorododecanoic Acid (PFDoA)	ND		ng/g	0.500	--
Perfluorotridecanoic Acid (PFTrDA)	ND		ng/g	0.500	--
Perfluorotetradecanoic Acid (PFTA)	ND		ng/g	0.500	--

Project Name: CARPENTER POND
Project Number: 22116.00
Lab Number: L2314638
Report Date: 04/11/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/11/23 10:11
Analyst: AC

Extraction Method: ALPHA 23528
Extraction Date: 04/10/23 11:30

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01 Batch: WG1764624-1					

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	83		61-135
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	86		58-150
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	79		74-139
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	80		14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	77		66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	77		71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	84		78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	86		75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	83		20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	84		72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	83		79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	83		75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	93		19-175
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	84		31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	82		61-155
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	11		5-117
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	87		34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	68		54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	62		24-159

Project Name: CARPENTER POND
Project Number: 22116.00

Lab Number: L2314638
Report Date: 04/11/23

Method Blank Analysis
Batch Quality Control

Analytical Method: 134,LCMSMS-ID
Analytical Date: 04/11/23 15:26
Analyst: JW

Extraction Method: ALPHA 23528
Extraction Date: 04/10/23 11:30

Parameter	Result	Qualifier	Units	RL	MDL
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab for sample(s): 01 Batch: WG1764624-1					
Perfluorooctanesulfonamide (FOSA)	ND		ng/g	0.500	--

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	56		5-117

Lab Control Sample Analysis

Batch Quality Control

Project Name: CARPENTER POND

Project Number: 22116.00

Lab Number: L2314638

Report Date: 04/11/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP 1,4 Dioxane by 8270E-SIM - Mansfield Lab Associated sample(s): 01 Batch: WG1758004-2 WG1758004-3								
1,4-Dioxane	106		108		40-140	2		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,4-Dioxane-d8	69		70		15-110

Lab Control Sample Analysis
Batch Quality Control

Project Name: CARPENTER POND
Project Number: 22116.00

Lab Number: L2314638
Report Date: 04/11/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 02 Batch: WG1762567-2								
Perfluorobutanoic Acid (PFBA)	105		-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	102		-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	104		-		65-157	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	109		-		37-219	-		30
Perfluorohexanoic Acid (PFHxA)	103		-		69-168	-		30
Perfluoropentanesulfonic Acid (PFPeS)	107		-		52-156	-		30
Perfluoroheptanoic Acid (PFHpA)	104		-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	104		-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	103		-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	103		-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	115		-		61-179	-		30
Perfluorononanoic Acid (PFNA)	103		-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	110		-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	108		-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	116		-		56-173	-		30
Perfluorononanesulfonic Acid (PFNS)	115		-		48-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	94		-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	105		-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	116		-		38-156	-		30
Perfluorooctanesulfonamide (FOSA)	107		-		46-170	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	108		-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	109		-		67-153	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: CARPENTER POND

Project Number: 22116.00

Lab Number: L2314638

Report Date: 04/11/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 02 Batch: WG1762567-2								
Perfluorotridecanoic Acid (PFTrDA)	113		-		48-158	-		30
Perfluorotetradecanoic Acid (PFTA)	107		-		59-182	-		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	94				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	102				62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	99				70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	103				12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	94				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	92				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	103				71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	95				62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	111				14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	99				59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	93				69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	90				62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	108				10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	86				24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	93				55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	23				5-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	87				27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	87				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	75				22-136

Lab Control Sample Analysis
Batch Quality Control

Project Name: CARPENTER POND
Project Number: 22116.00

Lab Number: L2314638
Report Date: 04/11/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01 Batch: WG1764624-2								
Perfluorobutanoic Acid (PFBA)	109		-		71-135	-		30
Perfluoropentanoic Acid (PFPeA)	109		-		69-132	-		30
Perfluorobutanesulfonic Acid (PFBS)	107		-		72-128	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	111		-		62-145	-		30
Perfluorohexanoic Acid (PFHxA)	108		-		70-132	-		30
Perfluoropentanesulfonic Acid (PFPeS)	106		-		73-123	-		30
Perfluoroheptanoic Acid (PFHpA)	106		-		71-131	-		30
Perfluorohexanesulfonic Acid (PFHxS)	106		-		67-130	-		30
Perfluorooctanoic Acid (PFOA)	101		-		69-133	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	113		-		64-140	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	104		-		70-132	-		30
Perfluorononanoic Acid (PFNA)	109		-		72-129	-		30
Perfluorooctanesulfonic Acid (PFOS)	108		-		68-136	-		30
Perfluorodecanoic Acid (PFDA)	105		-		69-133	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	120		-		65-137	-		30
Perfluorononanesulfonic Acid (PFNS)	103		-		69-125	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	110		-		63-144	-		30
Perfluoroundecanoic Acid (PFUnA)	119		-		64-136	-		30
Perfluorodecanesulfonic Acid (PFDS)	102		-		59-134	-		30
Perfluorooctanesulfonamide (FOSA)	106		-		67-137	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	103		-		61-139	-		30
Perfluorododecanoic Acid (PFDoA)	103		-		69-135	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: CARPENTER POND

Project Number: 22116.00

Lab Number: L2314638

Report Date: 04/11/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01 Batch: WG1764624-2								
Perfluorotridecanoic Acid (PFTrDA)	106		-		66-139	-		30
Perfluorotetradecanoic Acid (PFTA)	101		-		69-133	-		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	89				61-135
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	92				58-150
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	86				74-139
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	96				14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	85				66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	84				71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	91				78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	95				75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	95				20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	87				72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	92				79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	97				75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	107				19-175
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	100				31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	95				61-155
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	10				5-117
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	104				34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	84				54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	75				24-159

Lab Control Sample Analysis

Batch Quality Control

Project Name: CARPENTER POND
Project Number: 22116.00

Lab Number: L2314638
Report Date: 04/11/23

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01 Batch: WG1764624-2								
Perfluorooctanesulfonamide (FOSA)	96		-		67-137	-		30

Surrogate (Extracted Internal Standard)	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	57				5-117

Matrix Spike Analysis
Batch Quality Control

Project Name: CARPENTER POND
Project Number: 22116.00
Lab Number: L2314638
Report Date: 04/11/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1762567-3 QC Sample: L2314332-01 Client ID: MS Sample												
Perfluorobutanoic Acid (PFBA)	5.48	37.4	45.0	106		-	-		67-148	-		30
Perfluoropentanoic Acid (PFPeA)	6.34	37.4	45.2	104		-	-		63-161	-		30
Perfluorobutanesulfonic Acid (PFBS)	9.62	33.2	45.6	108		-	-		65-157	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	35.1	39.4	112		-	-		37-219	-		30
Perfluorohexanoic Acid (PFHxA)	20.3	37.4	57.6	100		-	-		69-168	-		30
Perfluoropentanesulfonic Acid (PFPeS)	13.0	35.2	49.6	104		-	-		52-156	-		30
Perfluoroheptanoic Acid (PFHpA)	43.8	37.4	80.0	97		-	-		58-159	-		30
Perfluorohexanesulfonic Acid (PFHxS)	33.2	34.2	70.0	108		-	-		69-177	-		30
Perfluorooctanoic Acid (PFOA)	9.36	37.4	49.2	107		-	-		63-159	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	35.6	38.8	109		-	-		49-187	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	3.62	35.6	44.4	114		-	-		61-179	-		30
Perfluorononanoic Acid (PFNA)	ND	37.4	43.4	114		-	-		68-171	-		30
Perfluorooctanesulfonic Acid (PFOS)	238	34.7	275	107		-	-		52-151	-		30
Perfluorodecanoic Acid (PFDA)	ND	37.4	42.3	113		-	-		63-171	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	35.9	39.9	111		-	-		56-173	-		30
Perfluorononanesulfonic Acid (PFNS)	ND	36	38.3	107		-	-		48-150	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	37.4	42.2	113		-	-		60-166	-		30
Perfluoroundecanoic Acid (PFUnA)	ND	37.4	39.7	106		-	-		60-153	-		30
Perfluorodecanesulfonic Acid (PFDS)	ND	36.1	40.5	112		-	-		38-156	-		30
Perfluorooctanesulfonamide (FOSA)	ND	37.4	37.3F	100		-	-		46-170	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	37.4	39.3	105		-	-		45-170	-		30
Perfluorododecanoic Acid (PFDoA)	ND	37.4	41.8	112		-	-		67-153	-		30

Matrix Spike Analysis

Batch Quality Control

Project Name: CARPENTER POND
Project Number: 22116.00
Lab Number: L2314638
Report Date: 04/11/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1762567-3 QC Sample: L2314332-01 Client ID: MS Sample												
Perfluorotridecanoic Acid (PFTrDA)	ND	37.4	40.7	109		-	-		48-158	-		30
Perfluorotetradecanoic Acid (PFTA)	ND	37.4	38.1	102		-	-		59-182	-		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	101				10-162
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	122				12-142
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	108				14-147
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	77				27-126
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	66				24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	83				55-137
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	72				62-124
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	73				57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	72				60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	104				71-134
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	70				48-131
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	70				22-136
Perfluoro[13C4]Butanoic Acid (MPFBA)	79				58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	89				62-163
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	29				5-112
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	93				69-131
Perfluoro[13C8]Octanoic Acid (M8PFOA)	75				62-129
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	72				59-139
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	98				70-131

Matrix Spike Analysis
Batch Quality Control

Project Name: CARPENTER POND
Project Number: 22116.00
Lab Number: L2314638
Report Date: 04/11/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1764624-3 QC Sample: L2314960-04 Client ID: MS Sample												
Perfluorobutanoic Acid (PFBA)	ND	5.44	4.21	77		-	-		71-135	-		30
Perfluoropentanoic Acid (PFPeA)	ND	5.44	5.89	108		-	-		69-132	-		30
Perfluorobutanesulfonic Acid (PFBS)	ND	4.83	5.12	106		-	-		72-128	-		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	5.1	5.69	111		-	-		62-145	-		30
Perfluorohexanoic Acid (PFHxA)	ND	5.44	6.38	117		-	-		70-132	-		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	5.13	5.44	106		-	-		73-123	-		30
Perfluoroheptanoic Acid (PFHpA)	ND	5.44	5.91	109		-	-		71-131	-		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	4.97	5.44	109		-	-		67-130	-		30
Perfluorooctanoic Acid (PFOA)	ND	5.44	5.98	108		-	-		69-133	-		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	5.18	5.73	111		-	-		64-140	-		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	5.19	5.29	102		-	-		70-132	-		30
Perfluorononanoic Acid (PFNA)	ND	5.44	6.15	113		-	-		72-129	-		30
Perfluorooctanesulfonic Acid (PFOS)	ND	5.05	5.61	108		-	-		68-136	-		30
Perfluorodecanoic Acid (PFDA)	ND	5.44	6.08	112		-	-		69-133	-		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	5.22	6.44	123		-	-		65-137	-		30
Perfluorononanesulfonic Acid (PFNS)	ND	5.24	5.48	105		-	-		69-125	-		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	5.44	5.05	93		-	-		63-144	-		30
Perfluoroundecanoic Acid (PFUnA)	ND	5.44	6.59	121		-	-		64-136	-		30
Perfluorodecanesulfonic Acid (PFDS)	ND	5.26	5.81	111		-	-		59-134	-		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	5.44	5.64	104		-	-		61-139	-		30
Perfluorododecanoic Acid (PFDoA)	ND	5.44	6.18	114		-	-		69-135	-		30
Perfluorotridecanoic Acid (PFTrDA)	ND	5.44	5.44	100		-	-		66-139	-		30

Matrix Spike Analysis

Batch Quality Control

Project Name: CARPENTER POND
Project Number: 22116.00
Lab Number: L2314638
Report Date: 04/11/23

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1764624-3 QC Sample: L2314960-04 Client ID: MS Sample												
Perfluorotetradecanoic Acid (PFTA)	ND	5.44	5.25	97		-	-		69-133	-		30

Surrogate (Extracted Internal Standard)	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	115				19-175
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	79				14-167
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	88				20-154
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	**13**	Q			34-137
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	**7**	Q			31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	**48**	Q			61-155
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	**38**	Q			75-130
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	**4**	Q			66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	**9**	Q			71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	80				78-139
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	**46**	Q			54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	56				24-159
Perfluoro[13C4]Butanoic Acid (MPFBA)	**4**	Q			61-135
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	**3**	Q			58-150
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	82				79-136
Perfluoro[13C8]Octanoic Acid (M8PFOA)	**17**	Q			75-130
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	**27**	Q			72-140
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	77				74-139

Lab Duplicate Analysis
Batch Quality Control

Project Name: CARPENTER POND
Project Number: 22116.00

Lab Number: L2314638
Report Date: 04/11/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1762567-4 QC Sample: L2314333-01 Client ID: DUP Sample						
Perfluorobutanoic Acid (PFBA)	4.97	5.08	ng/l	2		30
Perfluoropentanoic Acid (PFPeA)	4.88	5.08	ng/l	4		30
Perfluorobutanesulfonic Acid (PFBS)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	ND	ng/l	NC		30
Perfluorohexanoic Acid (PFHxA)	4.98	4.82	ng/l	3		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	ND	ng/l	NC		30
Perfluoroheptanoic Acid (PFHpA)	3.40	3.70	ng/l	8		30
Perfluorohexanesulfonic Acid (PFHxS)	3.98F	3.80	ng/l	5		30
Perfluorooctanoic Acid (PFOA)	16.2	16.1	ng/l	1		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	ND	ng/l	NC		30
Perfluoroheptanesulfonic Acid (PFHpS)	1.92	ND	ng/l	NC		30
Perfluorononanoic Acid (PFNA)	12.9	13.0	ng/l	1		30
Perfluorooctanesulfonic Acid (PFOS)	35.5	35.8	ng/l	1		30
Perfluorodecanoic Acid (PFDA)	ND	ND	ng/l	NC		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	ND	ng/l	NC		30
Perfluorononanesulfonic Acid (PFNS)	ND	ND	ng/l	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	ND	ng/l	NC		30
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ng/l	NC		30
Perfluorodecanesulfonic Acid (PFDS)	ND	ND	ng/l	NC		30
Perfluorooctanesulfonamide (FOSA)	ND	ND	ng/l	NC		30

Lab Duplicate Analysis
Batch Quality Control

Project Name: CARPENTER POND
Project Number: 22116.00

Lab Number: L2314638
Report Date: 04/11/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1762567-4 QC Sample: L2314333-01 Client ID: DUP Sample						
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/l	NC		30
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/l	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/l	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/l	NC		30

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	80		77		58-132
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	88		82		62-163
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	89		91		70-131
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	99		100		12-142
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	79		74		57-129
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	82		72		60-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	94		94		71-134
Perfluoro[13C8]Octanoic Acid (M8PFOA)	83		77		62-129
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	85		90		14-147
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	75		72		59-139
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	85		84		69-131
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	72		69		62-124
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	87		86		10-162
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	63		55		24-116
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	76		73		55-137
Perfluoro[13C8]Octanesulfonamide (M8FOSA)	27		15		5-112
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	65		56		27-126
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	60		61		48-131

Lab Duplicate Analysis
Batch Quality Control

Project Name: CARPENTER POND
Project Number: 22116.00

Lab Number: L2314638
Report Date: 04/11/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits

Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1762567-4 QC Sample: L2314333-01 Client ID: DUP Sample

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	52		66		22-136

Lab Duplicate Analysis
Batch Quality Control

Project Name: CARPENTER POND
Project Number: 22116.00

Lab Number: L2314638
Report Date: 04/11/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1764624-4 QC Sample: L2314960-08 Client ID: DUP Sample						
Perfluorobutanoic Acid (PFBA)	ND	ND	ng/g	NC		30
Perfluoropentanoic Acid (PFPeA)	ND	ND	ng/g	NC		30
Perfluorobutanesulfonic Acid (PFBS)	ND	ND	ng/g	NC		30
1H,1H,2H,2H-Perfluorohexanesulfonic Acid (4:2FTS)	ND	ND	ng/g	NC		30
Perfluorohexanoic Acid (PFHxA)	ND	ND	ng/g	NC		30
Perfluoropentanesulfonic Acid (PFPeS)	ND	ND	ng/g	NC		30
Perfluoroheptanoic Acid (PFHpA)	ND	ND	ng/g	NC		30
Perfluorohexanesulfonic Acid (PFHxS)	ND	ND	ng/g	NC		30
Perfluorooctanoic Acid (PFOA)	ND	ND	ng/g	NC		30
1H,1H,2H,2H-Perfluorooctanesulfonic Acid (6:2FTS)	ND	ND	ng/g	NC		30
Perfluoroheptanesulfonic Acid (PFHpS)	ND	ND	ng/g	NC		30
Perfluorononanoic Acid (PFNA)	ND	ND	ng/g	NC		30
Perfluorooctanesulfonic Acid (PFOS)	ND	ND	ng/g	NC		30
Perfluorodecanoic Acid (PFDA)	ND	ND	ng/g	NC		30
1H,1H,2H,2H-Perfluorodecanesulfonic Acid (8:2FTS)	ND	ND	ng/g	NC		30
Perfluorononanesulfonic Acid (PFNS)	ND	ND	ng/g	NC		30
N-Methyl Perfluorooctanesulfonamidoacetic Acid (NMeFOSAA)	ND	ND	ng/g	NC		30
Perfluoroundecanoic Acid (PFUnA)	ND	ND	ng/g	NC		30
Perfluorodecanesulfonic Acid (PFDS)	ND	ND	ng/g	NC		30
N-Ethyl Perfluorooctanesulfonamidoacetic Acid (NEtFOSAA)	ND	ND	ng/g	NC		30

Lab Duplicate Analysis
Batch Quality Control

Project Name: CARPENTER POND
Project Number: 22116.00

Lab Number: L2314638
Report Date: 04/11/23

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Perfluorinated Alkyl Acids by Isotope Dilution - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1764624-4 QC Sample: L2314960-08 Client ID: DUP Sample						
Perfluorododecanoic Acid (PFDoA)	ND	ND	ng/g	NC		30
Perfluorotridecanoic Acid (PFTrDA)	ND	ND	ng/g	NC		30
Perfluorotetradecanoic Acid (PFTA)	ND	ND	ng/g	NC		30

Surrogate (Extracted Internal Standard)	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
Perfluoro[13C4]Butanoic Acid (MPFBA)	**5**	Q	**16**	Q	61-135
Perfluoro[13C5]Pentanoic Acid (M5PFPEA)	**8**	Q	**22**	Q	58-150
Perfluoro[2,3,4-13C3]Butanesulfonic Acid (M3PFBS)	**71**	Q	**69**	Q	74-139
1H,1H,2H,2H-Perfluoro[1,2-13C2]Hexanesulfonic Acid (M2-4:2FTS)	68		65		14-167
Perfluoro[1,2,3,4,6-13C5]Hexanoic Acid (M5PFHxA)	**11**	Q	**29**	Q	66-128
Perfluoro[1,2,3,4-13C4]Heptanoic Acid (M4PFHpA)	**19**	Q	**36**	Q	71-129
Perfluoro[1,2,3-13C3]Hexanesulfonic Acid (M3PFHxS)	**76**	Q	**75**	Q	78-139
Perfluoro[13C8]Octanoic Acid (M8PFOA)	**30**	Q	**49**	Q	75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Octanesulfonic Acid (M2-6:2FTS)	70		65		20-154
Perfluoro[13C9]Nonanoic Acid (M9PFNA)	**38**	Q	**50**	Q	72-140
Perfluoro[13C8]Octanesulfonic Acid (M8PFOS)	**78**	Q	**75**	Q	79-136
Perfluoro[1,2,3,4,5,6-13C6]Decanoic Acid (M6PFDA)	**46**	Q	**55**	Q	75-130
1H,1H,2H,2H-Perfluoro[1,2-13C2]Decanesulfonic Acid (M2-8:2FTS)	83		81		19-175
N-Deuteriomethylperfluoro-1-octanesulfonamidoacetic Acid (d3-NMeFOSAA)	**12**	Q	**15**	Q	31-134
Perfluoro[1,2,3,4,5,6,7-13C7]Undecanoic Acid (M7-PFUDA)	**53**	Q	**58**	Q	61-155
N-Deuterioethylperfluoro-1-octanesulfonamidoacetic Acid (d5-NEtFOSAA)	**13**	Q	**15**	Q	34-137
Perfluoro[1,2-13C2]Dodecanoic Acid (MPFDOA)	**47**	Q	**47**	Q	54-150
Perfluoro[1,2-13C2]Tetradecanoic Acid (M2PFTEDA)	48		50		24-159

INORGANICS
&
MISCELLANEOUS

Project Name: CARPENTER POND
Project Number: 22116.00
Lab Number: L2314638
Report Date: 04/11/23

SAMPLE RESULTS

Lab ID: L2314638-01
Client ID: IMP-2
Sample Location: DUDLEY, MA
Sample Depth:
Matrix: Soil

Date Collected: 03/21/23 00:00
Date Received: 03/21/23
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Mansfield Lab										
Solids, Total	24.5		%	0.100	--	1	-	03/22/23 21:35	121,2540G	MSA

Project Name: CARPENTER POND
Project Number: 22116.00

Lab Number: L2314638
Report Date: 04/11/23

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2314638-01A	Glass 250ml/8oz unpreserved	B	NA		2.2	Y	Absent		A2-MCP-14DX-SIM-21(14)
L2314638-01B	Plastic 2oz unpreserved for TS	A	NA		2.2	Y	Absent		A2-TS(7)
L2314638-01C	Plastic 8oz unpreserved	A	NA		4.0	Y	Absent		A2-537-ISOTOPE(90)
L2314638-01D	Plastic 2oz unpreserved for TS	A	NA		4.0	Y	Absent		A2-TS(7)
L2314638-02A	Plastic 250ml unpreserved	A	NA		4.0	Y	Absent		A2-537-ISOTOPE(28)

Container Comments

L2314638-01B	Low Volume for PFAS

*Values in parentheses indicate holding time in days

Project Name: CARPENTER POND
Project Number: 22116.00
Lab Number: L2314638
Report Date: 04/11/23

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
PERFLUOROALKYL CARBOXYLIC ACIDS (PFCAs)		
Perfluorooctadecanoic Acid	PFODA	16517-11-6
Perfluorohexadecanoic Acid	PFHxDA	67905-19-5
Perfluorotetradecanoic Acid	PFTA/PFTeDA	376-06-7
Perfluorotridecanoic Acid	PFTrDA	72629-94-8
Perfluorododecanoic Acid	PFDoA	307-55-1
Perfluoroundecanoic Acid	PFUnA	2058-94-8
Perfluorodecanoic Acid	PFDA	335-76-2
Perfluorononanoic Acid	PFNA	375-95-1
Perfluorooctanoic Acid	PFOA	335-67-1
Perfluoroheptanoic Acid	PFHpA	375-85-9
Perfluorohexanoic Acid	PFHxA	307-24-4
Perfluoropentanoic Acid	PFPeA	2706-90-3
Perfluorobutanoic Acid	PFBA	375-22-4
PERFLUOROALKYL SULFONIC ACIDS (PFSAs)		
Perfluorododecanesulfonic Acid	PFDoDS/PFDoS	79780-39-5
Perfluorodecanesulfonic Acid	PFDS	335-77-3
Perfluorononanesulfonic Acid	PFNS	68259-12-1
Perfluorooctanesulfonic Acid	PFOS	1763-23-1
Perfluoroheptanesulfonic Acid	PFHpS	375-92-8
Perfluorohexanesulfonic Acid	PFHxS	355-46-4
Perfluoropentanesulfonic Acid	PFPeS	2706-91-4
Perfluorobutanesulfonic Acid	PFBS	375-73-5
Perfluoropropanesulfonic Acid	PFPrS	423-41-6
FLUOROTELOMERS		
1H,1H,2H,2H-Perfluorododecanesulfonic Acid	10:2FTS	120226-60-0
1H,1H,2H,2H-Perfluorodecanesulfonic Acid	8:2FTS	39108-34-4
1H,1H,2H,2H-Perfluorooctanesulfonic Acid	6:2FTS	27619-97-2
1H,1H,2H,2H-Perfluorohexanesulfonic Acid	4:2FTS	757124-72-4
PERFLUOROALKANE SULFONAMIDES (FASAs)		
Perfluorooctanesulfonamide	FOSA/PFOSA	754-91-6
N-Ethyl Perfluorooctane Sulfonamide	NEtFOSA	4151-50-2
N-Methyl Perfluorooctane Sulfonamide	NMeFOSA	31506-32-8
PERFLUOROALKANE SULFONYL SUBSTANCES		
N-Ethyl Perfluorooctanesulfonamido Ethanol	NEtFOSE	1691-99-2
N-Methyl Perfluorooctanesulfonamido Ethanol	NMeFOSE	24448-09-7
N-Ethyl Perfluorooctanesulfonamidoacetic Acid	NEtFOSAA	2991-50-6
N-Methyl Perfluorooctanesulfonamidoacetic Acid	NMeFOSAA	2355-31-9
PER- and POLYFLUOROALKYL ETHER CARBOXYLIC ACIDS		
2,3,3,3-Tetrafluoro-2-[1,1,2,2,3,3,3-Heptafluoropropoxy]-Propanoic Acid	HFPO-DA	13252-13-6
4,8-Dioxa-3h-Perfluorononanoic Acid	ADONA	919005-14-4
CHLORO-PERFLUOROALKYL SULFONIC ACIDS		
11-Chloroeicosafluoro-3-Oxaundecane-1-Sulfonic Acid	11Cl-PF3OUdS	763051-92-9
9-Chlorohexadecafluoro-3-Oxanone-1-Sulfonic Acid	9Cl-PF3ONS	756426-58-1
PERFLUOROETHER SULFONIC ACIDS (PFESAs)		
Perfluoro(2-Ethoxyethane)Sulfonic Acid	PFEESA	113507-82-7
PERFLUOROETHER/POLYETHER CARBOXYLIC ACIDS (PFPCAs)		
Perfluoro-3-Methoxypropanoic Acid	PFMPA	377-73-1
Perfluoro-4-Methoxybutanoic Acid	PFMBA	863090-89-5
Nonafluoro-3,6-Dioxaheptanoic Acid	NFDHA	151772-58-6

Project Name: CARPENTER POND
Project Number: 22116.00
Lab Number: L2314638
Report Date: 04/11/23

PFAS PARAMETER SUMMARY

Parameter	Acronym	CAS Number
FLUOROTELOMER CARBOXYLIC ACIDS (FTCAs)		
3-Perfluoroheptyl Propanoic Acid	7:3FTCA	812-70-4
2H,2H,3H,3H-Perfluorooctanoic Acid	5:3FTCA	914637-49-3
3-Perfluoropropyl Propanoic Acid	3:3FTCA	356-02-5

Project Name:	CARPENTER POND	**Lab Number:**	L2314638
Project Number:	22116.00	**Report Date:**	04/11/23

GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	CARPENTER POND	**Lab Number:**	L2314638
Project Number:	22116.00	**Report Date:**	04/11/23

Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Chlordane: The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Gasoline Range Organics (GRO): Gasoline Range Organics (GRO) results include all chromatographic peaks eluting from Methyl tert butyl ether through Naphthalene, with the exception of GRO analysis in support of State of Ohio programs, which includes all chromatographic peaks eluting from Hexane through Dodecane.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. For MassDEP DW compliance analysis only, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL. Note: If a 'Total' result is requested, the results of its individual components will also be reported.

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

Report Format: Data Usability Report

Project Name:	CARPENTER POND	**Lab Number:**	L2314638
Project Number:	22116.00	**Report Date:**	04/11/23

Data Qualifiers

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

Project Name:	CARPENTER POND	**Lab Number:**	L2314638
Project Number:	22116.00	**Report Date:**	04/11/23

REFERENCES

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

134 Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS) using Isotope Dilution. Alpha SOP 23528.

141 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA and IIB, November 2021.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

CHAIN OF CUSTODY

PAGE ____ OF ____

Date Rec'd in Lab: 3/21/23

ALPHA Job #: L2314638

ALPHA ANALYTICAL
8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Client Information

Client: PARE CORPORATION

Address: 8 BLACKSTONE VALLEY PLACE, LINCOLN, RI

Phone: (401) 334-4100

Email: MDASILVA@PARECORP.COM

Project Information

Project Name: CARPENTER POND

Project Location: DUDLEY, MA

Project #: 22116.00

Project Manager:

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due: 3/31/23

Additional Project Information:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☑ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods

☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)

☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)

☐ Yes ☐ No NPDES RGP

☐ Other State /Fed Program ____ Criteria ____

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☐ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☐ PAH	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☐ PCB ☐ PEST	TPH: ☐ Quant Only ☐ Fingerprint	PFAAS VIA LCMSMS	A2-1,4 DIOXANE - STM	TOTAL SOLIDS - SM 2540			Sample Comments	TOTAL # BOTTLES
14638-01	IMP-2	3/21/23		SED.	MDD									X	X	X				4