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April 10, 2017

Ms. Shauna Little
U.S. Environmental Protection Agency
EPA-Region 1
5 Post Office Square
Mail Code OEP06-4
Boston, MA 02109-3912

RE: Notice of Intent for Remediation General Permit (Revised)
Hopkinton Gas, 1 Grove Street, Hopkinton, MA 01748
MassDEP RTN 2-507 / 2-20148
ATC Project 3010000235

Dear Ms. Little:

ATC Group Services, LLC (ATC) provides the following (revised) copy of the Notice of Intent (NOI) originally submitted on March 27, 2017 for a Remediation General Permit (RGP) needed at Hopkinton Gas, Inc., 1 Grove Street, Hopkinton, Massachusetts.

To submit the revised NOI, it was necessary for ATC to sample the water-filled excavation. The prior monitoring wells were not accessible. Although the tank grave water is more representative of the "influent" then well water, water in the tank grave was more turbid and had a faint sheens causing analytical matrix interferences and increased some method detection limits. Clean effluent won't suffer the same limitations. The following analyses were performed on the tank grave water:

- Lead, selenium, and silver using Method 200.7-1994
- Hexavalent chromium using Method SM3500-Cr B-2009
- Ethanol by Method 8100M
- Ethylene Dibromide by Method 504
- Total Petroleum Hydrocarbons by 1664
- Semi-Volatile Organic Compounds 625
- Volatile Organic Compounds by Method 524, and
- Volatile Organic Compounds by Method 624

The revised NOI form is attached.

Hopkinton Gas is in the process removing and upgrading of the current gasoline and diesel underground storage tank (UST) system. Groundwater dewatering may be required as part of these activities. Our first intention will be to truck petroleum-impacted groundwater to a permitted treatment facility. However, if excess groundwater infiltrates the sheet-piled excavation where the new tanks will be installed, Hopkinton Gas will need to discharge treated effluent to a nearby storm drain (Outfall 001). In comparison to Table 1 of the RGP, property business activities would be considered Type I - Petroleum-Related Site Remediation:

Background

Hopkinton Gas is an existing Massachusetts Department of Environmental Protection (MassDEP) waste site identified by release tracking number (RTN) 2-507. RTN 2-507 was issued on July 15, 1989 for gasoline contamination discovered by the Hopkinton Department of Public Works at the corner of Grove and Main Street. Since 1989, three additional RTNs for petroleum-related releases have been assigned to the property and linked to the main RTN including RTN 2-12388 (September, 1998); RTN 2-12905 (August, 1998); and

RTN 2-18931 (July, 2013). The MassDEP case is in Temporary Solution Status. The pending work will be completed under an amended Phase IV Remedial Action Plan.

Well gauging data indicates the water table is shallow, and varies from three to four feet below grade. The underlying sediments are glacial till. As excavations are proposed to a depth of approximately fifteen (15) feet, therefore, temporary dewatering activities may be required to facilitate removal and reinstallation installation of USTs.

A Site Locus is provided as Figure 1. A schematic line drawing of the proposed treatment system is provided as Figure 2. A Site Plan showing the existing and proposed UST layout is provided as Figure 3. Figure 4 depicts the USGS StreamStat image showing the Main Street storm drain and flow path leading to the unnamed stream and Indian Brook, these are the receiving waters for the proposed discharge. A copy of the NOI application form and Best Management Practices for the operation of the temporary dewatering and treatment system are provided in **Attachment A**.

Treatment System Design

The groundwater treatment system will be composed of the following: a submersible pneumatic or electric pump to lift groundwater from a sheet-piled excavation into the first of (2) 21,000 frac tanks. The first frac tank will employ an aeration system to aid with iron oxidation. The first frac tank will be plumed to a second 21,000 frac tank by quick connect hose. Suspended solids will settle out in both tanks. A skid-mounted transfer pump will be used to push the effluent from the second tank through two skid-mounted particulate bag filters. The first filter will remove 50 micro and larger particles. The second bag filter will remove five micron and larger particles. Final carbon filtration will be completed using two-2,000 lbs. liquid phase granular activated carbon (GAC) units. A line diagram of the groundwater treatment system is provided as Figure 2. The location of Outfall 001 is depicted on Figure 3 and Figure 4.

The average discharge rate into the storm drain is expected to be approximately 50 gallons per minute (gpm). The design capacity of the groundwater treatment system is 100 gpm based upon data collected from comparable systems installed at other remedial sites operated/designed by ATC.

Due to the short duration of this project, the discharge will likely not last for more than two weeks. One week may be required for water table drawdown. The new tanks will be set and installed during the second week. Once the tanks are backfilled and installed, further dewatering will be unnecessary, and the discharge will be terminated.

Receiving Waters Information

The proposed discharge location for the treated groundwater is the storm drain located at the intersection of Main and Grove Street. This storm drain is identified as “Outfall 001” on Figures Three and Four. Effluent discharged to this storm drain will flow to the north and west under Main Street. The town-maintained drain turns north and runs through the neighborhood parallel to Cedar Street. The drain opens to daylight and discharges to an unnamed stream. The unnamed steam flows north into wetlands that bound the Indian Brook. The Indian Brook ultimately discharges to the Sudbury River.

According to the online MassDEP 2014 Integrated List of Waters, the Sudbury River is located in the Sudbury-Assabet-Concord Rivers watershed. Its 2014 Assessment Unit ID was MA82A-01. In the property area, the Sudbury River and Indian Brook are Category 3 “no uses assessed”, Class B Surface Waters. Total maximum daily loads (TMDLs) contaminants were researched on the MassDEP website, but for the Hopkinton area TMDLs have not been established. Background documentation on the receiving waters is provided in **Attachment B**.

Samples of receiving water were obtained and analyzed for ammonia and hardness. Ammonia was absent. The receiving water hardness was 141 mg/L. The hardness of site groundwater was reported at 45, 139, and 198 mg/L. The accessible sampling location was behind the parking lot at #61 Main Street, 200 feet west of Hopkinton Gas. Samples of receiving water were obtained and analyzed for ammonia and hardness. Ammonia was absent. The receiving water hardness was 141 mg/L. The hardness of site groundwater was reported at 45, 139, and 198 mg/L. Because the unnamed stream has a very low flow rate, no dilution factors will be requested from MassDEP or applied to effluent calculations.

Influent Sample Analysis

Groundwater samples were collected from monitoring wells MW-10 and HVE-1 on two occasions, on May 5, 2016 and on February 8, 2017. Tank grave water was sampled on March 31, 2017. All sample sets were delivered to the lab on ice. The samples were analyzed at New England Environmental Testing Laboratory of West Warwick, Rhode Island. The samples were handled under standard chain of custody protocol. Chemical analyses included:

ATC informs EPA that the initial assessment samples did not employ selective ion methods for the volatile organic compounds (VOC) and semi-volatile organic compounds (SVOC), or graphite furnace methods for metals. There are instances where the method detection limit of the RGP application sample result exceeded effluent limits. To prove compliance with effluent limits during discharge, selective ion and graphite furnace analytical methods will be employed, if effluent must be discharged. Copies of the laboratory reports and chain of custody are provided in **Attachment C**. A summary table of the data is included. The existing data were compared with the Massachusetts Effluent Limits listed on Table 2 of the RGP.

There are several instances where the laboratory method detection limits were greater than the effluent limits. This condition was observed with respect to PCBs and 1,4-dioxane. Our laboratory informs us that for the tank grave water and earlier well water samples, lower detection limits were not feasible. Subsequent effluent will be cleaned by bag and carbon filtration, which should correct the detection limit issues.

Evaluation of Threatened or Endangered Species or Critical Habitats

ATC contacted the United States Department of the Interior, Fish and Wildlife Service, New England Ecological Services Field Office via internet and telephone regarding the endangered species consultation required for the RGP application. We spoke by telephone with Ms. Susi von Oettingen. Ms. Oettingen indicated our short duration project would not affect any endangered or threatened species, and sent ATC a letter affirming this determination. A copy of the determination is provided in **Attachment D**.

Review of National Register of Historic Places

On February 13, 2017, ATC made a written inquiry with the Massachusetts Historical Commission. A copy of the inquiry is provided in **Attachment E**.

This Hopkinton Gas project does not involve the demolition or rehabilitation of historic properties. We believe the scope, location, and short duration of this Hopkinton Gas project will not have any long-term negative effects on the historical attributes of the nearest historical properties. A response has not yet been received from the Massachusetts Historical Commission.

Notification of Local Officials

ATC previously notified local officials of the pending service station upgrade, before the RGP was reissued. Our prior notification package included the background documentation contained within this NOI package (except for the NOI form, which was not available). Copies of correspondence concerning the use of Hopkinton Strom drains is attached in **Attachment F**. ATC will provide local officials with a copy of this final version of the RGP NOI.

This Hopkinton Gas project does not involve the demolition or rehabilitation of historic properties. We believe the scope, location, and short duration of this Hopkinton Gas project will not have any long-term negative effects on the historical attributes of the nearest historical properties. A response has not yet been received from the Massachusetts Historical Commission.

Regulation by the Massachusetts Contingency Plan

Lastly, the work being completed at the property is governed by Massachusetts Contingency Plan (310 CMR 40.0000) under MassDEP RTN 2-507. An amended Phase IV – Remedial Action Plan has or will be provided to the MassDEP before the work is initiated. Discharges subject to the MCP do not require the completion of state application form BRPWM 12 or to pay state fees.

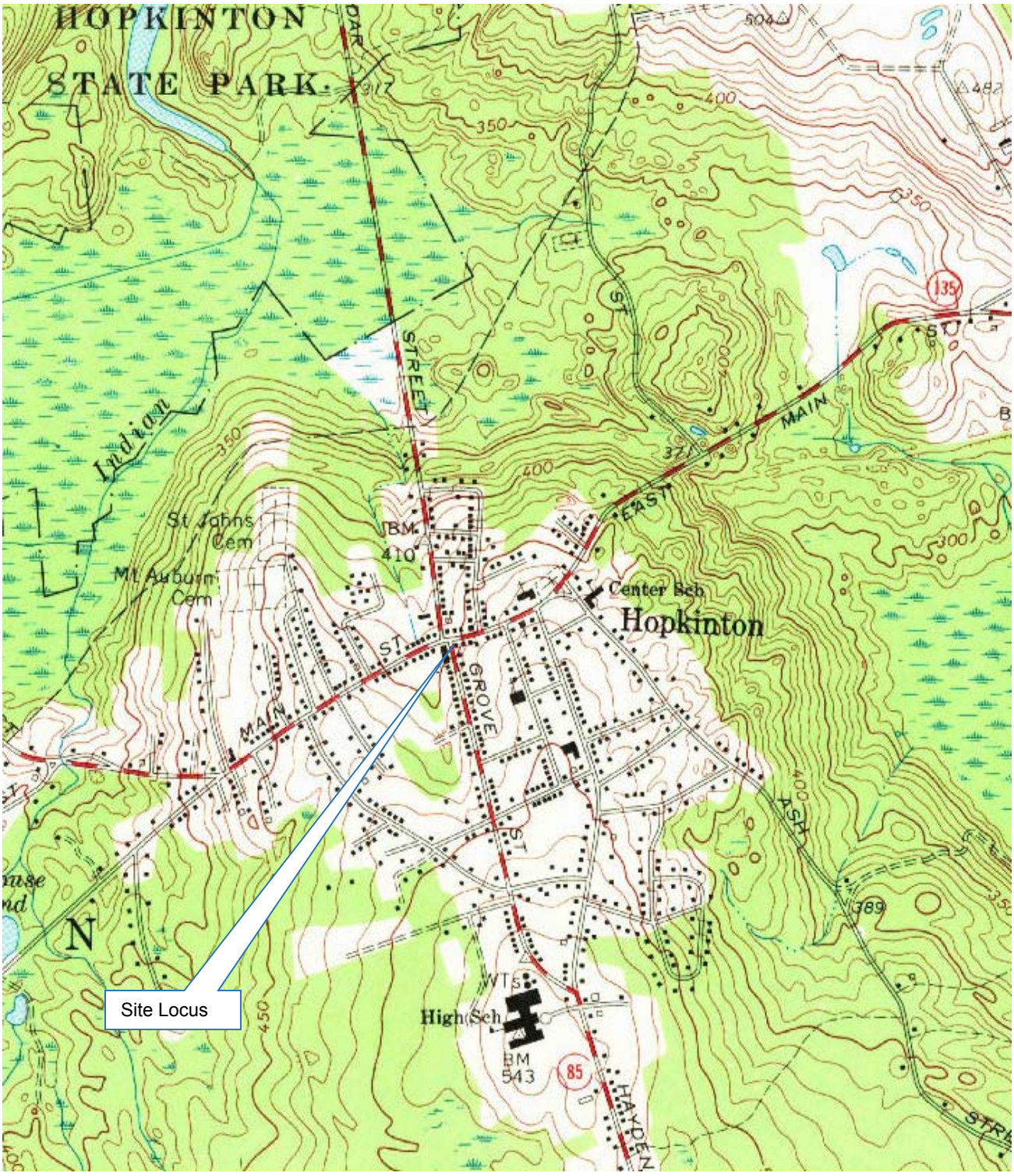
Should you have any questions regarding the contents of this letter or the NOI for the RGP, please do not hesitate to contact the undersigned at (401) 714-0306, extension 142.

Sincerely,
ATC Group Services LLC

Keith Sullivan, CHMM, LSP #1259
Senior Project Manager

cc: Kevin Gottwald, Global Contracting Services, Inc.
Sam Younes, Hopkinton Gas
Don MacAdam – Hopkinton Conservation Commission
Catherine Vakalopoulos (MassDEP)

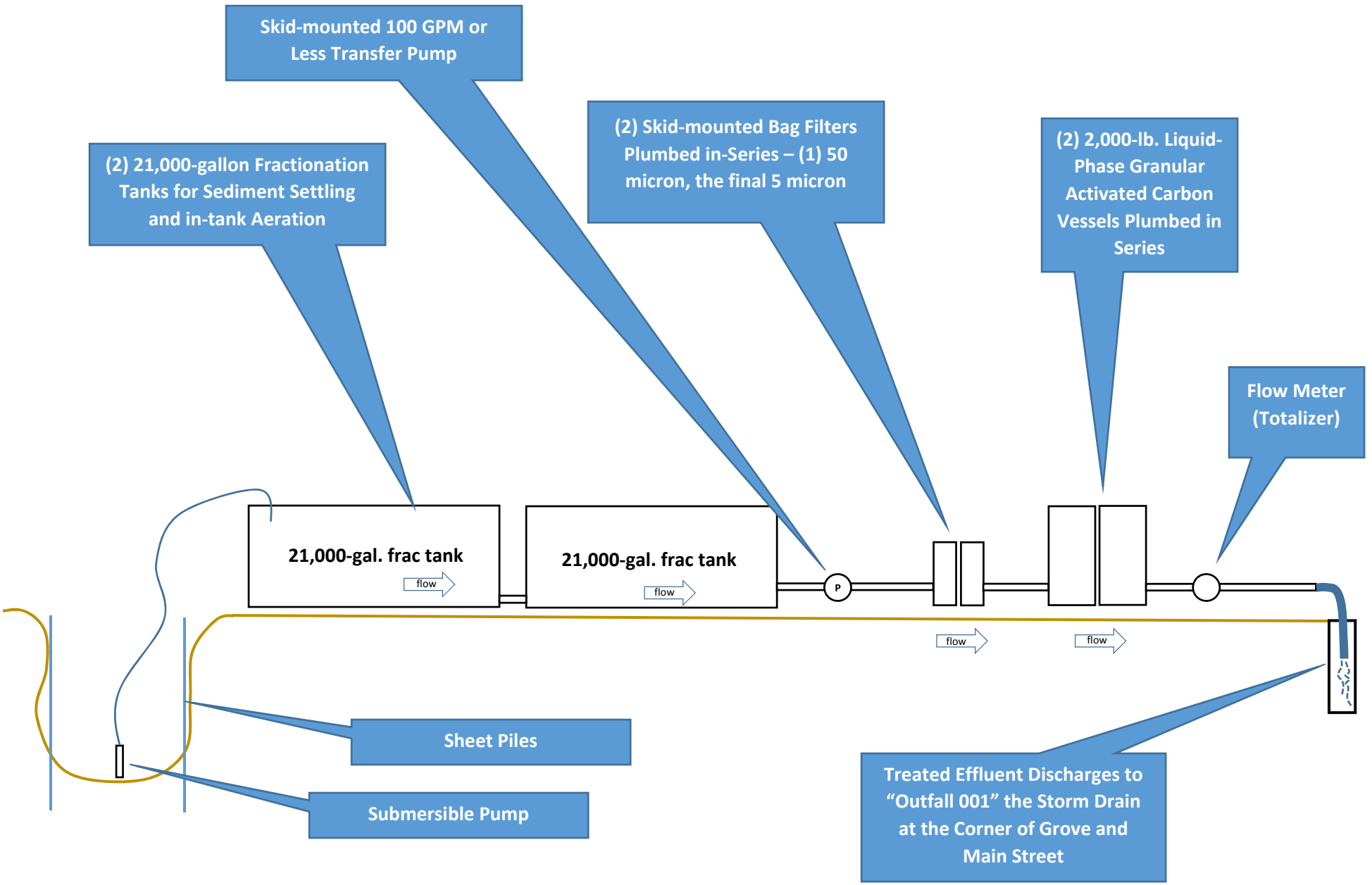
Figures

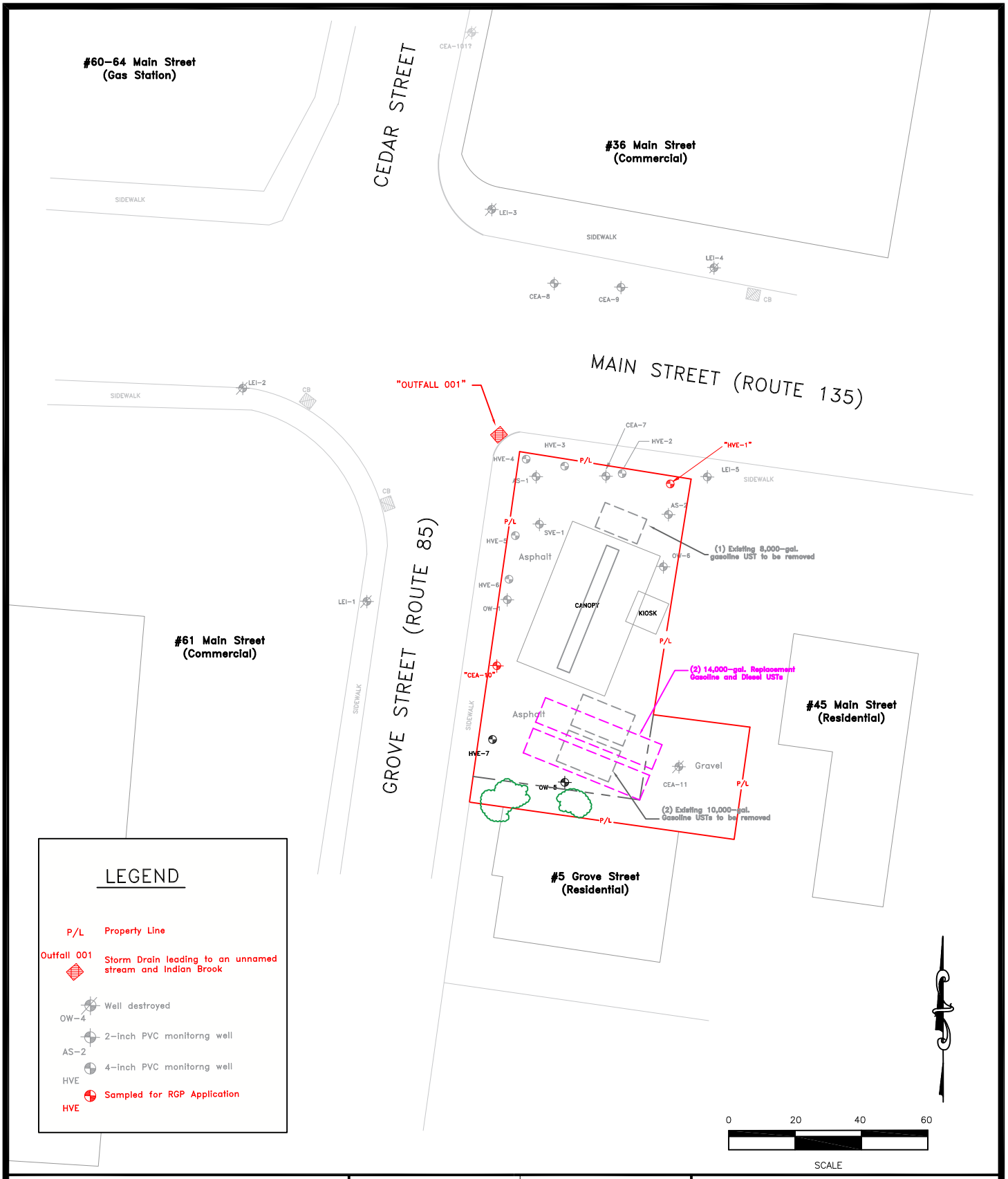


Site Locus Map
1 Grove Street
Hopkinton, Massachusetts

Source:
USGS 7.5 Minute
Milford, MA Quadrangle Map
(1968)

FIGURE 2 - SCHEMATIC LINE DRAWING OF TREATMENT SYSTEM





SITE PLAN

HOPKINTON GAS
1 GROVE STREET
HOPKINTON, MASSACHUSETTS

PROJECT NUMBER: 3010000235	FIGURE NUMBER: 3
SCALE: NTS	CHECKED BY:
DRAWN BY: KS	REVISED BY:
DRAWING FILE: s:common\3010000235\RGP\Site Plan	

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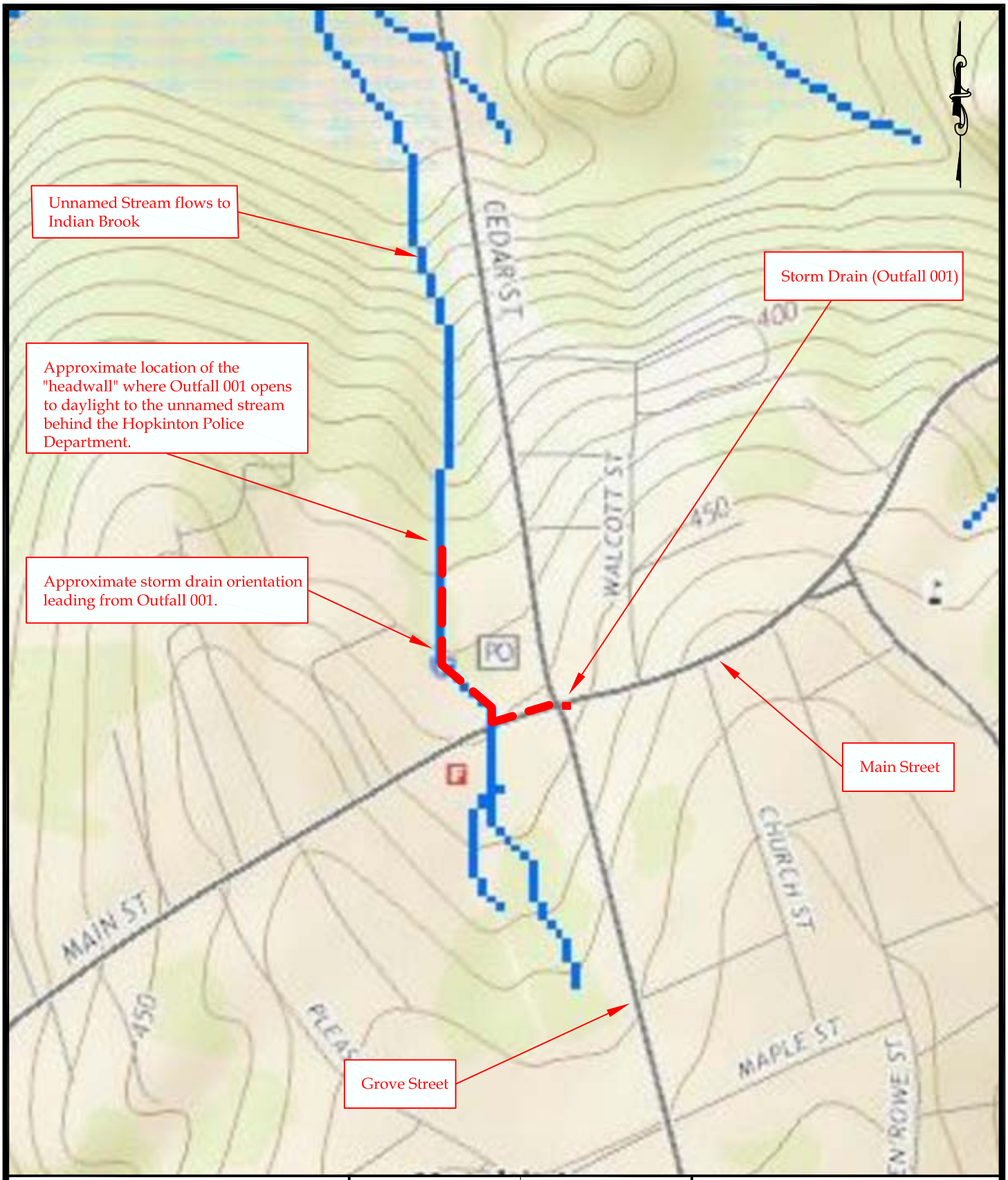

STORM DRAIN CONFIGURATION

HOPKINTON GAS
1 GROVE STREET
HOPKINTON, MASSACHUSETTS

PROJECT NUMBER: 3010000235	FIGURE NUMBER: 4
SCALE: NTS	CHECKED BY:
DRAWN BY: KS	REVISED BY:
DRAWING FILE: s:common\3010000235\RGP\Drainage	

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Attachment A
RGP NOI Application Form

and

Best Management Practices
Temporary Construction Dewatering

II. Suggested Format for the Remediation General Permit Notice of Intent (NOI)

A. General site information:

<table>
<tr><td rowspan="4">1. Name of site:
Hopkinton Gas</td><td colspan="3">Site address: 1 Grove Street
Street:</td></tr>
<tr><td colspan="2">City: Hopkinton</td><td>State: MA</td><td>Zip: 01748</td></tr>
<tr><td rowspan="4">2. Site owner
Hopkinton Gas, Inc.

Owner is (check one): ☐ Federal ☐ State/Tribal ■ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: Sam Younes</td></tr>
<tr><td colspan="2">Telephone: 508-887-6334</td><td colspan="2">Email: samyounes1400@gmail.com</td></tr>
<tr><td colspan="3">Mailing address: 115 Main Street, PO Box 850
Street:</td></tr>
<tr><td colspan="2">City: Upton</td><td>State: MA</td><td>Zip: 01568</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
Global Contracting Services, Inc.</td><td colspan="3">Contact Person: Kevin Gottwald</td></tr>
<tr><td colspan="2">Telephone: 508-828-1007</td><td colspan="2">Email: kgottwald@globalcontractingservi</td></tr>
<tr><td colspan="3">Mailing address:
Street: 680 Richmond Street</td></tr>
<tr><td colspan="2">City: East Taunton</td><td>State: MA</td><td>Zip: 02718</td></tr>
<tr><td>4. NPDES permit number assigned by EPA:

NPDES permit is (check all that apply: ■ RGP ☐ DGP ☐ CGP
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td><td colspan="4">5. Other regulatory program(s) that apply to the site (check all that apply):
■ MA Chapter 21e; list RTN(s):
2-507 / 2-20148
☐ NH Groundwater Management Permit or Groundwater Release Detection Permit:
☐ CERCLA
☐ UIC Program
☐ POTW Pretreatment
☐ CWA Section 404</td></tr>
</table>

B. Receiving water information:

1. Name of receiving water(s):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
Unnamed stream, tributary of Indian Brook	MA82A-23 (formerly part of MA82A-12)	Class B

Receiving water is (check any that apply): ☐ Outstanding Resource Water ☐ Ocean Sanctuary ☐ territorial sea ☐ Wild and Scenic River

2. Has the operator attached a location map in accordance with the instructions in B, above? (check one): ☐ Yes ☐ No

Are sensitive receptors present near the site? (check one): ☐ Yes ☐ No

If yes, specify: See the attached MassDEP Phase I Map

3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP. "No uses have been assessed"

4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.	0.0812 ft^3/s.
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.	none

6. Has the operator received confirmation from the appropriate State for the 7Q10and dilution factor indicated? (check one): ☐ Yes ☐ No

If yes, indicate date confirmation received: ATC has informed MassDEP that no dilution factor is requested. That correspondence is attached.

7. Has the operator attached a summary of receiving water sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ☐ Yes ☐ No

C. Source water information:

1. Source water(s) is (check any that apply):

■ Contaminated groundwater	☐ Contaminated surface water	☐ The receiving water	☐ Potable water; if so, indicate municipality or origin:
Has the operator attached a summary of influent sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ☐ Yes ☐ No	Has the operator attached a summary of influent sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ☐ Yes ☐ No	☐ A surface water other than the receiving water; if so, indicate waterbody:	☐ Other; if so, specify:

2. Source water contaminants: Historic gasoline and diesel releases from a UST containment and dispensing system	
a. For source waters that are contaminated groundwater or contaminated surface water, indicate are any contaminants present that are not included in the RGP? (check one): ☐ Yes ■ No If yes, indicate the contaminant(s) and the maximum concentration present in accordance with the instructions in Appendix VIII.	b. For a source water that is a surface water other than the receiving water, potable water or other, indicate any contaminants present at the maximum concentration in accordance with the instructions in Appendix VIII? (check one): ☐ Yes ☐ No
3. Has the source water been previously chlorinated or otherwise contains residual chlorine? (check one): ☐ Yes ■ No	

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ☐ Existing discharge ■ New discharge ☐ New source	
Outfall(s): Outfall 001 = Hopkinton catchbasin at the corner of Grove and Main Street	Outfall location(s): (Latitude, Longitude) 43 degrees, 13' 42.19" Latitude 71 degrees, 31' 18.67" Longitude
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ■ Indirect discharge, if so, specify: Outfall 001 joins Hopkinton darins, leads west across Main Street, behind the Hopkinton Police Department, where it daylights to an unnamed stream ☐ A private storm sewer system ■ A municipal storm sewer system If the discharge enters the receiving water via a private or municipal storm sewer system: Has notification been provided to the owner of this system? (check one): ☐ Yes ☐ No Has the operator has received permission from the owner to use such system for discharges? (check one): ■ Yes ☐ No, if so, explain, with an estimated timeframe for obtaining permission: Correspondence Attached Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ☐ Yes ☐ No	
Provide the expected start and end dates of discharge(s) (month/year): If needed, begin between April 3 and April 7, 2017 and ending in April 2017. Indicate if the discharge is expected to occur over a duration of: ■ less than 12 months ☐ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ■ Yes ☐ No	

<table>
<tr><td>2. Activity Category: (check all that apply)</td><td colspan="2">3. Contamination Type Category: (check all that apply)</td></tr>
<tr><td rowspan="5">■ I – Petroleum-Related Site Remediation
☐ II – Non-Petroleum-Related Site Remediation
☐ III – Contaminated Site Dewatering
☐ IV – Dewatering of Pipelines and Tanks
☐ V – Aquifer Pump Testing
☐ VI – Well Development/Rehabilitation
☐ VII – Collection Structure Dewatering/Remediation
☐ VIII – Dredge-Related Dewatering</td><td colspan="2">a. If Activity Category I or II: (check all that apply)

■ A. Inorganics
■ B. Non-Halogenated Volatile Organic Compounds
■ C. Halogenated Volatile Organic Compounds
■ D. Non-Halogenated Semi-Volatile Organic Compounds
■ E. Halogenated Semi-Volatile Organic Compounds
■ F. Fuels Parameters</td></tr>
<tr><td colspan="2">b. If Activity Category III, IV, V, VI, VII or VIII: (check either G or H)</td></tr>
<tr><td>☐ G. Sites with Known Contamination</td><td>☐ H. Sites with Unknown Contamination</td></tr>
<tr><td>c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)

☐ A. Inorganics
☐ B. Non-Halogenated Volatile Organic Compounds
☐ C. Halogenated Volatile Organic Compounds
☐ D. Non-Halogenated Semi-Volatile Organic Compounds
☐ E. Halogenated Semi-Volatile Organic Compounds
☐ F. Fuels Parameters</td><td>d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</td></tr>
</table>

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia	✔		2	4500-NH3	100	<100	<100	Report mg/L	---
Chloride	✔		2	4500-Cl	1,000	568,000	250,000	Report µg/l	---
Total Residual Chlorine	✔		2	4500ClG	10	<10	<10	0.2 mg/L	11 ug/l
Total Suspended Solids		✔	2	2540D	2,000	142,000	70,000	30 mg/L	---
Antimony	✔		2	6010C	10	<10	<10	206 µg/L	640
Arsenic	✔		2	6010C	10	20	15	104 µg/L	10
Cadmium		✔	3	200.7-199	0.1	0.6	0.6	10.2 µg/L	0.25
Chromium III		✔	2	6010C	5	11	5	323 µg/L	74
Chromium VI	✔		1	SM3500-C	1	<1.0	<1.0	323 µg/L	11
Copper		✔	2	6010C	20	40	20	242 µg/L	9
Iron		✔	2	6010C	5	1480	700	5,000 µg/L	1,000
Lead		✔	3	200.7-199	1	19	17	160 µg/L	2.5
Mercury		✔	3	7470	0.2	<0.2	<0.2	0.739 µg/L	0.77
Nickel		✔	2	6010C	5	7	6	1,450 µg/L	52
Selenium	✔		3	200.7-199	3	<3.0	<3.0	235.8 µg/L	5
Silver	✔		3	200.7-199	1	<1.0	<1.0	35.1 µg/L	3.2
Zinc		✔	2	6010C	20	260	130	420 µg/L	120
Cyanide	✔		2	4500-CN	10	<10	<10	178 mg/L	5.2
B. Non-Halogenated VOCs									
Total BTEX		✔	3	8260/624	2	67	35	100 µg/L	---
Benzene		✔	3	8260/624	1	10	<5	5.0 µg/L	---
1,4 Dioxane *	✔		3	8260/624	500	<500	<500	200 µg/L	---
Acetone **	✔		3	8260/624	5	19	19	7.97 mg/L	---
Phenol	✔		3	8260/624	2	<2	<2	1,080 µg/L	300

* Matrix interferences (i.e. the turbid nature of the sample and presence of other contaminant prevented lower detection limits). Cleaned effluent will meet EPA MDLs.

** There is no source at the site. The site is on sewer. Acetone is not used at the property, nor nearby. ATC believes the acetone is a lab contaminant.

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✔		3	8260/624	1	<1	<1	4.4 µg/L	4.4
1,2 Dichlorobenzene	✔		3	8260/624	1	<1	<1	600 µg/L	---
1,3 Dichlorobenzene	✔		3	8260/624	1	<1	<!	320 µg/L	---
1,4 Dichlorobenzene	✔		3	8260/624	1	<1	<1	5.0 µg/L	---
Total dichlorobenzene	✔		3	8260/624	1	<1	<1	763 µg/L in NH	---
1,1 Dichloroethane	✔		3	8260/624	1	<1	<1	70 µg/L	---
1,2 Dichloroethane	✔		3	8260/624	1	<1	<1	5.0 µg/L	---
1,1 Dichloroethylene	✔		3	8260/624	1	<1	<1	3.2 µg/L	---
Ethylene Dibromide	✔		3	8260/624	1	<1	<1	0.05 µg/L	---
Methylene Chloride	✔		3	8260/624	1	<1	<1	4.6 µg/L	---
1,1,1 Trichloroethane	✔		3	8260/624	1	<1	<1	200 µg/L	---
1,1,2 Trichloroethane	✔		3	8260/624	1	<1	<1	5.0 µg/L	---
Trichloroethylene	✔		3	8260/624	1	<1	<1	5.0 µg/L	---
Tetrachloroethylene	✔		3	8260/624	1	<1	<1	5.0 µg/L	3.3
cis-1,2 Dichloroethylene	✔		3	8260/624	1	<1	<1	70 µg/L	---
Vinyl Chloride	✔		3	8260/624	1	<1	<1	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates		✔	3	8270/625	3	25.3	12	190 µg/L	
Diethylhexyl phthalate		✔	3	8270/625	3	17.8	8	101 µg/L	2.2
Total Group I PAHs	✔		3	8270/625	2	<2	<2	1.0 µg/L	---
Benzo(a)anthracene	✔		3	8270/625	0.5	<0.5	<0.5	As Total PAHs	0.0038
Benzo(a)pyrene	✔		3	8270/625	0.5	<0.5	<0.5		0.0038
Benzo(b)fluoranthene	✔		3	8270/625	0.5	<0.5	<0.5		0.0038
Benzo(k)fluoranthene	✔		3	8270/625	0.5	<0.5	<0.5		0.0038
Chrysene	✔		3	8270/625	0.5	<0.5	<0.5		0.0038
Dibenzo(a,h)anthracene	✔		3	8270/625	0.5	<0.5	<0.5		0.0038
Indeno(1,2,3-cd)pyrene	✔		3	8270/625	0.5	<0.5	<0.5		0.0038

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs		✔	3	8270/625	0.5	3	2	100 µg/L	---
Naphthalene		✔	3	8270/625	0.5	3	2	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✔		3	8082	0.2	<0.2	<0.2	0.000064 µg/L	---
Pentachlorophenol	✔		3	8270/625	5	<5	<5	1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons		✔	3	1664	276	50000	25000	5.0 mg/L	---
Ethanol	✔		1	8100M	10000	<10000	<10000	Report mg/L	---
Methyl-tert-Butyl Ether	✔		3	8260/524	0.5	<0.5	<0.5	70 µg/L	20
tert-Butyl Alcohol	✔		3	8260/524	5	<5	<5	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✔		3	8260/524	0.5	<0.5	<0.5	90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									
pH			2	4500-H+	NA	6.33	6		
Hardness			2	6010	330	139,000	65,000		

E. Treatment system information

1. Indicate the type(s) of treatment that will be applied to effluent prior to discharge: (check all that apply)

☐ Adsorption/Absorption ☐ Advanced Oxidation Processes ☐ Air Stripping ■ Granulated Activated Carbon ("GAC")/Liquid Phase Carbon Adsorption

☐ Ion Exchange ☐ Precipitation/Coagulation/Flocculation ■ Separation/Filtration ☐ Other; if so, specify:

2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.

The treatment system include: a submersible pump to lift groundwater from a sheet-piled excavation into the first of (2) 21,000 frac tanks. The first tank will include aeration to aid with iron oxidation. Suspended solids will settle out in both tanks. A transfer pump will push the effluent from the second tank through two skid-mounted particulate bag filters. The first filter will remove 50 micro and larger particles. The second bag filter will remove five micron and larger particles. Final carbon filtration will be completed using two-2,000 lbs. liquid phase granular activated carbon (GAC) units. A line diagram of the groundwater treatment system is provided as Figure 2.

Identify each major treatment component (check any that apply):

■ Fractionation tanks☐ Equalization tank ☐ Oil/water separator ☐ Mechanical filter ☐ Media filter

☐ Chemical feed tank ☐ Air stripping unit ■ Bag filter ☐ Other; if so, specify:

Indicate if either of the following will occur (check any that apply):

☐ Chlorination ☐ De-chlorination

3. Provide the **design flow capacity** in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: Bag filters Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	100 gpm
Provide the proposed maximum effluent flow in gpm.	100 gpm
Provide the average effluent flow in gpm.	50 gpm
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	

4. Has the operator attached a schematic of flow in accordance with the instructions in E, above? (check one): ☐ Yes ☐ No

F. Chemical and additive information

1. Indicate the type(s) of chemical or additive that will be applied to effluent prior to discharge or that may otherwise be present in the discharge(s): (check all that apply)

☐ Algaecides/biocides ☐ Antifoams ☐ Coagulants ☐ Corrosion/scale inhibitors ☐ Disinfectants ☐ Flocculants ☐ Neutralizing agents ☐ Oxidants ☐ Oxygen ☐ scavengers ☐ pH conditioners ☐ Bioremedial agents, including microbes ☐ Chlorine or chemicals containing chlorine ☐ Other; if so, specify:
No additives will be applied

2. Provide the following information for each chemical/additive, using attachments, if necessary:

a. Product name, chemical formula, and manufacturer of the chemical/additive;
b. Purpose or use of the chemical/additive or remedial agent;
c. Material Safety Data Sheet (MSDS) and Chemical Abstracts Service (CAS) Registry number for each chemical/additive;
d. The frequency (hourly, daily, etc.), duration (hours, days), quantity (maximum and average), and method of application for the chemical/additive;
e. Any material compatibility risks for storage and/or use including the control measures used to minimize such risks; and
f. If available, the vendor's reported aquatic toxicity (NOAEL and/or LC50 in percent for aquatic organism(s)).

3. Has the operator attached an explanation which demonstrates that the addition of such chemicals/additives may be authorized under this general permit in accordance with the instructions in F, above? (check one): ☐ Yes ☐ No; if no, has the operator attached data that demonstrates each of the 126 priority pollutants in CWA Section 307(a) and 40 CFR Part 423.15(j)(1) are non-detect in discharges with the addition of the proposed chemical/additive?
(check one): ☐ Yes ☐ No

G. Endangered Species Act eligibility determination

1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit:

☐ **FWS Criterion A**: No endangered or threatened species or critical habitat are in proximity to the discharges or related activities or come in contact with the "action area".

■ **FWS Criterion B**: Formal or informal consultation with the FWS under section 7 of the ESA resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by FWS on a finding that the discharges and related activities are "not likely to adversely affect" listed species or critical habitat (informal consultation). Has the operator completed consultation with FWS? (check one): ■ Yes ☐ No; if no, is consultation underway? (check one): ☐ Yes ☐ No

☐ **FWS Criterion C**: Using the best scientific and commercial data available, the effect of the discharges and related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the operator and affirmed by EPA, that the discharges and related activities will have "no effect" on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the FWS. This determination was made by: (check one) ☐ the operator ☐ EPA ☐ Other; if so, specify:

☐ **NMFS Criterion**: A determination made by EPA is affirmed by the operator that the discharges and related activities will have "no effect" or are "not likely to adversely affect" any federally threatened or endangered listed species or critical habitat under the jurisdiction of NMFS and will not result in any take of listed species. Has the operator previously completed consultation with NMFS? (check one): ☐ Yes ☐ No

2. Has the operator attached supporting documentation of ESA eligibility in accordance with the instructions in Appendix I, and G, above? (check one): ☐ Yes ☐ No

Does the supporting documentation include any written concurrence or finding provided by the Services? (check one): ☐ Yes ☐ No; if yes, attach.

H. National Historic Preservation Act eligibility determination

1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit:

☐ **Criterion A**: No historic properties are present. The discharges and discharge-related activities (e.g., BMPs) do not have the potential to cause effects on historic properties.

■ **Criterion B**: Historic properties are present. Discharges and discharge related activities do not have the potential to cause effects on historic properties.

☐ **Criterion C**: Historic properties are present. The discharges and discharge-related activities have the potential to have an effect or will have an adverse effect on historic properties.

2. Has the operator attached supporting documentation of NHPA eligibility in accordance with the instructions in H, above? (check one): ☐ Yes ☐ No

Does the supporting documentation include any written agreement with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (TPHO), or other tribal representative that outlines measures the operator will carry out to mitigate or prevent any adverse effects on historic properties? (check one): ☐ Yes ☐ No

I. Supplemental information

Describe any supplemental information being provided with the NOI. Include attachments if required or otherwise necessary.

Refer to the cover letter and attachments, which include: Site maps; schematic drawing of treatment system; SHPO and FWS responses; lab results of source water obtained from two (2) groundwater monitoring wells, and receiving waters sample obtained from the nearest possible sampling point; correspondence from local offices regarding use of the catch basin as a discharge outfall. At the present time, we do not propose to use chemical additives. There are no plans of the underground storm drain. Figure 4 was developed with consultation with Hopkinton Town Officials.

Has the operator attached data, including any laboratory case narrative and chain of custody used to support the application? (check one): ☐ Yes ☐ No

Has the operator attached the certification requirement for the Best Management Practices Plan (BMPP)? (check one): ☐ Yes ☐ No

J. Certification requirement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

BMPP certification statement	As part of the NOI, as required by Section 2.5.1.c., a BMPP meeting the requirements of this general permit will be developed and implemented upon initiation of discharge.
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ■ No ☐
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐ NA ☐
Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.	Check one: Yes ■ No ☐ NA ☐
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Check one: Yes ☐ No ☐ NA ■
Signature: Kevin Gottwald	Date: 3/28/17
Print Name and Title: Kevin Gottwald, Project Manager, Global Contracting Services, Inc.	

Best Management Practices

Remediation General Permit
Temporary Construction Dewatering
1 Grove Street, Hopkinton, MA

A Notice of Intent for a Remediation General Permit (RGP) has been submitted to the US Environmental Protection Agency (EPA) in anticipation of temporary construction dewatering that may occur when three existing underground storage tanks (USTs) are removed from the ground and replaced with two new USTs. This Best Management Practices Plan (BMPP) has been prepared as an Appendix to the RGP and will be posted at the site during the time period that temporary construction dewatering is occurring at the site.

Water Treatment and Management

The groundwater treatment system will be composed of the following: a submersible pneumatic or electric pump to lift groundwater from a sheet-piled excavation into the first of (2) 21,000 frac tanks. The first frac tank will employ an aeration system to aid with iron oxidation. The first frac tank will be plumed to a second 21,000 frac tank by quick connect hose. Suspended solids will settle out in both tanks. A skid-mounted transfer pump will be used to push the effluent from the second tank through two skid-mounted particulate bag filters. The first filter will remove 50 micro and larger particles. The second bag filter will remove five micron and larger particles. Final carbon filtration will be completed using two-2,000 lbs. liquid phase granular activated carbon (GAC) units. A line diagram of the groundwater treatment system is provided as Figure 2.

The average discharge rate into the storm drain is expected to be approximately 50 gallons per minute (gpm). The design capacity of the groundwater treatment system is 100 gpm based upon data collected from comparable systems installed at other remedial sites operated/designed by ATC.

The treatment system will be designed and operated by the Contractor / Operator. The Environmental Consultant will obtain and test all influent and effluent samples for compliance monitoring. The Proposed Treatment System Schematic is depicted as Figure Two in the RGP Application. Construction dewatering under this RGP will include piping and discharging to the storm drain labelled “SD-1” on Figure Three of the RGP Application. Storm drain SD-1 is located on Main Street adjacent to the 1 Grove Street Property.

Effluent discharged to this storm drain will flow to the north and west under Main Street. The town-maintained drain turns north and runs through the neighborhood parallel to Cedar Street. The drain opens to daylight and discharges to an unnamed stream. The unnamed steam flows north into wetlands that bound the Indian Brook. The Indian Brook ultimately discharges to the Sudbury River.

Discharge Monitoring and Compliance

Regular sampling and testing will be conducted by the Environmental Consultant at the treated effluent as required by the RGP. Due to the short duration of this project, the discharge will likely not last for more than two weeks. Daily monitoring to be completed by the Contractor / Operator will include checking the condition of the treatment system, assessing the need for treatment system adjustments based on monitoring data, observing and recording daily flow rates and discharge quantities, and verifying the flow path of the discharged effluent. The total daily flow will be monitored by checking and documenting the flow through the flow meter to be installed on the system. Flow will be maintained below the “system design flow” by regularly monitoring flow and adjusting the amount of construction dewatering as needed.

System Maintenance

A number of methods will be used to minimize the potential for violations for the term of this permit. Scheduled regular maintenance of the treatment system will be conducted to verify proper operation. Regular maintenance will include checking the condition of the treatment system equipment such as the frac tanks, bag filters, hoses, pumps, and flow meter. Equipment will be monitored daily for potential issues or unscheduled maintenance requirements.

Employees who have direct or indirect responsibility for ensuring compliance with the RGP will be trained by the Contractor / Operator.

Miscellaneous Items

It is anticipated that the sheet-pile excavation support system, erosion control measures, and the nature of the site and surrounding infrastructure will minimize potential runoff to or from the site. The Contractor / Operator include Best Management Practices for the prevention of sediment entrainment in storm water runoff.

Site security for the treatment system will be covered within the overall Contractor / Operator site security plan.

No adverse effects are expected for downgradient surface water bodies. The nearest water body is an unnamed stream that exists the Hopkinton storm drains northwest the US Post Office at 5 Cedar Street. Dewatering effluent will sufficiently treated prior to discharge to the storm drain.

Management of Treatment System Materials

With the exception of total suspended solids, untreated groundwater analytical data obtained for the RGP application was below the applicable Technology Based Effluent Limits, as they are currently written in the 2016 Draft RGP. As of February 24, 2017, the EPA and MassDEP have not reauthorized an extension of the RGP

Dewatering effluent will be pumped directly into the treatment system from the excavation with use of hoses to minimize handling. The contractor will establish staging areas on the property for any equipment or materials storage which may be possible sources of pollution away from any dewatering activities.

Sediment from the fractionalization tank used in the treatment system will be characterized and disposed of as soil at an appropriate receiving facility in accordance with applicable laws and regulations. Bag filters will be placed in drums and manifested for off-site disposal.

Attachment B
Background Documentation on the Unnamed Street
Indian Brook and Sudbury River

Summary of Waterbody Assessment and TMDL Status in Massachusetts

Sudbury, MA

ID	Waterbody Name	Watershed Name	Category	Acres (In Town - Total)	Miles (In Town - Total)	Cause Non-Pollutant(s)*/Pollutant(s	TMDL
MA82A-03_2008	Sudbury River	Concord	5		0.4 5.6	Metals	
MA82A-04_2008	Sudbury River	Concord	5		0.6 11.7	Exotic species* Metals	
MA82A-05_2008	Hop Brook	Concord	5		6.7 6.7	Noxious aquatic plants Nutrients Organic enrichment/Low DO	
MA82A-06_2008	Hop Brook	Concord	5		1.5 3.0	Noxious aquatic plants Nutrients Pathogens	
MA82A-17_2008	Unnamed Tributary	Concord	5		0.5 0.5	Noxious aquatic plants Nutrients Organic enrichment/Low DO Suspended solids	
MA82A-19_2008	Pantry Brook	Concord	5		3.2 3.2		

1) Adapted from Final Massachusetts Year 2008 Integrated List of Waters (CN 281.1, 12/2008); available at http://www.mass.gov/dep/water/resources/08list2.pdf
2) For additional information on TMDLs and to view reports, see: http://www.mass.gov/dep/water/resources/tmdls.htm
3) For Massachusetts Surface Water Quality Standards, and waterbody classes and uses, see: http://www.mass.gov/dep/service/regulations/314cmr04.pdf

Assessment of Waterbody Segment

Category 2 - Attaining some uses; other uses not assessed
Category 3 - Insufficient information to make assessments for any use
Category 4a - TMDL is completed
Category 4c - Impairment not caused by a pollutant
Category 5 - Impaired or threatened for one or more uses and requiring a TMDL

Note: The accuracy of mileage and acreage estimates is limited for waterbodies that serve as or span municipal boundaries

Summary of Waterbody Assessment and TMDL Status in Massachusetts

Sudbury, MA

ID	Waterbody Name	Watershed Name	Category	Acres (In Town - Total)		Miles (In Town - Total)		Cause Non-Pollutant(s)*/Pollutant(s	TMDL
								Pathogens	
MA82B-09_2008	Second Division Brook	Concord	3			0.8	2.9		
MA82015_2008	Carding Mill Pond	Concord	5	40.47	40.47				
								Noxious aquatic plants	
								Nutrients	
MA82055_2008	Grist Mill Pond	Concord	5	16.52	16.73				
								Noxious aquatic plants	
								Nutrients	
								Organic enrichment/Low DO	
								Pathogens	
MA82092_2008	Puffers Pond	Concord	5	4.74	28.44				
								Metals	
MA82104_2008	Stearns Mill Pond	Concord	5	19.08	19.08				
								Noxious aquatic plants	
								Nutrients	
								Organic enrichment/Low DO	
								Turbidity	
MA82122_2008	Willis Pond	Concord	2	67.33	67.33				

1) Adapted from Final Massachusetts Year 2008 Integrated List of Waters (CN 281.1, 12/2008); available at http://www.mass.gov/dep/water/resources/08list2.pdf
2) For additional information on TMDLs and to view reports, see: http://www.mass.gov/dep/water/resources/tmdls.htm
3) For Massachusetts Surface Water Quality Standards, and waterbody classes and uses, see: http://www.mass.gov/dep/service/regulations/314cmr04.pdf

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Summary of Waterbody Assessment and TMDL Status in Massachusetts

Sudbury, MA

ID	Waterbody Name	Watershed Name	Category	Acres (In Town - Total)	Miles (In Town - Total)	Cause Non-Pollutant(s)*/Pollutant(s	TMDL

1) Adapted from Final Massachusetts Year 2008 Integrated List of Waters
(CN 281.1, 12/2008); available at http://www.mass.gov/dep/water/resources/08list2.pdf
2) For additional information on TMDLs and to view reports, see:
http://www.mass.gov/dep/water/resources/tmdls.htm
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Assessment of Waterbody Segment

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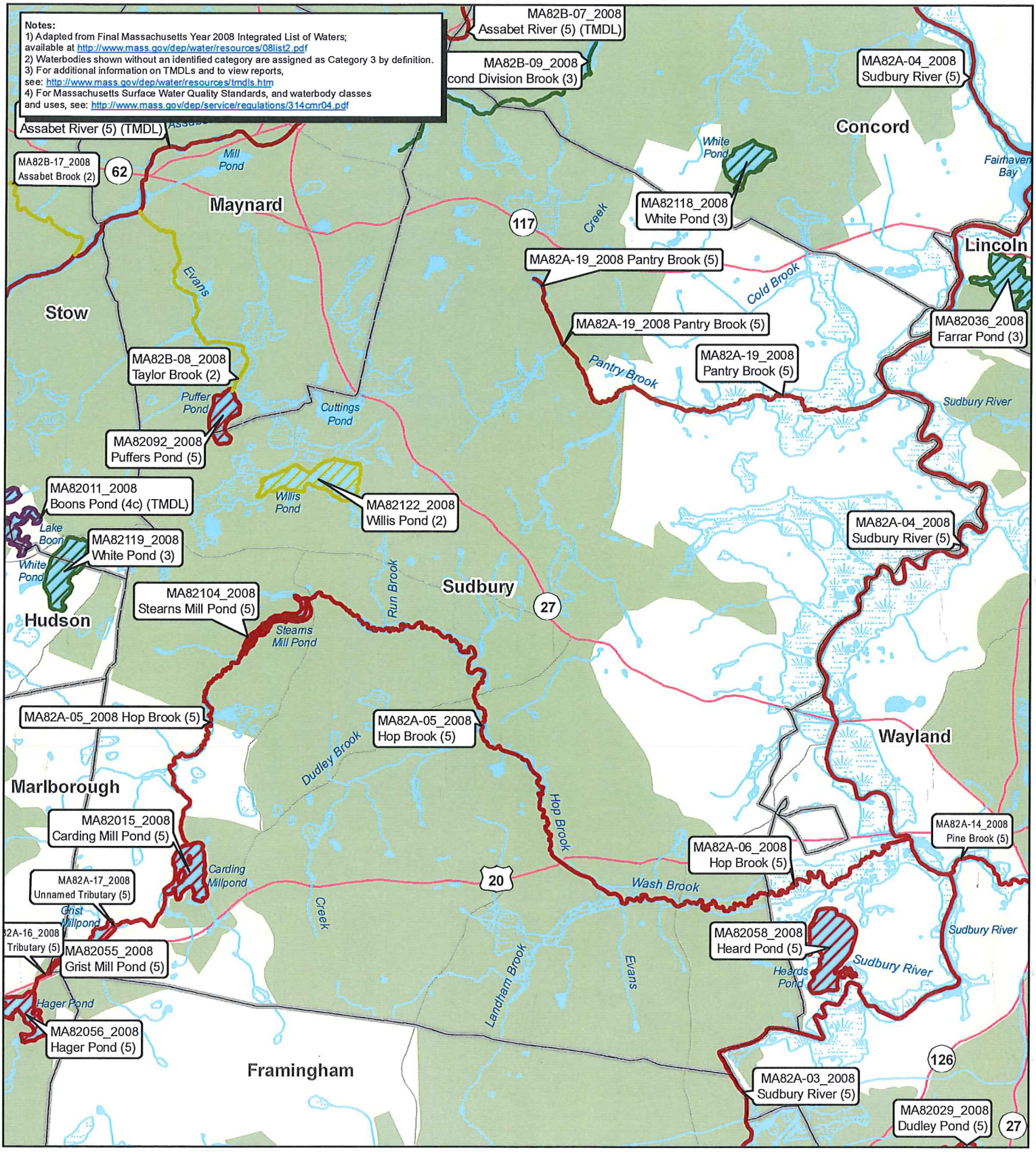
Note: The accuracy of mileage and acreage estimates is limited for waterbodies that serve as or span municipal boundaries



Waterbody Assessment and TMDL Status
Sudbury, MA

N

0 0.5 Miles

EPA

Map produced by EPA Region I GIS Center
Map Tracker ID 6678, February 25, 2010
Data Sources: TeleAtlas, Census Bureau, USGS, MassDEP

Waterbody Label

State ID,
Waterbody Name (Category)
(TMDL(s) approved for this waterbody)

See companion table for a listing of pollutants, non-pollutants, and TMDLs for each waterbody

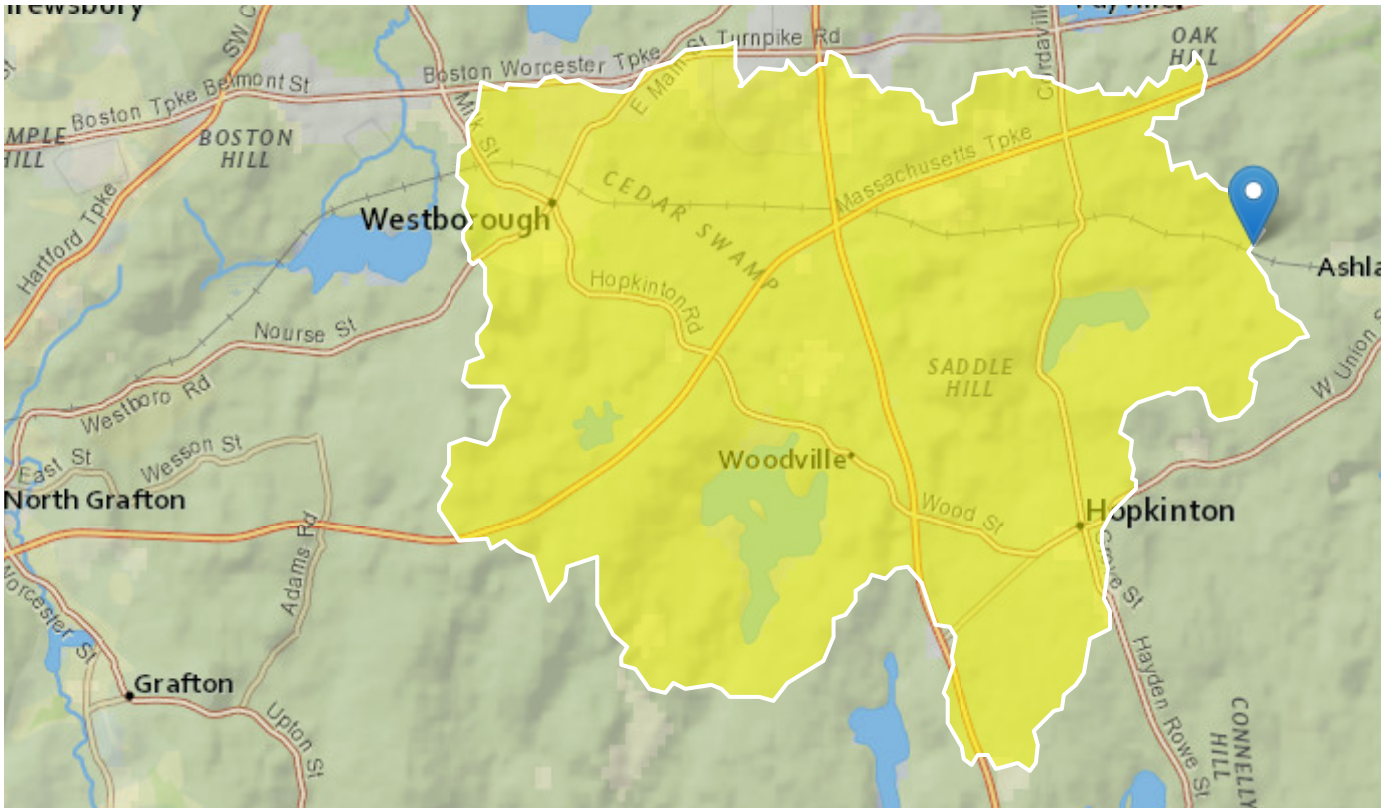
Assessment of Waterbody Segment

- Category 2: Attaining some uses; other uses not assessed
- Category 3: Insufficient information to make assessments for any use.
- Category 4a: TMDL is completed and approved for one or more pollutants
- Category 4c: Impairment not caused by a pollutant.
- Category 5: Impaired or threatened for one or more uses and requiring a TMDL.

- Waterbodies
- Swamp/Marsh
- MS4 Urbanized Areas (2000 Census)
- Municipal Boundaries

StreamStats Report - Sudbury River at Indian Brook

Region ID:
MA
Workspace ID:
MA20170220150143282000
Clicked Point (Latitude, Longitude):
42.26416, -71.49332
Time:
2017-02-20 17:02:07 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	31.4	square miles
DRFTPERSTR	Area of stratified drift per unit of stream length	0.12	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless
FOREST	Percentage of area covered by forest	51.75	percent
BSLDEM250	Mean basin slope computed from 1:250K DEM	3.26	percent

Parameter Code	Parameter Description	Value	Unit
PCTSNDGRV	Percentage of land surface underlain by sand and gravel deposits	34.92	percent

Low-Flow Statistics Parameters [100.00 Percent Statewide Low Flow WRIR00 4135]

Parameter Code	Parameter Description	Value	Min Limit	Max Limit
DRNAREA	Drainage Area	31.4	1.61	149
DRFTPERSTR	Stratified Drift per Stream Length	0.12	0	1.29
BSLDEM250	Mean Basin Slope from 250K DEM	3.26	0.32	24.6
MAREGION	Massachusetts Region	0	0	1

Low-Flow Statistics Disclaimers [100.00 Percent Statewide Low Flow WRIR00 4135]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Low-Flow Statistics Parameters [100.00 Percent Perennial Flow Probability]

Parameter Code	Parameter Description	Value	Min Limit	Max Limit
DRNAREA	Drainage Area	31.4	0.01	1.99
PCTSNDGRV	Percent Underlain By Sand And Gravel	34.92	0	100
FOREST	Percent Forest	51.75	0	100
MAREGION	Massachusetts Region	0	0	1

Low-Flow Statistics Disclaimers [100.00 Percent Perennial Flow Probability]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Low-Flow Statistics Flow Report [100.00 Percent Statewide Low Flow WRIR00 4135]

Statistic	Value	Unit	Prediction Error (Percent)	Lower Prediction Interval	Upper Prediction Interval
7 Day 2 Year Low Flow	3.2	ft^3/s	49.5	1.09	9.04

Statistic	Value	Unit	Prediction Error (Percent)	Lower Prediction Interval	Upper Prediction Interval
7 Day 10 Year Low Flow	1.39	ft^3/s	70.8	0.377	4.76

Low-Flow Statistics Flow Report [100.00 Percent Perennial Flow Probability]

Statistic	Value	Unit
Probability Stream Flowing Perennially	0.995	dim

Low-Flow Statistics Flow Report [Area-Averaged]

Statistic	Value	Unit
7 Day 2 Year Low Flow	3.2	ft^3/s
7 Day 10 Year Low Flow	1.39	ft^3/s
Probability Stream Flowing Perennially	0.995	dim

Low-Flow Statistics Citations

Ries, K.G., III,2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p. (http://pubs.usgs.gov/wri/wri004135/)

Bent, G.C., and Steeves, P.A.,2006, A revised logistic regression equation and an automated procedure for mapping the probability of a stream flowing perennially in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2006–5031, 107 p. (http://pubs.usgs.gov/sir/2006/5031/pdfs/SIR_2006-5031rev.pdf)

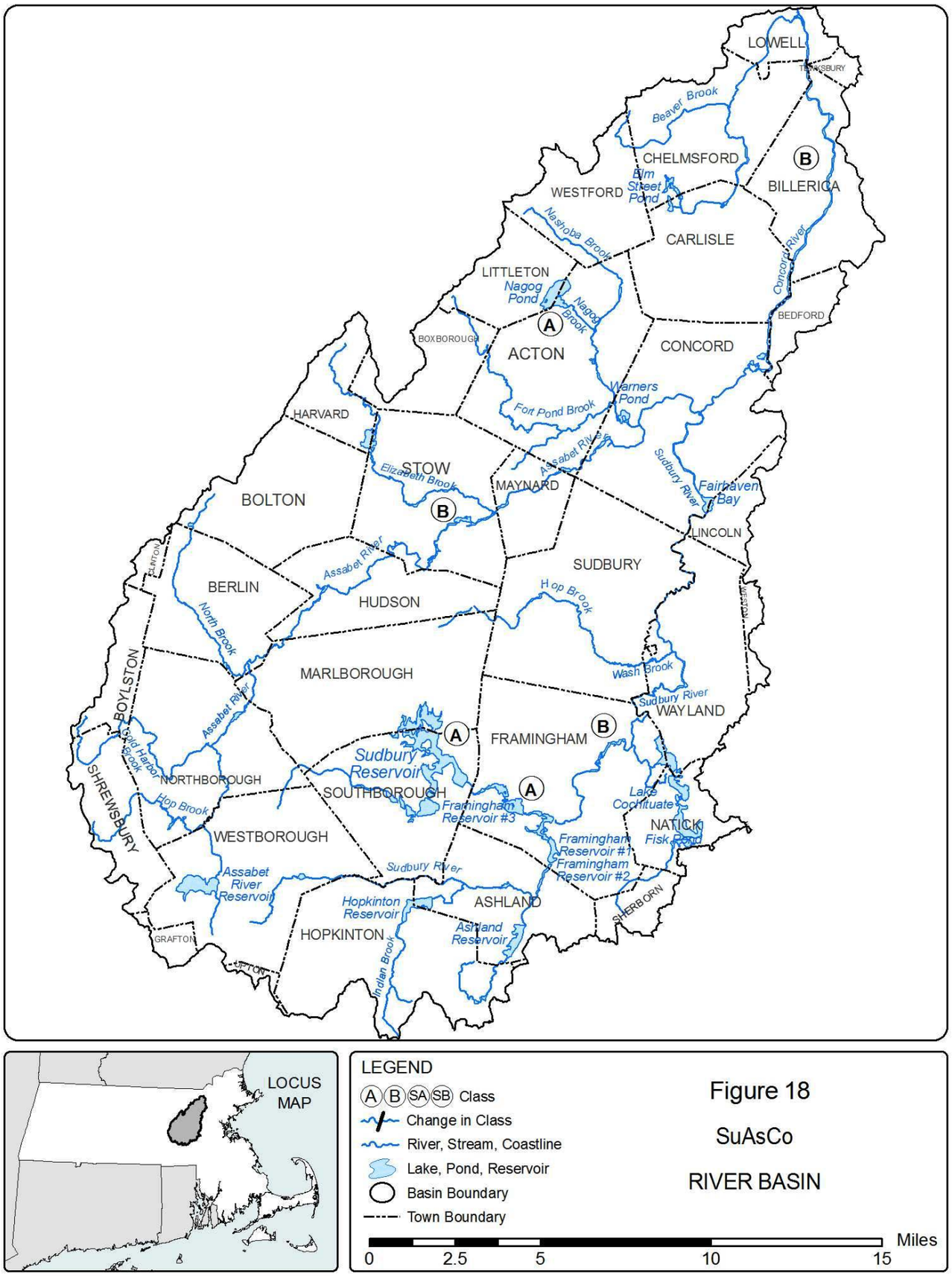
Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Spencer Brook	MA82B-15	From the outlet of an unnamed pond north of Bellows Hill, Carlisle to the inlet of Angiers Pond, Concord.	3.794	MILES
Sudbury River	MA82A-01	From the source at the outlet of Cedar Swamp Pond, Westborough to the Fruit Street Bridge, Hopkinton/Westborough.	1.895	MILES
Tripp Pond	MA82107	Hudson	3.501	ACRES
Westborough Reservoir	MA82114	Westborough	41.007	ACRES
White Pond	MA82118	Concord	36.112	ACRES
White Pond	MA82119	Hudson/Stow	48.837	ACRES
Whitehall Brook	MA82A-11	From the outlet of Whitehall Reservoir, Hopkinton to confluence with the Sudbury River, Westborough.	3.485	MILES
Williams Lake	MA82121	Marlborough	69.316	ACRES
Connecticut				
Atkins Reservoir	MA34006	Shutesbury	46.468	ACRES
Brickyard Brook	MA34-13	Headwaters, Westfield to confluence with Manhan River, Westfield.	1.616	MILES
Cooley Brook	MA34-20	Headwaters, Longmeadow to confluence with Connecticut River, Longmeadow.	1.44	MILES
Danks Pond	MA34019	Northampton/Easthampton	2.796	ACRES
Factory Hollow Pond	MA34021	Amherst	11.89	ACRES
Green Pond	MA34028	Montague	14.727	ACRES
Lake Pleasant	MA34070	Montague	54.006	ACRES
Long Plain Brook	MA34-09	Headwaters, Leveret/Sunderland town line (in Mt. Toby State Forest) to confluence with Russellville Brook at Route 116, Sunderland.	5.012	MILES
Longmeadow Brook	MA34-21	Headwaters, outlet Turner Park Pond, Longmeadow to confluence with Connecticut River, Longmeadow.	4.454	MILES
Lower Highland Lake	MA34047	Goshen	90.731	ACRES
Manhan River	MA34-10	Headwaters, northeast of Norwich Pond, Huntington to inlet Tighe Carmody Reservoir, Southampton (thru White Reservoir formely segment MA34100).	6.551	MILES
Mill River Diversion	MA34-32	Headwaters, outlet Paradise Pond to confluence with Oxbow (east of Old Springfield Road), Northampton (thru Hulberts Pond formely segment MA34036).	2.538	MILES
Mountain Street Reservoir	MA34056	Williamsburg/Hatfield/Whately	66.673	ACRES
Nine Mile Pond	MA34127	Wilbraham (PALIS/Segment changed from 36107 to 34127, TRD 6/21/02)	32.531	ACRES
Northampton Reservoir	MA34059	Whately	80.365	ACRES
Northfield Mountain Reservoir	MA34061	Erving	237.269	ACRES
Pine Island Lake	MA34069	Westhampton	55.096	ACRES
Plympton Brook Pond	MA34071	Wendell	4.894	ACRES
Potash Brook	MA34-12	Headwaters to confluence with Manhan River, Southampton.	0.96	MILES
Raspberry Brook	MA34-22	From Massachusetts/Connecticut border to confluence with Connecticut River, Longmeadow.	1.794	MILES
Roberts Meadow Reservoir	MA34076	Northampton	22.421	ACRES
Sawmill River	MA34-40	Headwaters, outlet Lake Wyola, Shutesbury to Dudleyville Road, Leverett (formerly part of MA34-26).	2.032	MILES

Massachusetts Category 3 Waters
"No uses assessed"

NAME	SEGMENT ID	DESCRIPTION	SIZE	UNITS
Queen Lake	MA36132	Phillipston	139	ACRES
Shaw Pond	MA36138	Leicester	64	ACRES
Springfield Reservoir	MA36145	Ludlow	393	ACRES
Stone Bridge Pond	MA36148	Templeton	32	ACRES
Thayer Pond	MA36181	Rutland	46	ACRES
Thompson Lake	MA36154	Palmer	34	ACRES
Thompsons Pond	MA36155	Spencer	116	ACRES
Town Barn Beaver Pond	MA36156	Petersham	20	ACRES
Waite Pond	MA36161	Hubbardston	34	ACRES
Concord (SuAsCo)				
Cedar Swamp Pond	MA82016	Westborough	16.579	ACRES
Clamshell Pond	MA82018	Clinton	24.326	ACRES
Denny Brook	MA82A-27	From outlet of unnamed pond west of South Street, Westborough to confluence with Jackstraw Brook, Westborough	0.642	MILES
Elm Street Pond	MA82032	Chelmsford/Carlisle	65.646	ACRES
Farrar Pond	MA82036	Lincoln	83.012	ACRES
Fiske Street Pond	MA82037	Carlisle/Chelmsford	37.732	ACRES
Fort Pond	MA82043	Littleton	101.823	ACRES
Fort Pond Brook	MA82B-13	From source in a wetland just west of Fort Pond, Littleton to the inlet of Warners Pond, Concord.	10.239	MILES
Gates Pond	MA82047	Berlin	72.666	ACRES
Gates Pond Brook	MA82B-10	From the outlet of Gates Pond, Berlin to the confluence with the Assabet River, Berlin.	1.042	MILES
Gleasons Pond	MA82048	Framingham	10.504	ACRES
Ice House Pond	MA82066	Acton	11.219	ACRES
Indian Brook	MA82A-23	Headwaters, outlet of Icehouse Pond, Hopkinton to the inlet of Hopkinton Reservoir, Hopkinton (formerly part of segment MA82A-12).	2.33	MILES
Jackstraw Brook	MA82A-28	From headwaters west of Upton Road, Westborough to inlet of Cedar Swamp Pond, Westborough	1.919	MILES
Learned Pond	MA82069	Framingham	33.857	ACRES
Milham Reservoir	MA82077	Marlborough	66.594	ACRES
Nagog Pond	MA82082	Littleton/Acton	277.719	ACRES
Piccadilly Brook	MA82A-30	From headwaters, outlet of Westboro Reservoir, Westborough to inlet to Cedar Swamp Pond, Westborough	2.032	MILES
Rutters Brook	MA82A-29	From headwaters near Robin Road, Westborough to confluence with Jackstraw Brook, Westborough	1.968	MILES
Second Division Brook	MA82B-09	From the headwaters at the outlet of small unnamed pond north of Waltham Street, Maynard to the confluence with the Assabet River, Concord.	2.909	MILES
Smith Pond	MA82099	Northborough	15.553	ACRES
Solomon Pond	MA82100	Northborough	21.242	ACRES

4.06: continued



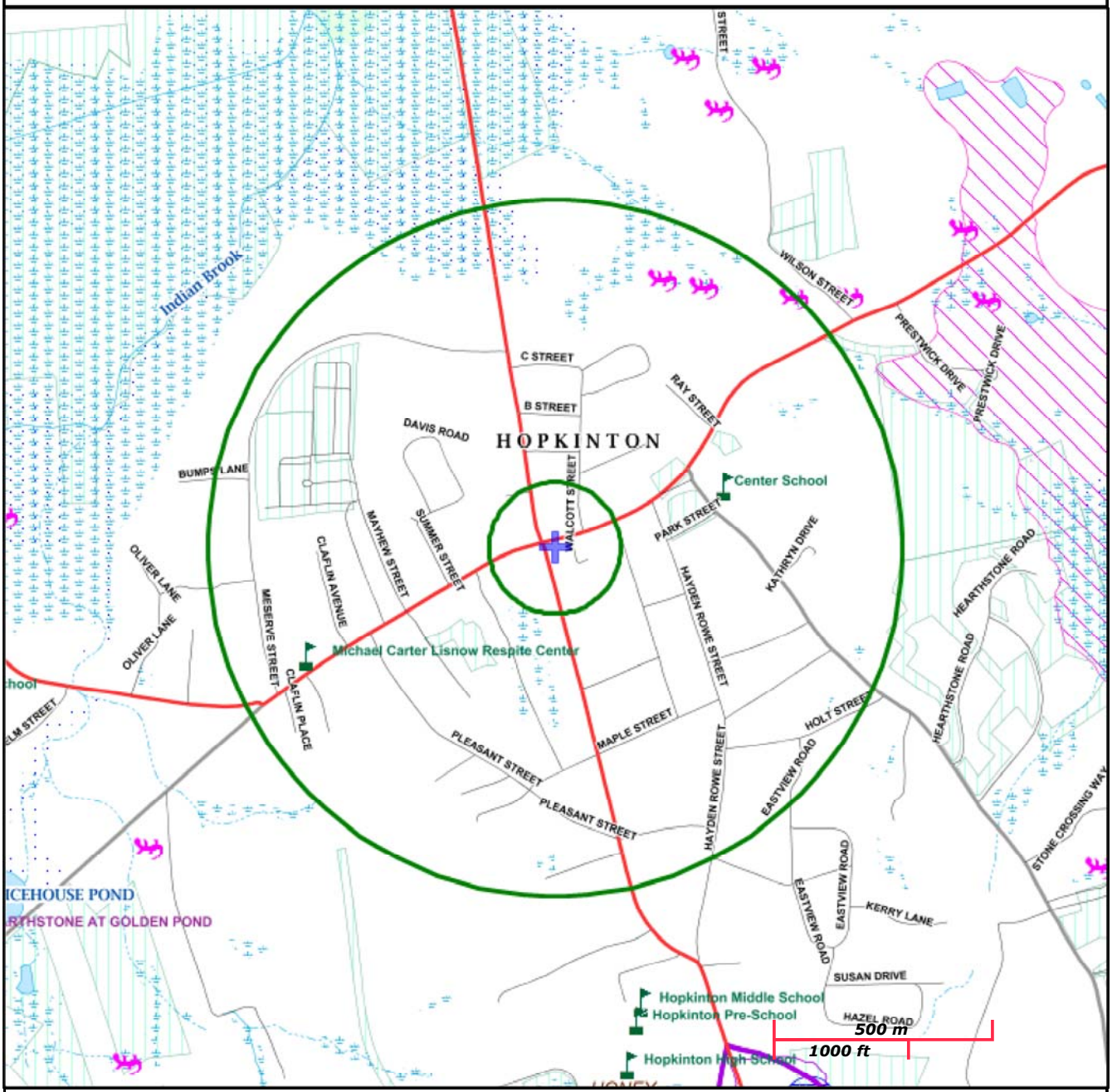
MassDEP - Bureau of Waste Site Cleanup

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

Site Information:
HOPKINTON, MA
NAD83 UTM Meters:
5195245mN , -7961750mE (Zone: 18)
February 21, 2017

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

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail
Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct
Basins: Major,PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam
Aquifers: Medium Yield, High Yield, EPA Sole Source
Non Potential Drinking Water Source Area: Medium, High (Yield)
PWS Protection Areas: Zone II, IWPA, Zone A
Hydrography: Open Water, PWS Reservoir, Tidal Flat
Wetlands: Freshwater, Saltwater, Cranberry Bog
FEMA 100yr Floodplain; Protected Open Space; ACEC
Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert., Potential
Solid Waste Landfill; PWS: Com.GW,SW, Emerg.,Non-Com.

Attachment C
Laboratory Reports and Data Summary Table

Summary of Analytical Results

Hopkinton Gas, Hopkinton Massachusetts

Location: Hopkinton Gas, 1 Grove Street, Hopkiinton, MA	Units	RGP TBEL	RGP WQBEL	HVE-1		HVE-1		CEA-10		CEA-10		Excavtion Sample	
Sample Date				May 5, 2016		February 15, 2016		May 5, 2016		February 15, 2016		March 31, 2017	
Compound Name				Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit	Sample Result	Reporting Limit
Inorganics Method 4500 and SM 2540 (Reported in mg/L and SU)													
Ammonia (Method 4500)	mg/L	Report mg/L	Report mg/L	-	-	ND	0.1	-	-	ND	0.1	-	-
Chloride (Method 4500)	mg/L	Report mg/L	Report mg/L	-	-	**105**	1	-	-	**568**	1.0	-	-
Total Suspended Solids (Method SM2540D)	mg/L	30	30	**7**	2	-	-	**142**	2	-	-	-	-
Hardness (Method 6010C)	mg/L			-	-	**139**	0.33	-	-	**45**	0.33	-	-
pH (Method 4500)	SU	6.5 - 8.3	6.5 - 8.3	-	-	**6.33**		-	-	**5.84**		-	-
Total Cyanide	mg/L	178	5.2	-	-	ND	0.01	-	-	ND	0.01	-	-
Total Residual Chlorine (Method 4500)	mg/L	0.2	0.011	ND	0.01	ND	0.01	ND	0.01	ND	0.01	-	-
Inorganics													
Metals Method 6010, 7470, and SM3500-C (Reported in ug/L)													
Antimony	ug/L	206	640	ND	10	-	-	ND	10	-	-	-	-
Arsenic	ug/L	104	10	**20**	10	-	-	**10**	10	-	-	-	-
Cadmium	ug/L	10.2	0.25	ND	5	-	-	ND	5	-	-	-	-
Cadmium	ug/L	10.2	0.25	-	-	-	-	-	-	-	-	**0.6**	0.1
Chromium (Total)	ug/L	323	74	ND	5	-	-	**11**	5	-	-	-	-
Hexavalent Chromium	ug/L	323	74	-	-	-	-	-	-	-	-	ND	1.0
Copper	ug/L	242	9	-	-	ND	20.0	-	-	**40**	20.0	-	-
Iron	ug/L	5000	5000	-	-	**180**	50.0	-	-	**1,480**	5.0	-	-
Lead	ug/L	160	2.5	**16**	5	-	-	**19**	5	-	-	-	-
Lead	ug/L	160	2.5	-	-	-	-	-	-	-	-	**9.8**	1.0
Mercury	ug/L	0.739	0.77	-	-	ND	2.0	-	-	ND	2.0	ND	2.0
Mercury (revised 3/31/2017)	ug/L	0.739	0.77	-	-	ND	0.2	-	-	ND	0.2	-	-
Nickel	ug/L	1450	52	**7**	5	-	-	**6**	5	-	-	-	-
Selenium	ug/L	235.8	5	ND	10	-	-	ND	10	-	-	-	-
Selenium	ug/L	235.8	5	-	-	-	-	-	-	-	-	ND	3.0
Silver	ug/L	35.1	3.2	ND	5	-	-	ND	5	-	-	-	-
Silver	ug/L	35.1	3.2	-	-	-	-	-	-	-	-	ND	1.0
Zinc	ug/L	420	120	ND	20	-	-	**260**	20	-	-	-	-
Non-Halogenated VOCs (Method 8260, 624 and 625)													
Acetone (8260)	ug/L	7.97	7.97	ND	5.0	-	-	ND	5.0	-	-	-	-
Acetone (624)	ug/L	7.97	7.97	-	-	-	-	-	-	-	-	**19.0**	5.0
Phenol (Method 8260)	ug/L	1,080	300	ND	2	-	-	ND	2	-	-	-	-
Phenol (Method 625)	ug/L	1,080	300	-	-	-	-	-	-	-	-	ND	2.0
1,4-Dioxane (Method 8260)	ug/L	200	200	ND	500	-	-	ND	500	-	-	-	-
1,4-Dioxane (Method 624)	ug/L	200	200	-	-	-	-	-	-	-	-	ND	500.0
Total BTEX (Method 8260)	ug/L	100	100	**3.5**	2.0	-	-	**13.7**	-	-	-	-	-
Total BTEX (Method 624)	ug/L	100	100	-	-	-	-	-	-	-	-	**67.0**	1.0
Benzene (Method 8260)	ug/L	5.0	5.0	ND	1.0	-	-	ND	1.0	-	-	-	-
Benzene (Method 624)	ug/L	5.0	5.0	-	-	-	-	-	-	-	-	**10.0**	1.0
Halogenated VOCs (Method 8260, 624, 504.1)													
Carbon Tetrachloride (Method 8260)	ug/L	4.4	1.6	ND	1.0	-	-	ND	1.0	-	-	-	-
Carbon Tetrachloride (Method 624)	ug/L	4.4	1.6	-	-	-	-	-	-	-	-	ND	1.0
1,2-Dichlorobenzene (Method 8260)	ug/L	600	600	ND	1.0	-	-	ND	1.0	-	-	-	-
1,2-Dichlorobenzene (Method 624)	ug/L	600	600	-	-	-	-	-	-	-	-	ND	1.0
1,3-Dichlorobenzene (Method 8260)	ug/L	320	320	ND	1.0	-	-	ND	1.0	-	-	-	-
1,3-Dichlorobenzene (Method 624)	ug/L	320	320	-	-	-	-	-	-	-	-	ND	1.0
1,4-Dichlorobenzene (Method 8260)	ug/L	5	5	ND	1.0	-	-	ND	1.0	-	-	-	-
1,4-Dichlorobenzene (Method 624)	ug/L	5	5	-	-	-	-	-	-	-	-	ND	1.0
1,1-Dichloroethane (Method 8260)	ug/L	70	70	ND	1.0	-	-	ND	1.0	-	-	-	-
1,1-Dichloroethane (Method 624)	ug/L	70	70	-	-	-	-	-	-	-	-	ND	1.0
1,2-Dichloroethane (Method 8260)	ug/L	5	5	ND	1.0	-	-	ND	1.0	-	-	-	-
1,2-Dichloroethane (Method 624)	ug/L	5	5	-	-	-	-	-	-	-	-	ND	1.0
1,1-Dichloroethene (Method 8260)	ug/L	3.2	3.2	ND	1.0	-	-	ND	1.0	-	-	-	-
1,1-Dichloroethene (Method 624)	ug/L	3.2	3.2	-	-	-	-	-	-	-	-	ND	1.0
Ethylene Dibromide (Method 8260)	ug/L	0.05	0.05	ND	1.0	-	-	ND	1.0	-	-	-	-
Ethylene Dibromide (Method 504.1)	ug/L	0.05	0.05	-	-	-	-	-	-	-	-	ND	0.01
Methylene Chloride (Method 8260)	ug/L	4.6	4.6	ND	1.0	-	-	ND	1.0	-	-	-	-
Methylene Chloride (Method 624)	ug/L	4.6	4.6	ND	1.0	-	-	-	-	-	-	ND	5.0
1,1,1-Trichloroethane (Method 8260)	ug/L	200	200	ND	1.0	-	-	ND	1.0	-	-	-	-
1,1,1-Trichloroethane (Method 624)	ug/L	200	200	ND	1.0	-	-	-	-	-	-	ND	1.0
1,1,2-Trichloroethane (Method 8260)	ug/L	5	5	ND	1.0	-	-	ND	1.0	-	-	-	-
1,1,2-Trichloroethane (Method 624)	ug/L	5	5	ND	1.0	-	-	-	-	-	-	ND	1.0
Trichloroethene (Method 8260)	ug/L	5	5	ND	1.0	-	-	ND	1.0	-	-	-	-
Trichloroethene (Method 624)	ug/L	5	5	ND	1.0	-	-	-	-	-	-	ND	1.0
Tetrachloroethene (Method 8260)	ug/L	5	3.3	ND	1.0	-	-	ND	1.0	-	-	-	-
Tetrachloroethene (Method 624)	ug/L	5	3.3	ND	1.0	-	-	-	-	-	-	ND	1.0
cis 1,2-dichloroethene (Method 8260)	ug/L	70	70	ND	1.0	-	-	ND	1.0	-	-	-	-
cis 1,2-dichloroethene (Method 624)	ug/L	70	70	ND	1.0	-	-	-	-	-	-	ND	1.0
Vinyl Chloride (Method 8260)	ug/L	2	2	ND	1.0	-	-	ND	1.0	-	-	-	-
Vinyl Chloride (Method 624)	ug/L	2	2	ND	1.0	-	-	-	-	-	-	ND	1.0
Non-Halogenated SVOCs (Method 8270 and 625)													
Total Phthalates	ug/L	190	190	ND	30	-	-	ND	30	-	-	-	-
bis (2-Ethylhexyl)phthalate	ug/L	101	2.2	ND	30	-	-	ND	30	-	-	-	-
Halogenated and Non-Halogenated SVOCs (Method 625)													
Total Phthalates	ug/L	190	190	-	-	-	-	-	-	-	-	**25.3**	3.0
bis (2-Ethylhexyl)phthalate	ug/L	101	2.2	-	-	-	-	-	-	-	-	**17.8**	3.0
Total Group I PAHs (Method 8270)	ug/L	1	1	ND	2			ND	2				
Benzo(a)anthracene	ug/L	0.1	0.0038	ND	2	-	-	ND	2	-	-	-	-
Benzo(a)pyrene	ug/L	0.1	0.0038	ND	2	-	-	ND	2	-	-	-	-
Benzo(b)fluoranthene	ug/L	0.1	0.0038	ND	2	-	-	ND	2	-	-	-	-
Benzo(k)fluoranthene	ug/L	0.1		ND	2	-	-	ND	2	-	-	-	-
Chrysene	ug/L	0.1	0.0038	ND	2	-	-	ND	2	-	-	-	-
Dibenz(a,h)anthracene	ug/L	0.1	0.0038	ND	2	-	-	ND	2	-	-	-	-
Indeno(1,2,3-cd)pyrene	ug/L	0.1	0.0038	ND	2	-	-	ND	2	-	-	-	-
Total Group I PAHs (Method 625)	ug/L	1	1	-	-			-	-			ND	0.5
Benzo(a)anthracene	ug/L	0.1	0.0038	-	-	-	-	-	-	-	-	ND	0.5
Benzo(a)pyrene	ug/L	0.1	0.0038	-	-	-	-	-	-	-	-	ND	0.5
Benzo(b)fluoranthene	ug/L	0.1	0.0038	-	-	-	-	-	-	-	-	ND	0.5
Benzo(k)fluoranthene	ug/L	0.1		-	-	-	-	-	-	-	-	ND	0.5
Chrysene	ug/L	0.1	0.0038	-	-	-	-	-	-	-	-	ND	0.5
Dibenz(a,h)anthracene	ug/L	0.1	0.0038	-	-	-	-	-	-	-	-	ND	0.5
Indeno(1,2,3-cd)pyrene	ug/L	0.1	0.0038	-	-	-	-	-	-	-	-	ND	0.5
Total Group II PAHs (Method 8270)	ug/L	100	100	**2**	2			**3**	2				
Naphthalene	ug/L	20	20	**2**	2	-	-	**3**	2	-	-	-	-
Total Group II PAHs (Method 625)	ug/L	100	100	-	-	-	-	-	-	-	-	**9.8**	0.5
Naphthalene	ug/L	20	20	-	-	-	-	-	-	-	-	ND	0.5
Halogenated SVOCs (Method 8270 and 625)													
Pentachlorophenol	ug/L	1	1	ND	5	-	-	ND	5	-	-	-	-
Pentachlorophenol (Method 625)	ug/L	1	1	-	-	-	-	-	-	-	-	ND	5.0
PCBs (Method 8082)													
Aroclor 1221	ug/l	0.000064	0.000064	ND	0.2	-	-	ND	0.2	-	-	-	-
Aroclor 1232	ug/l	0.000064	0.000064	ND	0.2	-	-	ND	0.2	-	-	-	-
Aroclor 1016	ug/l	0.000064	0.000064	ND	0.2	-	-	ND	0.2	-	-	-	-
Aroclor 1242	ug/l	0.000064	0.000064	ND	0.2	-	-	ND	0.2	-	-	-	-
Aroclor 1248	ug/l	0.000064	0.000064	ND	0.2	-	-	ND	0.2	-	-	-	-
Aroclor 1254	ug/l	0.000064	0.000064	ND	0.2	-	-	ND	0.2	-	-	-	-
Aroclor 1260	ug/l	0.000064	0.000064	ND	0.2	-	-	ND	0.2	-	-	-	-
Aroclor 1262	ug/l	0.000064	0.000064	ND	0.2	-	-	ND	0.2	-	-	-	-
Fuels													
TPH (Method 8100M)	ug/L	5000	5000	ND	308	-	-	**1,170**	276	-	-	-	-
Oil & Grease (1664A)	ug/L	5000	5000	-	-	-	-	-	-	-	-	**50,000**	2,000
MTBE (Method 8260)	ug/L	70	20	ND	1.0	-	-	ND	1.0	-	-	-	-
MTBE (Method 524.2	ug/L	70	20	-	-	-	-	-	-	-	-	ND	5.0
Ethanol (Method 8100M)	mg/L	Report mg/L	Report mg/L	-	-	-	-	-	-	-	-	ND	10
tert-Butyl Alcohol (Method 8260)	ug/L	90	90	ND	1.0	-	-	ND	1.0	-	-	-	-
tert-Butyl Alcohol (Method 524.2)	ug/L	90	90	-	-	-	-	-	-	-	-	ND	5.0
tert-Amyl Methyl Ether (Method 8260)	ug/L	120	120	ND	5.0	-	-	ND	5.0	-	-	-	-
tert-Amyl Methyl Ether (Method 524.2)	ug/L	120	120	-	-	-	-	-	-	-	-	ND	5.0

TBEL = Technology Based Effluent Limit

WQBEL = Technology Based Effluent Limit

Bold font = detected concentration

Yellow highlight = method detection limit exceeds RGP TBEL Effluent Limit

- = Not analyzed

Green highlight = analyte resampled, or corrected

N/A = effluent limit not published

REPORT OF ANALYTICAL RESULTS

NETLAB Case Number D0331-01

Prepared for:

Attn: Keith Sullivan
ATC Group Services
400 Reservoir Avenue
Suite 2C
Providence, RI 02907

Report Date: April 7, 2017

Director
New England Testing Laboratory, Inc.
Lab # RI010

NEW ENGLAND TESTING LABORATORY, INC.
59 Greenhill Street, West Warwick, RI 02893
(401) 353-3420

SAMPLES SUBMITTED and REQUEST FOR ANALYSIS:

The samples listed in Table I were submitted to New England Testing Laboratory on March 31, 2017. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provided to us by the client which are indicated on the custody record. The case number for this sample submission is D0331-01.

Custody records are included in this report.

Project: 3010000235 – Hopkinton Gas

TABLE I, Samples Submitted

Sample ID	Date Sampled	Matrix	Analysis Requested
Excavation Sample	3/31/2017	Water	Table II

TABLE II, Analysis and Methods

ANALYSIS	DETERMINATIVE METHOD
Hexavalent Chromium	SM3500-Cr B-2009
Total Metals	
Cadmium	200.7-1994
Lead	200.7-1994
Selenium	200.7-1994
Silver	200.7-1994
Ethanol	8100 M
Ethylene Dibromide	504
Total Petroleum Hydrocarbons	1664
Semi-Volatile Organic Compounds	625
Volatile Organic Compounds	524
Volatile Organic Compounds	624

These methods are documented in:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, USEPA/OSW.

CASE NARRATIVE:

Sample Receipt

The samples were all appropriately cooled and preserved upon receipt. The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

Metals

All analyses were performed according to NETLAB's documented Standard Operating Procedures, within all required holding times, and with appropriate quality control measures. All QC was within laboratory established acceptance criteria. The samples were received, processed, and reported with no anomalies.

Semi-volatile Compounds

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

The sample has elevated detection limits due to matrix interference caused by the large concentration of petroleum hydrocarbons present.

Total Petroleum Hydrocarbons

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

Volatile Organic Compounds

All samples were analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

Wet Chemistry

All samples were analyzed within method specified holding times and according to NETLAB's documented standard operating procedures.

Excavation Sample

Parameter	Result, mg/L	Reporting Limit	Date Analyzed
Ethanol	ND	10	3/31/2017
Hexavalent Chromium	ND	0.001	3/31/2017 @ 09:45
Cadmium	0.0006	0.0001	4/3/2017
Lead	0.098	0.001	4/3/2017
Selenium	ND	0.003	4/3/2017
Silver	ND	0.001	4/3/2017
Total Petroleum Hydrocarbons	50	2	4/5/2017

ND = Not Detected
NA = Not Applicable

Sample: Excavation Sample		Analyst's Initials: BJ
Case No. D0331-01		
Date Collected: 3/31/2017		
Sample Matrix: Water		
Subject: Ethylene Dibromide		
Prep Method: NA	Date Extracted	Date Analyzed
Analytical Method: EPA 504.1	4/6/2017	4/7/2017
Compound	Concentration, ug/l (ppb)	Reporting Limit
Ethylene Dibromide	ND	0.01

ND = Not Detected

Sample: Excavation Sample
Date Sampled: 3/31/2017

Case No. D0331-01
Date Extracted: 4/4/2017
Date Analyzed: 4/6/2017

Subject: Acid and Base/Neutral Extractable Compounds
Method: EPA 625

Base/Neutral Compounds	Concentration ug/l (ppb)	Reporting Limit
Benzo(a)anthracene	N.D.	0.5
Benzo(b)fluoranthene	N.D.	0.5
Benzo(k)fluoranthene	N.D.	0.5
Benzo(a)pyrene	N.D.	0.5
Chrysene	N.D.	0.5
Dibenzo(a,h)anthracene	N.D.	0.5
Indeno(1,2,3-cd)pyrene	N.D.	0.5
Naphthalene	N.D.	0.5
Total Phthalates	25.3	3.0
Diethyhexyl Phthalate	17.8	3.0
Total Group I PAH's	N.D.	0.5
Total Group II PAH's	9.8	0.5

Acid Compounds	Concentration ug/l (ppb)	Reporting Limit
Pentachlorophenol	N.D.	5.0
Phenol	N.D.	2.0

Surrogates:

Compound	% Recovery	Limits
Nitrobenzene d5	88	33-130
2-Fluorobiphenyl	80	35-130
p-Terphenyl d14	87	50-130
Phenol d6	25	10-83
2,4,6-Tribromophenol	73	44-120
2-Fluorophenol	35	10-81

Sample: Excavation Sample

Case No. D0331-01
Date Analyzed: 4/6/2017

Subject: Volatile Organic Compounds
Method: EPA 624

Compound	Concentration ug/L (ppb)	Reporting Limit
Benzene	10	1.0
Carbon tetrachloride	N.D.	1.0
1,1-Dichloroethane	N.D.	1.0
1,2-Dichloroethane	N.D.	1.0
1,1-Dichloroethene	N.D.	1.0
cis-1,2-Dichloroethene	N.D.	1.0
Methylene chloride	N.D.	5.0
Tetrachloroethene	N.D.	1.0
1,1,1-Trichloroethane	N.D.	1.0
1,1,2-Trichloroethane	N.D.	1.0
Trichloroethene	N.D.	1.0
Vinyl chloride	N.D.	1.0
Total BTEX	67	6.0
1,4 Dioxane	N.D.	500
Acetone	19	5.0
1,2 Dichlorobenzene	N.D.	1.0
1,3 Dichlorobenzene	N.D.	1.0
1,4 Dichlorobenzene	N.D.	1.0
Total Dichlorobenzene	N.D.	3.0

Surrogates:

Compound	% Recovery	Limits
Toluene d8	104	70-130
1,2-Dichloroethane d4	91	70-130
4 BFB	100	70-130

Sample: Excavation Sample

Case No. D0331-01
Date Analyzed: 4/6/2017

Subject: Volatile Organic Compounds
Method: EPA 524.2

Compound	Concentration ug/L (ppb)	Method Detection Limit, ug/l	Reporting Limit, ug/l
tert-butylmethylether	N.D.	0.5	0.5
tert-Amyl Methyl Ether	N.D.	0.5	0.5
tert-Butyl Alcohol	N.D.	5.0	5.0

Surrogates

Compound	% Recovery	Limits
1,2-Dichlorobenzene d4	113	70-130
4 BFB	114	70-130

N.D. = Not Detected

NEW ENGLAND TESTING LABORATORY, INC.
59 Greenhill Street
West Warwick, RI 02893
1-888-863-8522

CHAIN OF CUSTODY RECORD

D0331.01

PROJ. NO. 3010000235 | PROJECT NAME/LOCATION: Hopkinton GAS

CLIENT: Keith Sullivan
REPORT TO: Keith.Sullivan@ATCASSOCIATES.com
INVOICE TO: Keith Sullivan

DATE	TIME	COMP	GRAB	SAMPLE I.D.	AQUEOUS	SOIL	OTHER	NO. OF CONTAINERS	PRESERVATIVE	TESTS** G24/G25	Cr, Se, Ag, Cd, Pb	ONG 1664 (SGT)	TAME, TBA, MTBE	EDB 504	ETHANOL (8100M)	REMARKS
3/31	0600		X	Excavation Sample	X			6	HCL H2SO4	X	X	X	X	X	X	Excavation Sample
																Faint Sheen
																Root Matter

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	3/31 0600		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time
[signature]	3/31 0815	[signature]	3/31/12 08:15

Laboratory Remarks:
Temp. received: 4°
Cooled: X

Special Instructions:
List Specific Detection Limit Requirements: See Mike
G24/G25 1x DIL to meet EPA limits

Turnaround (Business Days): 72 HRS

**Netlab subcontracts the following tests: Radiologicals, Radon, Asbestos, UCMRs, Perchlorate, Bromate, Bromide, Sieve, Salmonella, Carbamates

REPORT OF ANALYTICAL RESULTS

NETLAB Case Number D0321-15

Prepared for:

Attn: Keith Sullivan
ATC Group Services
400 Reservoir Avenue
Suite 2C
Providence, RI 02907

Report Date: March 22, 2017

Director
New England Testing Laboratory, Inc.
Lab # RI010

NEW ENGLAND TESTING LABORATORY, INC.
59 Greenhill Street, West Warwick, RI 02893
(401) 353-3420

SAMPLES SUBMITTED and REQUEST FOR ANALYSIS:

The samples listed in Table I were submitted to New England Testing Laboratory on March 21, 2017. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provided to us by the client which are indicated on the custody record. The case number for this sample submission is D0321-15.

Custody records are included in this report.

Project: 3010000235 – Hopkinton Gas

TABLE I, Samples Submitted

Sample ID	Date Sampled	Matrix	Analysis Requested
Stream Sample	3/21/2017	Water	Table II, III
CEA-10	3/21/2017	Water	Table II

TABLE II, Analysis and Methods

ANALYSIS	PREPARATION METHOD	DETERMINATIVE METHOD
Hardness	3010A	6010C

. **TABLE III, Analysis and Methods**

ANALYSIS	PREPARATION METHOD	DETERMINATIVE METHOD
Ammonia	NA	4500-NH3 D-1997

These methods are documented in:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, USEPA/OSW.

CASE NARRATIVE:

Sample Receipt

The samples were all appropriately cooled and preserved upon receipt. The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

Metals

All analyses were performed according to NETLAB's documented Standard Operating Procedures, within all required holding times, and with appropriate quality control measures. All QC was within laboratory established acceptance criteria. The samples were received, processed, and reported with no anomalies.

Wet Chemistry

All samples were analyzed within method specified holding times and according to NETLAB's documented standard operating procedures.

Stream Sample

Parameter	Result	Reporting Limit	Date Analyzed
Ammonia, mg/L	ND	0.1	3/21/2017
Hardness, mg/L	141	0.33	3/22/2017

CEA-10

Parameter	Result	Reporting Limit	Date Analyzed
Hardness, mg/L	198	0.33	3/22/2017

NA = Not Applicable
ND = Not Detected

CHAIN OF CUSTODY [NETLAB 401-353-3420]

ATC GROUP SERVICES

400 Reservoir Avenue, Suite 2C
Providence, RI 02907
Tel: 401-714-0306

D0321-15

Date Collected	Time Collected	Sample Identification	Grab or Composite	# of Containers	Containers type	Preseravtion Code	Matrix	Ammonia (SM 4500)	Hardness	Copper	pH	chloride	CONDUCTANCE	PARTICLE SIZE (seive)	PROCTOR DENSITY (ASTM D1557)	NATAURAL MOISTURE(ASTM D2216)	RCRA 8 (total)	SVOC 8270 (PAH only	VPH with targets	Water Content (9025B)	Free Liquids (9095B)	
3/21/17	1215	Stream sample	G	2	P	SN	SW	x	x													
3/21/17	1230	CEA-10	G	1	P	N	GW		x													

Project Information:	ATC Lincoln Contact Information:
Project name: Hopkinton Gas	ATC: Keith Sullivan
ATC Project Number: 3010000235	Email: keith.sullivan@atcassociates.com Tel: 401-714-0306, ext. 142
Sampled by: AK	

Relinquished By:	Date	Time	Received By:	Date	Time	LABORATORY	
[signature]	3/21/17	1505	[signature]	3/21/17	1505	Normal Turnaround	
						Rush Turnaround	x
						Shipped on ice	x

Notes:

Need low-level, MassDEP GW-3 MDL

24-hr RESULTS

Temp. on Arrival: 4

Lab Workorder#

MCP Data Enhancement QC Package? (Yes) No

Container Types: P = Poly, G = Glass, A = Amber, V = Vial, St = Sterile S = Suma **Preservation Codes:** NP = None, N = HNO, H = HCl, S = H_2SO_4, SH = NaOH, SB = $NaHSO_4$, M = MeOH, T = $Na_2S_2O_3$, Z = ZnOAc, I = Ice

Matrix Codes: GW = Groundwater, SW = Surface Water, WW = Wastewater, DW = Drinking Water, S= Soil, Sl = Sludge, A = Air, B = Bulk/Solid, w=Wipe

REPORT OF ANALYTICAL RESULTS

NETLAB Case Number D0215-03 Revised

Prepared for:

Attn: Keith Sullivan
ATC Group Services
400 Reservoir Avenue
Suite 2C
Providence, RI 02907

Report Date: March 31, 2017

Director
New England Testing Laboratory, Inc.
Lab # RI010

NEW ENGLAND TESTING LABORATORY, INC.
59 Greenhill Street, West Warwick, RI 02893
(401) 353-3420

SAMPLES SUBMITTED and REQUEST FOR ANALYSIS:

The samples listed in Table I were submitted to New England Testing Laboratory on February 15, 2017. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provided to us by the client which are indicated on the custody record. The case number for this sample submission is D0215-03.

Custody records are included in this report.

Project: 3010000235 – Hopkinton Gas

TABLE I, Samples Submitted

Sample ID	Date Sampled	Matrix	Analysis Requested
HVE-1	2/15/2017	Water	Table II
CEA-10	2/15/2017	Water	Table II

TABLE II, Analysis and Methods

ANALYSIS	PREPARATION METHOD	DETERMINATIVE METHOD
Ammonia	NA	4500-NH3 D-1997
Chlorides	NA	4500-Cl B-1997
Hardness	3010A	6010C
pH	NA	4500-H+ B-2000
Total Cyanide	NA	
Total Residual Chlorine	NA	4500-Cl G-2000
Total Metals		
Copper	3010A	6010C
Iron	3010A	6010C
Mercury	NA	7470A

.

These methods are documented in:

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, USEPA/OSW.

CASE NARRATIVE:

Sample Receipt

The samples were all appropriately cooled and preserved upon receipt. The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

Metals

All analyses were performed according to NETLAB's documented Standard Operating Procedures, within all required holding times, and with appropriate quality control measures. All QC was within laboratory established acceptance criteria. The samples were received, processed, and reported with no anomalies.

Wet Chemistry

All samples were analyzed within method specified holding times and according to NETLAB's documented standard operating procedures.

In order to meet client specified reporting limits, cyanide was estimated down to MDL limits.

HVE-1

Parameter	Result	Reporting Limit	Date Analyzed
Ammonia, mg/L	ND	0.1	2/16/2017
Chlorides, mg/L	105	1	2/16/2017
Hardness, mg/L	139	0.33	2/22/2017
pH, S.U.	6.33	NA	2/15/2017 @ 12:35
Total Cyanide, mg/L	ND	0.005	2/22/2017
Total Residual Chlorine, mg/L	ND	0.01	2/15/2017 @ 12:00

CEA-10

Parameter	Result	Reporting Limit	Date Analyzed
Ammonia, mg/L	ND	0.1	2/16/2017
Chlorides, mg/L	568	1	2/16/2017
Hardness, mg/L	45	0.33	2/22/2017
pH, S.U.	5.84	NA	2/15/2017 @ 12:35
Total Cyanide, mg/L	ND	0.005	2/22/2017
Total Residual Chlorine, mg/L	ND	0.01	2/15/2017 @ 12:00

NA = Not Applicable
ND = Not Detected

METALS RESULTS

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Metals Analysis Department certifies that the results included in this section have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

New England Testing Laboratory, Inc.

METALS RESULTS

Case Number: D0215-03
Sample ID: CEA-10
Date collected: 2/15/2017
Matrix WATER
Sample Type: TOTAL

Analyst NC/NB

Parameter	CAS Number	Preparative Method	Analytical Method	Result	Reporting Limit	Units	Date of Preparation	Date Analyzed
Copper	7440-50-8	3010A	6010C	0.04	0.02	mg/l	2/16/17	2/22/17
Iron	7439-89-6	3010A	6010C	1.48	0.05	mg/l	2/16/17	2/22/17
Mercury	7439-97-6	NA	7470A	ND	0.0002	mg/l	2/21/17	2/21/17

ND indicates Not Detected.

METALS RESULTS

Case Number: D0215-03
Sample ID: HVE-1
Date collected: 2/15/2017
Matrix WATER
Sample Type: TOTAL

Analyst NC/NB

Parameter	CAS Number	Preparative Method	Analytical Method	Result	Reporting Limit	Units	Date of Preparation	Date Analyzed
Copper	7440-50-8	3010A	6010C	ND	0.02	mg/l	2/16/17	2/22/17
Iron	7439-89-6	3010A	6010C	0.18	0.05	mg/l	2/16/17	2/22/17
Mercury	7439-97-6	NA	7470A	ND	0.0002	mg/l	2/21/17	2/21/17

ND indicates Not Detected.

METALS RESULTS

Sample ID: METHOD BLANK
Matrix WATER **Analyst** AEG/NC
Sample Type: Preparation Blank

Parameter	CAS Number	Preparative Method	Analytical Method	Result	Reporting Limit	Units	Date of Preparation	Date Analyzed
Copper	7440-50-8	3010A	6010C	ND	0.02	mg/l	2/16/17	2/17/17
Iron	7439-89-6	3010A	6010C	ND	0.05	mg/l	2/16/17	2/17/17
Mercury	7439-97-6	NA	7470A	ND	0.0002	mg/l	2/21/17	2/21/17

ND indicates Not Detected.

LABORATORY CONTROL SAMPLE RECOVERY

Parameter	True Value	Result	Units	Recovery, %	Internal LCL, %	Internal UCL, %	Date Analyzed
Copper	1.00	1.03	mg/l	103	85	115	2/17/17
Iron	10.00	10.78	mg/l	108	85	115	2/17/17
Mercury	0.001	0.001	mg/l	96	85	115	2/21/17

NEW ENGLAND TESTING LABORATORY, INC.
59 Greenhill Street
West Warwick, RI 02893
1-888-863-8522

D0215-03 Rev

CHAIN OF CUSTODY RECORD

PROJ. NO.: 30100005235 | PROJECT NAME/LOCATION: Hopkinton Gas

CLIENT: ATC Group Services LLC

REPORT TO: Keith.Sullivan@ATCAssociates.com

INVOICE TO: Same

DATE	TIME	COMP	GRAB	SAMPLE I.D.	AQUEOUS	SOIL	OTHER	NO. OF CONTAINERS	PRESERVATIVE	TESTS** Residual Chlorine	Ammonia	Copper	pH	Chloride	Hg	REMARKS
2/15	1300		X	HVE-1	X			4	Sulfuric Nitric	X	X	X	X	X	X	Mass CW-3 MDL (NO ODOR)
2/15	1115		X	~~AW-10~~ AH CEA-10	X			4	↓	X	X	X	X	X	X	Mass CW-3 MDL (NO ODOR)
																Cyanide both samples & Hg additional analysis requested by Keith via phone 2/21 AH
																Total Iron and hardness added by Keith via phone 2/22 AH for both samples

Sampled by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	2/15/17 1205		
Relinquished by: (Signature)	Date/Time	Received by: (Signature)	Date/Time
[signature]	2/15/17 1205	Allison P. Hamel	2/15/17 1205
Relinquished by: (Signature)	Date/Time	Received for Laboratory by: (Signature)	Date/Time

Laboratory Remarks:
Temp. received: _____
Cooled ☐

Special Instructions:
List Specific Detection Limit Requirements:

Turnaround (Business Days) Normal (5)

**Netlab subcontracts the following tests: Radiologicals, Radon, Asbestos, UCMRs, Perchlorate, Bromate, Bromide, Sieve, Salmonella, Carbamates

REPORT OF ANALYTICAL RESULTS

NETLAB Case Number C0506-24

Prepared for:

Attn: Keith Sullivan
Cardno ATC
333 George Washington Highway
Smithfield, RI 02917

Report Date: May 13, 2016

Director
New England Testing Laboratory, Inc.
Lab # RI010

NEW ENGLAND TESTING LABORATORY, INC.
59 Greenhill Street, West Warwick, RI 02893
(401) 353-3420

Total # of Pages: 49

SAMPLES SUBMITTED and REQUEST FOR ANALYSIS:

The samples listed in Table I were submitted to New England Testing Laboratory on May 6, 2016. The group of samples appearing in this report was assigned an internal identification number (case number) for laboratory information management purposes. The client's designations for the individual samples, along with our case numbers, are used to identify the samples in this report. This report of analytical results pertains only to the sample(s) provided to us by the client which are indicated on the custody record. The case number for this sample submission is C0506-24.

Custody records are included in this report.

Project: 3010000191 – Hopkinton Gas

TABLE I, Samples Submitted

Sample ID	Date Sampled	Matrix	Analysis Requested
HVE-1	5/5/2016	Water	Table II, III
HVE-2	5/5/2016	Water	Table II, IV
HVE-3	5/5/2016	Water	Table II, IV
AS-1	5/5/2016	Water	Table II, IV
CEA-10	5/5/2016	Water	Table II, III

TABLE II, Analysis and Methods

ANALYSIS	PREPARATION METHOD	DETERMINATIVE METHOD
VPH	NA	*

TABLE III, Analysis and Methods

ANALYSIS	PREPARATION METHOD	DETERMINATIVE METHOD
Residual Chlorine	NA	SM4500ClG
Total Suspended Solids	NA	SM2540D
Total Metals		
Antimony	3010A	6010C
Arsenic	3010A	6010C
Barium	3010A	6010C
Beryllium	3010A	6010C
Cadmium	3010A	6010C
Chromium	3010A	6010C
Lead	3010A	6010C
Nickel	3010A	6010C
Selenium	3010A	6010C
Silver	3010A	6010C
Thallium	3010A	6010C
Vanadium	3010A	6010C
Zinc	3010A	6010C
PCB's	3510C	8082A
Total Petroleum Hydrocarbons	3510C	8100M
Semi-Volatile Organic Compounds	3510C	8270D
Volatile Organic Compounds	5030	8260C

TABLE IV, Analysis and Methods

ANALYSIS	PREPARATION METHOD	DETERMINATIVE METHOD
Ferrous Iron	NA	Hach
Ferric Iron	NA	Calculation
Sulfates	NA	EPA 375.4
Nitrates	NA	4500NO3E

These methods are documented in:

*Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MADEP.

Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, USEPA/OSW.

CASE NARRATIVE:

Sample Receipt

The samples were all appropriately cooled and preserved upon receipt. The samples were received in the appropriate containers. The chain of custody was adequately completed and corresponded to the samples submitted.

EPH

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

Metals

All analyses were performed according to NETLAB's documented Standard Operating Procedures, within all required holding times, and with appropriate quality control measures. All QC was within laboratory established acceptance criteria. The samples were received, processed, and reported with no anomalies.

Herbicides

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

PCBs

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

Pesticides

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

Semi-volatile Compounds

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

Total Petroleum Hydrocarbons

All samples were extracted and analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

The samples "HVE-1" and "CEA-10" were reported with elevated reporting limits due to a limited sample volume supplied by client.

Volatile Organic Compounds

All samples were analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

VPH

All samples were analyzed within method specified holding times and according to NETLAB's documented standard operating procedures. The results for the associated calibration, method blank and laboratory control sample (LCS) were within method specified quality control criteria.

Wet Chemistry

All samples were analyzed within method specified holding times and according to NETLAB's documented standard operating procedures.

HVE-1

Parameter	Result, mg/L	Reporting Limit, mg/L	Date Analyzed
Residual Chlorine	ND	0.01	5/6/2016 @ 17:00
Total Suspended Solids	7	2	5/10/2016

CEA-10

Parameter	Result, mg/L	Reporting Limit, mg/L	Date Analyzed
Residual Chlorine	ND	0.01	5/6/2016 @ 17:00
Total Suspended Solids	142	2	5/10/2016

ND = Not Detected

HVE-2

Parameter	Result, mg/L	Reporting Limit, mg/L	Date Analyzed
Ferrous Iron	0.38	0.02	5/6/2016 @ 17:15
Ferric Iron	0.47	0.02	5/12/2016
Sulfate	17	2	5/11/2016
Nitrate	0.71	0.03	5/6/2016 @ 17:00

HVE-3

Parameter	Result, mg/L	Reporting Limit, mg/L	Date Analyzed
Ferrous Iron	ND	0.02	5/6/2016 @ 17:15
Ferric Iron	0.51	0.02	5/12/2016
Sulfate	18	2	5/11/2016
Nitrate	0.86	0.03	5/6/2016 @ 17:00

AS-1

Parameter	Result, mg/L	Reporting Limit, mg/L	Date Analyzed
Ferrous Iron	0.25	0.02	5/6/2016 @ 17:15
Ferric Iron	4.26	0.02	5/12/2016
Sulfate	14	2	5/11/2016
Nitrate	1.34	0.03	5/6/2016 @ 17:00

ND = Not Detected

METALS RESULTS

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Metals Analysis Department certifies that the results included in this section have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

New England Testing Laboratory, Inc.

METALS RESULTS

Case Number: C0506-24
Sample ID: HVE-1
Date collected: 05/05/16
Matrix WATER
Sample Type: TOTAL

Analyst AEG/NC

Parameter	CAS Number	Preparative Method	Analytical Method	Result	Reporting Limit	Units	Date of Preparation	Date Analyzed
Antimony	7440-36-0	3010A	6010C	ND	0.01	mg/l	5/10/16	5/12/16
Arsenic	7440-38-2	3010A	6010C	0.02	0.01	mg/l	5/10/16	5/12/16
Barium	7440-39-3	3010A	6010C	0.107	0.005	mg/l	5/10/16	5/12/16
Beryllium	7440-41-7	3010A	6010C	ND	0.005	mg/l	5/10/16	5/12/16
Cadmium	7440-43-9	3010A	6010C	ND	0.004	mg/l	5/10/16	5/12/16
Chromium	7440-47-3	3010A	6010C	ND	0.005	mg/l	5/10/16	5/12/16
Lead	7439-92-1	3010A	6010C	0.016	0.005	mg/l	5/10/16	5/12/16
Nickel	7440-02-0	3010A	6010C	0.007	0.005	mg/l	5/10/16	5/12/16
Selenium	7782-49-2	3010A	6010C	ND	0.01	mg/l	5/10/16	5/12/16
Silver	7440-22-4	3010A	6010C	ND	0.005	mg/l	5/10/16	5/12/16
Thallium	7440-28-0	3010A	7010	ND	0.002	mg/l	5/10/16	5/12/16
Vanadium	7440-62-2	3010A	6010C	ND	0.005	mg/l	5/10/16	5/12/16
Zinc	7440-66-6	3010A	6010C	ND	0.02	mg/l	5/10/16	5/12/16

ND indicates Not Detected.

METALS RESULTS

Case Number: C0506-24
Sample ID: CEA-10
Date collected: 05/05/16
Matrix WATER
Sample Type: TOTAL

Analyst AEG/NC

Parameter	CAS Number	Preparative Method	Analytical Method	Result	Reporting Limit	Units	Date of Preparation	Date Analyzed
Antimony	7440-36-0	3010A	6010C	ND	0.01	mg/l	5/10/16	5/12/16
Arsenic	7440-38-2	3010A	6010C	0.01	0.01	mg/l	5/10/16	5/12/16
Barium	7440-39-3	3010A	6010C	0.039	0.005	mg/l	5/10/16	5/12/16
Beryllium	7440-41-7	3010A	6010C	ND	0.005	mg/l	5/10/16	5/12/16
Cadmium	7440-43-9	3010A	6010C	ND	0.004	mg/l	5/10/16	5/12/16
Chromium	7440-47-3	3010A	6010C	0.011	0.005	mg/l	5/10/16	5/12/16
Lead	7439-92-1	3010A	6010C	0.019	0.005	mg/l	5/10/16	5/12/16
Nickel	7440-02-0	3010A	6010C	0.006	0.005	mg/l	5/10/16	5/12/16
Selenium	7782-49-2	3010A	6010C	ND	0.01	mg/l	5/10/16	5/12/16
Silver	7440-22-4	3010A	6010C	ND	0.005	mg/l	5/10/16	5/12/16
Thallium	7440-28-0	3010A	7010	ND	0.002	mg/l	5/10/16	5/12/16
Vanadium	7440-62-2	3010A	6010C	0.012	0.005	mg/l	5/10/16	5/12/16
Zinc	7440-66-6	3010A	6010C	0.26	0.02	mg/l	5/10/16	5/12/16

ND indicates Not Detected.

Sample ID: METHOD BLANK
Sample Type: Preparation Blank

Parameter	CAS Number	Preparative Method	Analytical Method	Result	Reporting Limit	Units	Date of Preparation	Date Analyzed
Antimony	7440-36-0	3010A	6010C	ND	0.01	mg/l	5/10/16	5/12/16
Arsenic	7440-38-2	3010A	6010C	ND	0.01	mg/l	5/10/16	5/12/16
Barium	7440-39-3	3010A	6010C	ND	0.005	mg/l	5/10/16	5/12/16
Beryllium	7440-41-7	3010A	6010C	ND	0.005	mg/l	5/10/16	5/12/16
Cadmium	7440-43-9	3010A	6010C	ND	0.004	mg/l	5/10/16	5/12/16
Chromium	7440-47-3	3010A	6010C	ND	0.005	mg/l	5/10/16	5/12/16
Lead	7439-92-1	3010A	6010C	ND	0.005	mg/l	5/10/16	5/12/16
Nickel	7440-02-0	3010A	6010C	ND	0.005	mg/l	5/10/16	5/12/16
Selenium	7782-49-2	3010A	6010C	ND	0.01	mg/l	5/10/16	5/12/16
Silver	7440-22-4	3010A	6010C	ND	0.005	mg/l	5/10/16	5/12/16
Thallium	7440-28-0	3010A	7010	ND	0.002	mg/l	5/10/16	5/12/16
Vanadium	7440-62-2	3010A	6010C	ND	0.005	mg/l	5/10/16	5/12/16
Zinc	7440-66-6	3010A	6010C	ND	0.02	mg/l	5/10/16	5/12/16

ND indicates Not Detected.

LABORATORY CONTROL SAMPLE RECOVERY

Parameter	True Value	Result	Units	Recovery, %	Internal LCL, %	Internal UCL, %	Date Analyzed
Antimony	1.00	0.95	mg/l	95	85	115	5/12/16
Arsenic	0.20	0.20	mg/l	102	85	115	5/12/16
Barium	1.00	0.98	mg/l	98	85	115	5/12/16
Beryllium	0.20	0.20	mg/l	100	85	115	5/12/16
Cadmium	1.00	0.93	mg/l	93	85	115	5/12/16
Chromium	1.00	0.96	mg/l	96	85	115	5/12/16
Lead	1.00	1.03	mg/l	103	85	115	5/11/16
Nickel	1.00	0.93	mg/l	93	85	115	5/11/16
Selenium	0.20	0.18	mg/l	91	85	115	5/12/16
Silver	0.40	0.35	mg/l	88	85	115	5/12/16
Thallium	0.020	0.020	mg/l	102	85	115	5/12/16
Vanadium	1.00	1.02	mg/l	102	85	115	5/12/16
Zinc	1.00	0.96	mg/l	96	85	115	5/12/16

RESULTS: PCBs

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Organics Analysis Department certifies that the samples included in this section have been prepared and analyzed using the procedures cited and that the results have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

Sample: HVE-1		Analyst's Initials: BJ
Case No. C0506-24		
Date Collected: 5/5/2016		
Sample Matrix: Water		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3510C	5/11/16	5/11/16
Analytical Method: EPA 8082A		
Compound	Concentration ug/l (ppb)	Reporting Limit ug/l (ppb)
Aroclor-1016	N.D.	0.2
Aroclor-1221	N.D.	0.2
Aroclor-1232	N.D.	0.2
Aroclor-1242	N.D.	0.2
Aroclor-1248	N.D.	0.2
Aroclor-1254	N.D.	0.2
Aroclor-1260	N.D.	0.2
Aroclor-1262	N.D.	0.2
Aroclor-1268	N.D.	0.2
Surrogates:		
Compound	% Recovery	Limits
TCMX	72	30-129
DCBP	92	30-126

N.D. = Not Detected

Sample: CEA-10		Analyst's Initials: BJ
Case No. C0506-24		
Date Collected: 5/5/2016		
Sample Matrix: Water		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3510C	5/11/16	5/11/16
Analytical Method: EPA 8082A		
Compound	Concentration ug/l (ppb)	Reporting Limit ug/l (ppb)
Aroclor-1016	N.D.	0.2
Aroclor-1221	N.D.	0.2
Aroclor-1232	N.D.	0.2
Aroclor-1242	N.D.	0.2
Aroclor-1248	N.D.	0.2
Aroclor-1254	N.D.	0.2
Aroclor-1260	N.D.	0.2
Aroclor-1262	N.D.	0.2
Aroclor-1268	N.D.	0.2
Surrogates:		
Compound	% Recovery	Limits
TCMX	71	30-129
DCBP	76	30-126

N.D. = Not Detected

Sample: Method Blank		Analyst's Initials: BJ
Case No. C0506-24		
Date Collected: NA		
Sample Matrix: Water		
Subject: PCBs	Date Extracted	Date Analyzed
Prep Method: EPA 3510C	5/11/16	5/11/16
Analytical Method: EPA 8082A		
Compound	Concentration ug/l (ppb)	Reporting Limit ug/l (ppb)
Aroclor-1016	N.D.	0.2
Aroclor-1221	N.D.	0.2
Aroclor-1232	N.D.	0.2
Aroclor-1242	N.D.	0.2
Aroclor-1248	N.D.	0.2
Aroclor-1254	N.D.	0.2
Aroclor-1260	N.D.	0.2
Aroclor-1262	N.D.	0.2
Aroclor-1268	N.D.	0.2
Surrogates:		
Compound	% Recovery	Limits
TCMX	74	30-129
DCBP	78	30-126

N.D. = Not Detected

PCB Laboratory Control Spike

Sample Matrix: Water				
Subject: PCB	Date Extracted			Date Analyzed
Prep Method: EPA 3510C	5/11/16			5/11/16
Analytical Method: EPA 8082A				
Compound	Amount Spiked mg/l	Result mg/l	Recovery %	Recovery Limits
Aroclor 1016	0.500	0.446	89	40-130
Aroclor 1260	0.500	0.463	93	40-130
Surrogates:				
Compound	% Recovery	Limits		
TCMX	64	30-129		
DCBP	80	30-126		

Sample: HVE-1		Analyst's Initials: BJ
Case No.: C0506-24		
Date Collected: 5/5/2016		
Sample Matrix: Water		
Subject: TPH		
Prep Method: EPA 3510C	Date Extracted	Date Analyzed
Analytical Method: EPA 8100 M	5/12/16	5/13/16
Compound	Concentration, ug/l (ppb)	Reporting Limit ug/l (ppb)
Total Petroleum Hydrocarbons	ND	308
Surrogates:		
Compound	% Recovery	Limits
Chloroctadecane	85	51-134

Sample: CEA-10		Analyst's Initials: BJ
Case No.: C0506-24		
Date Collected: 5/5/2016		
Sample Matrix: Water		
Subject: TPH		
Prep Method: EPA 3510C	Date Extracted	Date Analyzed
Analytical Method: EPA 8100 M	5/12/16	5/13/16
Compound	Concentration, ug/l (ppb)	Reporting Limit ug/l (ppb)
Total Petroleum Hydrocarbons	1170	276
Surrogates:		
Compound	% Recovery	Limits
Chloroctadecane	103	51-134

ND = Not Detected

RESULTS: VOLATILE PETROLEUM HYDROCARBONS

Results for VPH analysis are presented in the following section. Each page is electronically signed.

SAMPLE INFORMATION

Matrix	X Aqueous __ Soil __ Sediment __ Other:		
Containers	X Satisfactory __ Broken __ Leaking:		
Sample Preservatives	Aqueous	__ N/A X pH≤2 __ pH>2 Comment:	
	Soil or Sediment	__ N/A __ Samples NOT preserved Methanol or air-tight container	mL Methanol/g soil
		__ Samples rec'd in Methanol: __ covering soil __ not covering soil	__ 1:1 +/- 25%
		__ Samples received in air-tight container:	__ Other:
Temperature	X Received on Ice X Received at 4° C ± 2°C _Other: Received at ° C		

VPH ANALYTICAL RESULTS

Method for Ranges: MADEP VPH 04-1.1			Client ID	HVE-1
Method for Target Analytes:			Lab ID	C0506-24
VPH Surrogate Standards			Date Collected	5/5/2016
PID: 2,5- Dibromotoluene			Date Received	5/6/2016
FID: 2,5- Dibromotoluene			Date Analyzed	5/10/16
			Dilution Factor	1X
			% Moisture (soil)	NA
Range/Target Analyte	**Elution Range**	**RL**	**Units**	
Unadjusted C5-C8 Aliphatics[1]	N/A	50	ug/L	<50
Unadjusted C9-C12 Aliphatics[1]	N/A	50	ug/L	128
Benzene	C5-C8	5.0	ug/L	<5.0
Ethylbenzene	C9-C12	5.0	ug/L	<5.0
Methyl-tert-butylether	C5-C8	10	ug/L	<10
Naphthalene	N/A	10	ug/L	<10
Toluene	C5-C8	5.0	ug/L	<5.0
m- & p- Xylenes	C9-C12	10	ug/L	<10
o-Xylene	C9-C12	10	ug/L	<10
C5-C8 Aliphatic Hydrocarbons[1,2]	N/A	50	ug/L	<50
C9-C12 Aliphatic Hydrocarbons[1,3]	N/A	50	ug/L	77.7
C9-C10 Aromatic Hydrocarbons[1]	N/A	50	ug/L	50.3
PID Surrogate % Recovery				87
FID Surrogate % Recovery				83
Surrogate Acceptance Range				70-130%

[1]Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

[2]C_5-C_8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range

[3]C_9-C_{12} Aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C_9-C_{10} Aromatic Hydrocarbons

CERTIFICATION

Were all QA/QC procedures REQUIRED by the VPH Method followed? X Yes __ No-Details Attached
Were all performance/acceptance standards for the required QA/QC procedures achieved? X Yes __ No-Details Attached
Were any significant modifications made to the VPH method, as specified in Section 11.3? X No __ Yes-Details Attached

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SIGNATURE: _____ POSITION: Laboratory Director

PRINTED NAME: Richard Warila DATE: 5/13/2016

SAMPLE INFORMATION

Matrix	X Aqueous __ Soil __ Sediment __ Other:		
Containers	X Satisfactory __ Broken __ Leaking:		
Sample Preservatives	Aqueous	__ N/A X pH≤2 __ pH>2 Comment:	
	Soil or Sediment	__ N/A __ Samples NOT preserved Methanol or air-tight container	mL Methanol/g soil
		__ Samples rec'd in Methanol: __ covering soil __ not covering soil	__ 1:1 +/- 25%
		__ Samples received in air-tight container:	__ Other:
Temperature	X Received on Ice X Received at 4° C ± 2°C _Other: Received at ° C		

VPH ANALYTICAL RESULTS

Method for Ranges: MADEP VPH 04-1.1			Client ID	HVE-2
Method for Target Analytes:			Lab ID	C0506-24
VPH Surrogate Standards			Date Collected	5/5/2016
PID: 2,5- Dibromotoluene			Date Received	5/6/2016
FID: 2,5- Dibromotoluene			Date Analyzed	5/10/16
			Dilution Factor	1X
			% Moisture (soil)	NA
Range/Target Analyte	**Elution Range**	**RL**	**Units**	
Unadjusted C5-C8 Aliphatics[1]	N/A	50	ug/L	<50
Unadjusted C9-C12 Aliphatics[1]	N/A	50	ug/L	<50
Benzene	C5-C8	5.0	ug/L	<5.0
Ethylbenzene	C9-C12	5.0	ug/L	<5.0
Methyl-tert-butylether	C5-C8	10	ug/L	<10
Naphthalene	N/A	10	ug/L	<10
Toluene	C5-C8	5.0	ug/L	<5.0
m- & p- Xylenes	C9-C12	10	ug/L	<10
o-Xylene	C9-C12	10	ug/L	<10
C5-C8 Aliphatic Hydrocarbons[1,2]	N/A	50	ug/L	<50
C9-C12 Aliphatic Hydrocarbons[1,3]	N/A	50	ug/L	<50
C9-C10 Aromatic Hydrocarbons[1]	N/A	50	ug/L	<50
PID Surrogate % Recovery				88
FID Surrogate % Recovery				86
Surrogate Acceptance Range				70-130%

[1]Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

[2]C_5-C_8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range

[3]C_9-C_{12} Aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C_9-C_{10} Aromatic Hydrocarbons

CERTIFICATION

Were all QA/QC procedures REQUIRED by the VPH Method followed? X Yes __ No-Details Attached
Were all performance/acceptance standards for the required QA/QC procedures achieved? X Yes __ No-Details Attached
Were any significant modifications made to the VPH method, as specified in Section 11.3? X No __ Yes-Details Attached

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SIGNATURE:  POSITION: Laboratory Director

PRINTED NAME: Richard Warila DATE: 5/13/2016

SAMPLE INFORMATION

Matrix	X Aqueous __ Soil __ Sediment __ Other:		
Containers	X Satisfactory __ Broken __ Leaking:		
Sample Preservatives	Aqueous	__ N/A X pH≤2 __ pH>2 Comment:	
	Soil or Sediment	__ N/A __ Samples NOT preserved Methanol or air-tight container	mL Methanol/g soil
		__ Samples rec'd in Methanol: __ covering soil __ not covering soil	__ 1:1 +/- 25%
		__ Samples received in air-tight container:	__ Other:
Temperature	X Received on Ice X Received at 4° C ± 2°C _Other: Received at ° C		

VPH ANALYTICAL RESULTS

Method for Ranges: MADEP VPH 04-1.1			Client ID	HVE-3
Method for Target Analytes:			Lab ID	C0506-24
VPH Surrogate Standards			Date Collected	5/5/2016
PID: 2,5- Dibromotoluene			Date Received	5/6/2016
FID: 2,5- Dibromotoluene			Date Analyzed	5/10/16
			Dilution Factor	1X
			% Moisture (soil)	NA
Range/Target Analyte	**Elution Range**	**RL**	**Units**	
Unadjusted C5-C8 Aliphatics[1]	N/A	50	ug/L	<50
Unadjusted C9-C12 Aliphatics[1]	N/A	50	ug/L	<50
Benzene	C5-C8	5.0	ug/L	<5.0
Ethylbenzene	C9-C12	5.0	ug/L	<5.0
Methyl-tert-butylether	C5-C8	10	ug/L	<10
Naphthalene	N/A	10	ug/L	<10
Toluene	C5-C8	5.0	ug/L	<5.0
m- & p- Xylenes	C9-C12	10	ug/L	<10
o-Xylene	C9-C12	10	ug/L	<10
C5-C8 Aliphatic Hydrocarbons[1,2]	N/A	50	ug/L	<50
C9-C12 Aliphatic Hydrocarbons[1,3]	N/A	50	ug/L	<50
C9-C10 Aromatic Hydrocarbons[1]	N/A	50	ug/L	<50
PID Surrogate % Recovery				91
FID Surrogate % Recovery				88
Surrogate Acceptance Range				70-130%

[1]Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

[2]C_5-C_8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range

[3]C_9-C_{12} Aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C_9-C_{10} Aromatic Hydrocarbons

CERTIFICATION

Were all QA/QC procedures REQUIRED by the VPH Method followed? X Yes __ No-Details Attached
Were all performance/acceptance standards for the required QA/QC procedures achieved? X Yes __ No-Details Attached
Were any significant modifications made to the VPH method, as specified in Section 11.3? X No __ Yes-Details Attached

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SIGNATURE:  POSITION: Laboratory Director

PRINTED NAME: Richard Warila DATE: 5/13/2016

SAMPLE INFORMATION

Matrix	X Aqueous __ Soil __ Sediment __ Other:		
Containers	X Satisfactory __ Broken __ Leaking:		
Sample Preservatives	Aqueous	__ N/A X pH≤2 __ pH>2 Comment:	
	Soil or Sediment	__ N/A __ Samples NOT preserved Methanol or air-tight container	mL Methanol/g soil
		__ Samples rec'd in Methanol: __ covering soil __ not covering soil	__ 1:1 +/- 25%
		__ Samples received in air-tight container:	__ Other:
Temperature	X Received on Ice X Received at 4° C ± 2°C _Other: Received at ° C		

VPH ANALYTICAL RESULTS

Method for Ranges: MADEP VPH 04-1.1			Client ID	AS-1
Method for Target Analytes:			Lab ID	C0506-24
VPH Surrogate Standards			Date Collected	5/5/2016
PID: 2,5- Dibromotoluene			Date Received	5/6/2016
FID: 2,5- Dibromotoluene			Date Analyzed	5/10/16
			Dilution Factor	1X
			% Moisture (soil)	NA
Range/Target Analyte	**Elution Range**	**RL**	**Units**	
Unadjusted C5-C8 Aliphatics[1]	N/A	50	ug/L	<50
Unadjusted C9-C12 Aliphatics[1]	N/A	50	ug/L	<50
Benzene	C5-C8	5.0	ug/L	<5.0
Ethylbenzene	C9-C12	5.0	ug/L	<5.0
Methyl-tert-butylether	C5-C8	10	ug/L	<10
Naphthalene	N/A	10	ug/L	<10
Toluene	C5-C8	5.0	ug/L	<5.0
m- & p- Xylenes	C9-C12	10	ug/L	<10
o-Xylene	C9-C12	10	ug/L	<10
C5-C8 Aliphatic Hydrocarbons[1,2]	N/A	50	ug/L	<50
C9-C12 Aliphatic Hydrocarbons[1,3]	N/A	50	ug/L	<50
C9-C10 Aromatic Hydrocarbons[1]	N/A	50	ug/L	<50
PID Surrogate % Recovery				91
FID Surrogate % Recovery				88
Surrogate Acceptance Range				70-130%

[1]Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

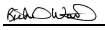
[2]C_5-C_8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range

[3]C_9-C_{12} Aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C_9-C_{10} Aromatic Hydrocarbons

CERTIFICATION

Were all QA/QC procedures REQUIRED by the VPH Method followed? X Yes __ No-Details Attached
Were all performance/acceptance standards for the required QA/QC procedures achieved? X Yes __ No-Details Attached
Were any significant modifications made to the VPH method, as specified in Section 11.3? X No __ Yes-Details Attached

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SIGNATURE:  POSITION: Laboratory Director

PRINTED NAME: Richard Warila DATE: 5/13/2016

SAMPLE INFORMATION

Matrix	X Aqueous __ Soil __ Sediment __ Other:		
Containers	X Satisfactory __ Broken __ Leaking:		
Sample Preservatives	Aqueous	__ N/A X pH≤2 __ pH>2 Comment:	
	Soil or Sediment	__ N/A __ Samples NOT preserved Methanol or air-tight container	mL Methanol/g soil
		__ Samples rec'd in Methanol: __ covering soil __ not covering soil	__ 1:1 +/- 25%
		__ Samples received in air-tight container:	__ Other:
Temperature	X Received on Ice X Received at 4° C ± 2°C _Other: Received at ° C		

VPH ANALYTICAL RESULTS

Method for Ranges: MADEP VPH 04-1.1			Client ID	CEA-10
Method for Target Analytes:			Lab ID	C0506-24
VPH Surrogate Standards			Date Collected	5/5/2016
PID: 2,5- Dibromotoluene			Date Received	5/6/2016
FID: 2,5- Dibromotoluene			Date Analyzed	5/10/16
			Dilution Factor	1X
			% Moisture (soil)	NA
Range/Target Analyte	**Elution Range**	**RL**	**Units**	
Unadjusted C5-C8 Aliphatics[1]	N/A	50	ug/L	58.2
Unadjusted C9-C12 Aliphatics[1]	N/A	50	ug/L	123
Benzene	C5-C8	5.0	ug/L	<5.0
Ethylbenzene	C9-C12	5.0	ug/L	<5.0
Methyl-tert-butylether	C5-C8	10	ug/L	<10
Naphthalene	N/A	10	ug/L	<10
Toluene	C5-C8	5.0	ug/L	<5.0
m- & p- Xylenes	C9-C12	10	ug/L	12.1
o-Xylene	C9-C12	10	ug/L	<10
C5-C8 Aliphatic Hydrocarbons[1,2]	N/A	50	ug/L	58.2
C9-C12 Aliphatic Hydrocarbons[1,3]	N/A	50	ug/L	111
C9-C10 Aromatic Hydrocarbons[1]	N/A	50	ug/L	<50
PID Surrogate % Recovery				98
FID Surrogate % Recovery				97
Surrogate Acceptance Range				70-130%

[1]Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

[2]C_5-C_8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range

[3]C_9-C_{12} Aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C_9-C_{10} Aromatic Hydrocarbons

CERTIFICATION

Were all QA/QC procedures REQUIRED by the VPH Method followed? X Yes __ No-Details Attached
Were all performance/acceptance standards for the required QA/QC procedures achieved? X Yes __ No-Details Attached
Were any significant modifications made to the VPH method, as specified in Section 11.3? X No __ Yes-Details Attached

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SIGNATURE:  POSITION: Laboratory Director

PRINTED NAME: Richard Warila DATE: 5/13/2016

SAMPLE INFORMATION

Matrix	X Aqueous __ Soil __ Sediment __ Other:		
Containers	__ Satisfactory __ Broken __ Leaking:		
Sample Preservatives	Aqueous	__ N/A X pH≤2 __ pH>2 Comment:	
	Soil or Sediment	__ N/A __ Samples NOT preserved Methanol or air-tight container	mL Methanol/g soil
		__ Samples rec'd in Methanol: __ covering soil __ not covering soil	__ 1:1 +/- 25%
		__ Samples received in air-tight container:	__ Other:
Temperature	__ Received on Ice __ Received at 4° C __ Other:		

VPH ANALYTICAL RESULTS

Method for Ranges: MADEP VPH 04-1.1			Client ID	Method Blank
Method for Target Analytes:			Lab ID	C0506-24
VPH Surrogate Standards			Date Collected	NA
PID: 2,5- Dibromotoluene			Date Received	NA
FID: 2,5- Dibromotoluene			Date Analyzed	5/10/16
			Dilution Factor	1X
			% Moisture (soil)	NA
Range/Target Analyte	**Elution Range**	**RL**	**Units**	
Unadjusted C5-C8 Aliphatics[1]	N/A	50	ug/L	<50
Unadjusted C9-C12 Aliphatics[1]	N/A	50	ug/L	<50
Benzene	C5-C8	5.0	ug/L	<5.0
Ethylbenzene	C9-C12	5.0	ug/L	<5.0
Methyl-tert-butylether	C5-C8	10	ug/L	<10
Naphthalene	N/A	10	ug/L	<10
Toluene	C5-C8	5.0	ug/L	<5.0
m- & p- Xylenes	C9-C12	10	ug/L	<10
o-Xylene	C9-C12	10	ug/L	<10
C5-C8 Aliphatic Hydrocarbons[1,2]	N/A	50	ug/L	<50
C9-C12 Aliphatic Hydrocarbons[1,3]	N/A	50	ug/L	<50
C9-C10 Aromatic Hydrocarbons[1]	N/A	50	ug/L	<50
PID Surrogate % Recovery				105
FID Surrogate % Recovery				100
Surrogate Acceptance Range				70-130%

[1]Hydrocarbon Range data exclude concentrations of any surrogate(s) and/or internal standards eluting in that range

[2]C_5-C_8 Aliphatic Hydrocarbons exclude the concentration of Target Analytes eluting in that range

[3]C_9-C_{12} Aliphatic Hydrocarbons exclude conc of Target Analytes eluting in that range AND concentration of C_9-C_{10} Aromatic Hydrocarbons

CERTIFICATION

Were all QA/QC procedures REQUIRED by the VPH Method followed? X Yes __ No-Details Attached
Were all performance/acceptance standards for the required QA/QC procedures achieved? X Yes __ No-Details Attached
Were any significant modifications made to the VPH method, as specified in Section 11.3? X No __ Yes-Details Attached

I attest under the pains and penalties of perjury that, based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

SIGNATURE: _____ POSITION: Laboratory Director

PRINTED NAME: Richard Warila DATE: 5/13/2016

Spike Recovery and RPD Summary Report -

Method : C:\HPCHEM\1\METHODS\VPH0502.M (Chemstation Integrator)
Title :
Last Update : Wed May 04 10:28:47 2016
Response via : Initial Calibration

Non-Spiked Sample: D050925.D

	Spike Sample	Spike Duplicate Sample
File ID :	D050922.D	D050923.D
Sample :	VLCS051016	VLCSD051016
Acq Time:	10 May 116 5:34 pm	10 May 116 6:15 pm

Compound	Sample Conc	Spike Added	Spike Res	Dup Res	Spike %Rec	Dup %Rec	RPD	QC Limits RPD	QC Limits % Rec
Pentane	0.0	50	55	55	111	109	2	25	70-130
2-Methyl Pentane	0.0	50	48	46	96	93	3	25	70-130
2,2,4-trimethylpenta	0.0	50	46	45	93	91	2	25	70-130
Nonane	0.0	50	43	45	87	91	4	25	70-130
n-decane	0.0	50	41	39	82	77	6	25	70-130
n-butylcyclohexane	0.0	50	50	50	99	101	2	25	70-130
MTBE #2	0.0	50	62	59	124	118	5	25	70-130
Benzene #2	0.0	50	59	59	118	118	1	25	70-130
Toluene #2	0.0	50	55	56	109	112	3	25	70-130
Ethylbenzene #2	0.0	50	58	60	116	121	4	25	70-130
M&P Xylene #2	0.0	100	113	116	113	116	3	25	70-130
O Xylene #2	0.0	50	54	55	109	111	2	25	70-130
1,2,4-Trimethylbezen	0.0	50	51	52	102	104	2	25	70-130
Naphthlene #2	0.0	50	64	63	128	126	1	25	70-130

- Fails Limit Check

VPH0502.M Wed May 11 09:41:44 2016

RESULTS: SEMIVOLATILE ORGANIC COMPOUNDS

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Organics Analysis Department certifies that the samples included in this section have been prepared and analyzed using the procedures cited and that the results have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HVE-1

Lab Name: New England Testing Laboratory Contract: Hopkinton G

Lab Code: RI010 Case No.: C0506-24 SAS No.: ATC SDG No.: ATC

Matrix: (soil/water) WATER Lab Sample ID: HVE-1

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B051305.D

Level: (low/med) LOW Date Received: 5/6/2016

% Moisture: _____ decanted:(Y/N) N Date Extracted: 5/12/2016

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 5/13/2016

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
62-75-9	n-Nitrosodimethylamine	3	U
110-86-1	Pyridine	2	U
108-95-2	Phenol	2	U
62-53-3	Aniline	2	U
111-44-4	bis(2-Chloroethyl)ether	2	U
95-57-8	2-Chlorophenol	2	U
541-73-1	1,3-Dichlorobenzene	2	U
106-46-7	1,4-Dichlorobenzene	2	U
95-50-1	1,2-Dichlorobenzene	2	U
95-48-7	2-Methylphenol	2	U
108-60-1	2,2'-oxybis (1-chloropropane)	2	U
106-44-5	3- & 4-Methylphenol	4	U
621-64-7	n-Nitroso-di-n-propylamine	2	U
67-72-1	Hexachloroethane	2	U
98-95-3	Nitrobenzene	2	U
78-59-1	Isophorone	2	U
88-75-5	2-Nitrophenol	5	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic acid	15	U
111-91-1	bis(2-Chloroethoxy)methane	2	U
120-83-2	2,4-Dichlorophenol	5	U
120-82-1	1,2,4-Trichlorobenzene	2	U
91-20-3	Naphthalene	2	
106-47-8	4-Chloroaniline	2	U
87-68-3	Hexachlorobutadiene	2	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	2	U
77-47-4	Hexachlorocyclopentadiene	2	U
88-06-2	2,4,6-Trichlorophenol	2	U
95-95-4	2,4,5-Trichlorophenol	2	U
91-58-7	2-Chloronaphthalene	2	U
88-74-4	2-Nitroaniline	2	U
131-11-3	Dimethyl phthalate	2	U
208-96-8	Acenaphthylene	2	U
606-20-2	2,6-Dinitrotoluene	2	U
99-09-2	3-Nitroaniline	2	U
83-32-9	Acenaphthene	2	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

HVE-1

Lab Name: New England Testing Laboratory Contract: Hopkinton G

Lab Code: RI010 Case No.: C0506-24 SAS No.: ATC SDG No.: ATC

Matrix: (soil/water) WATER Lab Sample ID: HVE-1

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B051305.D

Level: (low/med) LOW Date Received: 5/6/2016

% Moisture: _____ decanted:(Y/N) N Date Extracted: 5/12/2016

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 5/13/2016

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	5	U
100-02-7	4-Nitrophenol	5	U
132-64-9	Dibenzofuran	2	U
121-14-2	2,4-Dinitrotoluene	2	U
84-66-2	Diethyl phthalate	2	U
86-73-7	Fluorene	2	U
7005-72-3	4-Chlorophenyl phenyl ether	2	U
100-01-6	4-Nitroaniline	2	U
534-52-1	4,6-Dinitro-2-methylphenol	5	U
86-30-6	n-Nitrosodiphenylamine	2	U
101-55-3	4-Bromophenyl phenyl ether	2	U
118-74-1	Hexachlorobenzene	2	U
87-86-5	Pentachlorophenol	5	U
85-01-8	Phenanthrene	2	U
120-12-7	Anthracene	2	U
84-74-2	Di-n-butylphthalate	3	U
206-44-0	Fluoranthene	2	U
129-00-0	Pyrene	2	U
85-68-7	Butyl benzyl phthalate	2	U
91-94-1	3,3'-Dichlorobenzidine	5	U
56-55-3	Benzo(a)anthracene	2	U
218-01-9	Chrysene	2	U
117-81-7	bis(2-Ethylhexyl)phthalate	30	U
117-84-0	Di-n-octyl phthalate	3	U
205-99-2	Benzo(b)fluoranthene	2	U
207-08-9	Benzo(k)fluoranthene	2	U
50-32-8	Benzo(a)pyrene	2	U
53-70-3	Dibenz(a,h)anthracene	2	U
193-39-5	Indeno(1,2,3-cd)pyrene	2	U
191-24-2	Benzo(g,h,i)perylene	2	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CEA-10

Lab Name: New England Testing Laboratory Contract: Hopkinton G

Lab Code: RI010 Case No.: C0506-24 SAS No.: ATC SDG No.: ATC

Matrix: (soil/water) WATER Lab Sample ID: CEA-10

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B051306.D

Level: (low/med) LOW Date Received: 5/6/2016

% Moisture: _____ decanted:(Y/N) N Date Extracted: 5/12/2016

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 5/13/2016

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
62-75-9	n-Nitrosodimethylamine	3	U
110-86-1	Pyridine	2	U
108-95-2	Phenol	2	U
62-53-3	Aniline	2	U
111-44-4	bis(2-Chloroethyl)ether	2	U
95-57-8	2-Chlorophenol	2	U
541-73-1	1,3-Dichlorobenzene	2	U
106-46-7	1,4-Dichlorobenzene	2	U
95-50-1	1,2-Dichlorobenzene	2	U
95-48-7	2-Methylphenol	2	U
108-60-1	2,2'-oxybis (1-chloropropane)	2	U
106-44-5	3- & 4-Methylphenol	4	U
621-64-7	n-Nitroso-di-n-propylamine	2	U
67-72-1	Hexachloroethane	2	U
98-95-3	Nitrobenzene	2	U
78-59-1	Isophorone	2	U
88-75-5	2-Nitrophenol	5	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic acid	15	U
111-91-1	bis(2-Chloroethoxy)methane	2	U
120-83-2	2,4-Dichlorophenol	5	U
120-82-1	1,2,4-Trichlorobenzene	2	U
91-20-3	Naphthalene	3	
106-47-8	4-Chloroaniline	2	U
87-68-3	Hexachlorobutadiene	2	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	2	U
77-47-4	Hexachlorocyclopentadiene	2	U
88-06-2	2,4,6-Trichlorophenol	2	U
95-95-4	2,4,5-Trichlorophenol	2	U
91-58-7	2-Chloronaphthalene	2	U
88-74-4	2-Nitroaniline	2	U
131-11-3	Dimethyl phthalate	2	U
208-96-8	Acenaphthylene	2	U
606-20-2	2,6-Dinitrotoluene	2	U
99-09-2	3-Nitroaniline	2	U
83-32-9	Acenaphthene	2	U

EPA SAMPLE NO.

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

CEA-10

Lab Name: New England Testing Laboratory Contract: Hopkinton G

Lab Code: RI010 Case No.: C0506-24 SAS No.: ATC SDG No.: ATC

Matrix: (soil/water) WATER Lab Sample ID: CEA-10

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B051306.D

Level: (low/med) LOW Date Received: 5/6/2016

% Moisture: _____ decanted:(Y/N) N Date Extracted: 5/12/2016

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 5/13/2016

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	5	U
100-02-7	4-Nitrophenol	5	U
132-64-9	Dibenzofuran	2	U
121-14-2	2,4-Dinitrotoluene	2	U
84-66-2	Diethyl phthalate	2	U
86-73-7	Fluorene	2	U
7005-72-3	4-Chlorophenyl phenyl ether	2	U
100-01-6	4-Nitroaniline	2	U
534-52-1	4,6-Dinitro-2-methylphenol	5	U
86-30-6	n-Nitrosodiphenylamine	2	U
101-55-3	4-Bromophenyl phenyl ether	2	U
118-74-1	Hexachlorobenzene	2	U
87-86-5	Pentachlorophenol	5	U
85-01-8	Phenanthrene	2	U
120-12-7	Anthracene	2	U
84-74-2	Di-n-butylphthalate	3	U
206-44-0	Fluoranthene	2	U
129-00-0	Pyrene	2	U
85-68-7	Butyl benzyl phthalate	2	U
91-94-1	3,3'-Dichlorobenzidine	5	U
56-55-3	Benzo(a)anthracene	2	U
218-01-9	Chrysene	2	U
117-81-7	bis(2-Ethylhexyl)phthalate	30	U
117-84-0	Di-n-octyl phthalate	3	U
205-99-2	Benzo(b)fluoranthene	2	U
207-08-9	Benzo(k)fluoranthene	2	U
50-32-8	Benzo(a)pyrene	2	U
53-70-3	Dibenz(a,h)anthracene	2	U
193-39-5	Indeno(1,2,3-cd)pyrene	2	U
191-24-2	Benzo(g,h,i)perylene	2	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

BSW051216

Lab Name: New England Testing Laboratory Contract: Hopkinton G

Lab Code: RI010 Case No.: C0506-24 SAS No.: ATC SDG No.: ATC

Matrix: (soil/water) WATER Lab Sample ID: BSW051216

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B051303.D

Level: (low/med) LOW Date Received: 5/6/2016

% Moisture: _____ decanted:(Y/N) N Date Extracted: 5/12/2016

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 5/13/2016

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
62-75-9	n-Nitrosodimethylamine	3	U
110-86-1	Pyridine	2	U
108-95-2	Phenol	2	U
62-53-3	Aniline	2	U
111-44-4	bis(2-Chloroethyl)ether	2	U
95-57-8	2-Chlorophenol	2	U
541-73-1	1,3-Dichlorobenzene	2	U
106-46-7	1,4-Dichlorobenzene	2	U
95-50-1	1,2-Dichlorobenzene	2	U
95-48-7	2-Methylphenol	2	U
108-60-1	2,2'-oxybis (1-chloropropane)	2	U
106-44-5	3- & 4-Methylphenol	4	U
621-64-7	n-Nitroso-di-n-propylamine	2	U
67-72-1	Hexachloroethane	2	U
98-95-3	Nitrobenzene	2	U
78-59-1	Isophorone	2	U
88-75-5	2-Nitrophenol	5	U
105-67-9	2,4-Dimethylphenol	10	U
65-85-0	Benzoic acid	15	U
111-91-1	bis(2-Chloroethoxy)methane	2	U
120-83-2	2,4-Dichlorophenol	5	U
120-82-1	1,2,4-Trichlorobenzene	2	U
91-20-3	Naphthalene	2	U
106-47-8	4-Chloroaniline	2	U
87-68-3	Hexachlorobutadiene	2	U
59-50-7	4-Chloro-3-methylphenol	5	U
91-57-6	2-Methylnaphthalene	2	U
77-47-4	Hexachlorocyclopentadiene	2	U
88-06-2	2,4,6-Trichlorophenol	2	U
95-95-4	2,4,5-Trichlorophenol	2	U
91-58-7	2-Chloronaphthalene	2	U
88-74-4	2-Nitroaniline	2	U
131-11-3	Dimethyl phthalate	2	U
208-96-8	Acenaphthylene	2	U
606-20-2	2,6-Dinitrotoluene	2	U
99-09-2	3-Nitroaniline	2	U
83-32-9	Acenaphthene	2	U

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

BSW051216

Lab Name: New England Testing Laboratory Contract: Hopkinton G

Lab Code: RI010 Case No.: C0506-24 SAS No.: ATC SDG No.: ATC

Matrix: (soil/water) WATER Lab Sample ID: BSW051216

Sample wt/vol: 1000 (g/ml) ML Lab File ID: B051303.D

Level: (low/med) LOW Date Received: 5/6/2016

% Moisture: _____ decanted:(Y/N) N Date Extracted: 5/12/2016

Concentrated Extract Volume: 1000 (uL) Date Analyzed: 5/13/2016

Injection Volume: 1.0 (uL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: _____

CAS NO.	COMPOUND	CONCENTRATION UNITS: (ug/L or ug/Kg) UG/L	Q
51-28-5	2,4-Dinitrophenol	5	U
100-02-7	4-Nitrophenol	5	U
132-64-9	Dibenzofuran	2	U
121-14-2	2,4-Dinitrotoluene	2	U
84-66-2	Diethyl phthalate	2	U
86-73-7	Fluorene	2	U
7005-72-3	4-Chlorophenyl phenyl ether	2	U
100-01-6	4-Nitroaniline	2	U
534-52-1	4,6-Dinitro-2-methylphenol	5	U
86-30-6	n-Nitrosodiphenylamine	2	U
101-55-3	4-Bromophenyl phenyl ether	2	U
118-74-1	Hexachlorobenzene	2	U
87-86-5	Pentachlorophenol	5	U
85-01-8	Phenanthrene	2	U
120-12-7	Anthracene	2	U
84-74-2	Di-n-butylphthalate	3	U
206-44-0	Fluoranthene	2	U
129-00-0	Pyrene	2	U
85-68-7	Butyl benzyl phthalate	2	U
91-94-1	3,3'-Dichlorobenzidine	5	U
56-55-3	Benzo(a)anthracene	2	U
218-01-9	Chrysene	2	U
117-81-7	bis(2-Ethylhexyl)phthalate	30	U
117-84-0	Di-n-octyl phthalate	3	U
205-99-2	Benzo(b)fluoranthene	2	U
207-08-9	Benzo(k)fluoranthene	2	U
50-32-8	Benzo(a)pyrene	2	U
53-70-3	Dibenz(a,h)anthracene	2	U
193-39-5	Indeno(1,2,3-cd)pyrene	2	U
191-24-2	Benzo(g,h,i)perylene	2	U

2C

WATER SEMIVOLATILE SURROGATE RECOVERY

Lab Name: New England Testing Laboratory Contract: Hopkinton Gas

Lab Code: RI010 Case No.: C0506-24 SAS No.: ATC SDG No.: ATC

	EPA SAMPLE NO.	S1 #	S2 #	S3 #	S4 #	S5 #	S6 #	TOT OUT
01	BSW051216	25	15	64	68	64	76	0
02	LSW051216	25	15	69	71	86	92	0
03	HVE-1	18	12	50	55	74	80	0
04	CEA-10	17	11	53	60	75	83	0

QC LIMITS

S1	=	2-Fluorophenol	(10-81)
S2	=	Phenol-d6	(10-83)
S3	=	Nitrobenzene-d5	(30-130)
S4	=	2-Fluorobiphenyl	(35-130)
S5	=	2,4,6-Tribromophenol	(44-120)
S6	=	Terphenyl-d14	(50-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D Surrogate diluted out

Semivolatile Water Laboratory Control Spike

Date Extracted: 5/12/2016
Date Analyzed: 5/13/2016

	Amount Spiked ug/L	Result, ug/L	Recovery %	Lower Recovery Limit	Upper Recovery Limit
n-Nitrosodimethylamine	50.0	11.9	24	10	69
Phenol	50.0	8.1	16	10	67
Aniline	50.0	14.4	29	14	92
bis(2-Chloroethyl)ether	50.0	37.9	76	26	120
2-Chlorophenol	50.0	28.9	58	28	85
1,3-Dichlorobenzene	50.0	31.1	62	26	87
1,4-Dichlorobenzene	50.0	30.7	61	26	89
1,2-Dichlorobenzene	50.0	31.6	63	27	92
2-Methylphenol	50.0	23.6	47	30	86
2,2'-oxybis (1-chlorop...	50.0	39.2	78	24	120
3- & 4-Methylphenol	50.0	21.0	42	15	80
n-Nitroso-di-n-propylamine	50.0	39.6	79	31	106
Hexachloroethane	50.0	30.5	61	24	89
Nitrobenzene	50.0	37.5	75	26	100
Isophorone	50.0	43.1	86	26	115
2-Nitrophenol	50.0	34.9	70	25	104
2,4-Dimethylphenol	50.0	31.4	63	28	114
bis(2-Chloroethoxy)methane	50.0	41.2	82	28	120
2,4-Dichlorophenol	50.0	35.4	71	28	105
1,2,4-Trichlorobenzene	50.0	32.8	66	26	98
Naphthalene	50.0	36.8	74	27	104
Hexachlorobutadiene	50.0	37.2	74	26	115
4-Chloro-3-methylphenol	50.0	35.1	70	29	116
2-Methylnaphthalene	50.0	36.5	73	27	104
Hexachlorocyclopentadiene	50.0	25.3	51	10	115
2,4,6-Trichlorophenol	50.0	39.5	79	35	114
2,4,5-Trichlorophenol	50.0	37.5	75	34	123
2-Chloronaphthalene	50.0	39.4	79	33	108
2-Nitroaniline	50.0	41.9	84	37	124
Dimethyl phthalate	50.0	45.3	91	40	119
Acenaphthylene	50.0	40.6	81	35	113
2,6-Dinitrotoluene	50.0	48.0	96	41	128
Acenaphthene	50.0	42.0	84	34	130
2,4-Dinitrophenol	50.0	50.4	101	15	130
Dibenzofuran	50.0	40.1	80	36	116
2,4-Dinitrotoluene	50.0	49.0	98	41	129
Diethyl phthalate	50.0	44.3	89	39	121

Semivolatile Water Laboratory Control Spike

Date Extracted: 5/12/2016
Date Analyzed: 5/13/2016

Fluorene	50.0	44.7	89	40	130
4-Chlorophenyl phenyl ether	50.0	43.2	86	38	130
4-Nitroaniline	50.0	32.8	66	32	130
4,6-Dinitro-2-methylphenol	50.0	43.8	88	10	130
4-Bromophenyl phenyl ether	50.0	45.9	92	36	130
Hexachlorobenzene	50.0	45.3	91	48	130
Pentachlorophenol	50.0	41.8	84	30	130
Phenanthrene	50.0	47.2	94	48	115
Anthracene	50.0	46.3	93	45	121
Di-n-butylphthalate	50.0	48.3	97	38	130
Fluoranthene	50.0	49.9	100	48	122
Pyrene	50.0	49.2	98	45	130
Butyl benzyl phthalate	50.0	51.7	103	34	130
Benzo(a)anthracene	50.0	49.7	99	52	117
Chrysene	50.0	49.2	98	47	130
Benzo(b)fluoranthene	50.0	53.0	106	45	130
Benzo(k)fluoranthene	50.0	52.1	104	46	130
Benzo(a)pyrene	50.0	49.7	99	46	130
Indeno(1,2,3-cd)pyrene	50.0	50.4	101	41	130
Dibenz(a,h)anthracene	50.0	52.6	105	48	130
Benzo(g,h,i)perylene	50.0	52.2	104	36	130

RESULTS: VOLATILE ORGANIC COMPOUNDS

The presence of the NETLAB LOGO in the top right corner of each page in this section indicates:

The Technical Manager of the Organics Analysis Department certifies that the samples included in this section have been prepared and analyzed using the procedures cited and that the results have been reviewed and approved. Any exceptions or qualifications of substance have been reported in the case narrative.

VOLATILE ORGANICS ANALYSIS DATA SHEET

Case No.: C0506-24
Method: 8260
Matrix: (soil/water) WATER
Sample wt/vol: 5.0 (g/ml) ML
% Moisture
Soil Extract Volume: (uL)
Analyst's Initials: JO

Client Name: Cardno ATC
Lab Sample ID: HVE-1
Lab File ID: C050624.D
Date Sampled: 5/5/2016
Date Analyzed: 5/7/2016
Dilution Factor: 1.0
Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	UNITS: ug/L	Q
75-01-4	Vinyl Chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-64-1	Acetone	5.0	U
75-35-4	1,1-Dichloroethene	1.0	U
75-15-0	Carbon Disulfide	1.0	U
75-09-2	Methylene Chloride	1.0	U
1634-04-4	tert-Butyl methyl ether	1.0	U
156-60-5	trans-1,2 Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
78-93-3	2-Butanone	5.0	U
594-20-7	2,2-Dichloropropane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
67-66-3	Chloroform	6.3	
74-97-5	Bromochloromethane	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
563-58-6	1,1-Dichloropropene	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
74-95-3	Dibromomethane	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
106-93-4	Ethylene Dibromide	1.0	U
108-88-3	Toluene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
10061-02-6	Trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
591-78-6	2-Hexanone	5.0	U
127-18-4	Tetrachloroethene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

VOLATILE ORGANICS ANALYSIS DATA SHEET

Case No.: C0506-24
Method: 8260
Matrix: (soil/water) WATER
Sample wt/vol: 5.0 (g/ml) ML
% Moisture
Soil Extract Volume: (uL)
Analyst's Initials: JO

Client Name: Cardno ATC
Lab Sample ID: HVE-1
Lab File ID: C050624.D
Date Sampled: 5/5/2016
Date Analyzed: 5/7/2016
Dilution Factor: 1.0
Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	UNITS: ug/L	Q
100-41-4	Ethylbenzene	1.0	U
1330-20-7	m & p-Xylene	2.0	U
95-47-6	o-Xylene	3.5	
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
98-82-8	Isopropylbenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
108-86-1	Bromobenzene	1.0	U
96-18-4	1,2,3-Trichloropropane	1.0	U
95-49-8	2-Chlorotoluene	1.0	U
103-65-1	n-Propylbenzene	1.0	U
108-67-8	1,3,5-Trimethylbenzene	2.1	
106-43-4	4-Chlorotoluene	1.0	U
98-06-6	tert-Butylbenzene	1.0	U
95-63-6	1,2,4-Trimethylbenzene	6.3	
135-98-8	sec-Butylbenzene	1.0	U
99-87-6	p-Isopropyltoluene	1.0	U
75-87-3	Chloromethane	1.0	U
75-65-0	tert butyl alcohol	5.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
109-99-9	Tetrahydrofuran	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
60-29-7	Diethyl Ether	1.0	U
104-51-8	n-Butylbenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
91-20-3	Naphthalene	2.8	
87-61-6	1,2,3-Trichlorobenzene	1.0	U
994-05-8	Tert-amyl Methyl Ether	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
142-28-9	1,3-Dichloropropane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
637-92-3	Ethyl Tert-butyl ether	1.0	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

VOLATILE ORGANICS ANALYSIS DATA SHEET

Case No.: C0506-24
Method: 8260
Matrix: (soil/water) WATER
Sample wt/vol: 5.0 (g/ml) ML
% Moisture
Soil Extract Volume: (uL)
Analyst's Initials: JO

Client Name: Cardno ATC
Lab Sample ID: HVE-1
Lab File ID: C050624.D
Date Sampled: 5/5/2016
Date Analyzed: 5/7/2016
Dilution Factor: 1.0
Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	UNITS: ug/L	Q
108-20-3	Diisopropyl Ether	1.0	U
123-91-1	1,4-Dioxane	500	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

VOLATILE ORGANICS ANALYSIS DATA SHEET

Case No.: C0506-24
Method: 8260
Matrix: (soil/water) WATER
Sample wt/vol: 5.0 (g/ml) ML
% Moisture
Soil Extract Volume: (uL)
Analyst's Initials: JO

Client Name: Cardno ATC
Lab Sample ID: CEA-10
Lab File ID: C050625.D
Date Sampled: 5/5/2016
Date Analyzed: 5/7/2016
Dilution Factor: 1.0
Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	UNITS: ug/L	Q
75-01-4	Vinyl Chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-64-1	Acetone	5.0	U
75-35-4	1,1-Dichloroethene	1.0	U
75-15-0	Carbon Disulfide	1.0	U
75-09-2	Methylene Chloride	1.0	U
1634-04-4	tert-Butyl methyl ether	1.0	U
156-60-5	trans-1,2 Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
78-93-3	2-Butanone	5.0	U
594-20-7	2,2-Dichloropropane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
67-66-3	Chloroform	1.0	U
74-97-5	Bromochloromethane	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
563-58-6	1,1-Dichloropropene	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
74-95-3	Dibromomethane	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
106-93-4	Ethylene Dibromide	1.0	U
108-88-3	Toluene	1.2	
10061-01-5	cis-1,3-Dichloropropene	1.0	U
10061-02-6	Trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
591-78-6	2-Hexanone	5.0	U
127-18-4	Tetrachloroethene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

Case No.: C0506-24
Method: 8260
Matrix: (soil/water) WATER
Sample wt/vol: 5.0 (g/ml) ML
% Moisture
Soil Extract Volume: (uL)
Analyst's Initials: JO

Client Name: Cardno ATC
Lab Sample ID: CEA-10
Lab File ID: C050625.D
Date Sampled: 5/5/2016
Date Analyzed: 5/7/2016
Dilution Factor: 1.0
Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	UNITS: ug/L	Q
100-41-4	Ethylbenzene	9.6	
1330-20-7	m & p-Xylene	15	
95-47-6	o-Xylene	2.9	
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
98-82-8	Isopropylbenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
108-86-1	Bromobenzene	1.0	U
96-18-4	1,2,3-Trichloropropane	1.0	U
95-49-8	2-Chlorotoluene	1.0	U
103-65-1	n-Propylbenzene	1.1	
108-67-8	1,3,5-Trimethylbenzene	1.3	
106-43-4	4-Chlorotoluene	1.0	U
98-06-6	tert-Butylbenzene	1.0	U
95-63-6	1,2,4-Trimethylbenzene	5.8	
135-98-8	sec-Butylbenzene	1.0	U
99-87-6	p-Isopropyltoluene	1.0	U
75-87-3	Chloromethane	1.0	U
75-65-0	tert butyl alcohol	5.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
109-99-9	Tetrahydrofuran	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
60-29-7	Diethyl Ether	1.0	U
104-51-8	n-Butylbenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
91-20-3	Naphthalene	1.6	
87-61-6	1,2,3-Trichlorobenzene	1.0	U
994-05-8	Tert-amyl Methyl Ether	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
142-28-9	1,3-Dichloropropane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
637-92-3	Ethyl Tert-butyl ether	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

Case No.: C0506-24
Method: 8260
Matrix: (soil/water) WATER
Sample wt/vol: 5.0 (g/ml) ML
% Moisture
Soil Extract Volume: (uL)
Analyst's Initials: JO

Client Name: Cardno ATC
Lab Sample ID: CEA-10
Lab File ID: C050625.D
Date Sampled: 5/5/2016
Date Analyzed: 5/7/2016
Dilution Factor: 1.0
Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	UNITS: ug/L	Q
108-20-3	Diisopropyl Ether	1.0	U
123-91-1	1,4-Dioxane	500	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

VOLATILE ORGANICS ANALYSIS DATA SHEET

Case No.: C0506-24
Method: 8260
Matrix: (soil/water) WATER
Sample wt/vol: 5.0 (g/ml) ML
% Moisture
Soil Extract Volume: (uL)
Analyst's Initials: JO

Client Name: Cardno ATC
Lab Sample ID: VBLK050616
Lab File ID: C050608.D
Date Sampled: 5/5/2016
Date Analyzed: 5/6/2016
Dilution Factor: 1.0
Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	UNITS: ug/L	Q
75-01-4	Vinyl Chloride	1.0	U
74-83-9	Bromomethane	1.0	U
75-00-3	Chloroethane	1.0	U
67-64-1	Acetone	5.0	U
75-35-4	1,1-Dichloroethene	1.0	U
75-15-0	Carbon Disulfide	1.0	U
75-09-2	Methylene Chloride	1.0	U
1634-04-4	tert-Butyl methyl ether	1.0	U
156-60-5	trans-1,2 Dichloroethene	1.0	U
75-34-3	1,1-Dichloroethane	1.0	U
78-93-3	2-Butanone	5.0	U
594-20-7	2,2-Dichloropropane	1.0	U
156-59-2	cis-1,2-Dichloroethene	1.0	U
67-66-3	Chloroform	1.0	U
74-97-5	Bromochloromethane	1.0	U
71-55-6	1,1,1-Trichloroethane	1.0	U
563-58-6	1,1-Dichloropropene	1.0	U
56-23-5	Carbon Tetrachloride	1.0	U
71-43-2	Benzene	1.0	U
107-06-2	1,2-Dichloroethane	1.0	U
79-01-6	Trichloroethene	1.0	U
78-87-5	1,2-Dichloropropane	1.0	U
75-27-4	Bromodichloromethane	1.0	U
74-95-3	Dibromomethane	1.0	U
108-10-1	4-Methyl-2-pentanone	5.0	U
106-93-4	Ethylene Dibromide	1.0	U
108-88-3	Toluene	1.0	U
10061-01-5	cis-1,3-Dichloropropene	1.0	U
10061-02-6	Trans-1,3-Dichloropropene	1.0	U
79-00-5	1,1,2-Trichloroethane	1.0	U
591-78-6	2-Hexanone	5.0	U
127-18-4	Tetrachloroethene	1.0	U
124-48-1	Chlorodibromomethane	1.0	U
108-90-7	Chlorobenzene	1.0	U
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

Case No.: C0506-24
Method: 8260
Matrix: (soil/water) WATER
Sample wt/vol: 5.0 (g/ml) ML
% Moisture
Soil Extract Volume: (uL)
Analyst's Initials: JO

Client Name: Cardno ATC
Lab Sample ID: VBLK050616
Lab File ID: C050608.D
Date Sampled: 5/5/2016
Date Analyzed: 5/6/2016
Dilution Factor: 1.0
Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	UNITS: ug/L	Q
100-41-4	Ethylbenzene	1.0	U
1330-20-7	m & p-Xylene	2.0	U
95-47-6	o-Xylene	1.0	U
100-42-5	Styrene	1.0	U
75-25-2	Bromoform	1.0	U
98-82-8	Isopropylbenzene	1.0	U
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U
108-86-1	Bromobenzene	1.0	U
96-18-4	1,2,3-Trichloropropane	1.0	U
95-49-8	2-Chlorotoluene	1.0	U
103-65-1	n-Propylbenzene	1.0	U
108-67-8	1,3,5-Trimethylbenzene	1.0	U
106-43-4	4-Chlorotoluene	1.0	U
98-06-6	tert-Butylbenzene	1.0	U
95-63-6	1,2,4-Trimethylbenzene	1.0	U
135-98-8	sec-Butylbenzene	1.0	U
99-87-6	p-Isopropyltoluene	1.0	U
75-87-3	Chloromethane	1.0	U
75-65-0	tert butyl alcohol	5.0	U
541-73-1	1,3-Dichlorobenzene	1.0	U
109-99-9	Tetrahydrofuran	1.0	U
106-46-7	1,4-Dichlorobenzene	1.0	U
60-29-7	Diethyl Ether	1.0	U
104-51-8	n-Butylbenzene	1.0	U
95-50-1	1,2-Dichlorobenzene	1.0	U
96-12-8	1,2-Dibromo-3-chloropropane	1.0	U
120-82-1	1,2,4-Trichlorobenzene	1.0	U
87-68-3	Hexachlorobutadiene	1.0	U
91-20-3	Naphthalene	1.0	U
87-61-6	1,2,3-Trichlorobenzene	1.0	U
994-05-8	Tert-amyl Methyl Ether	1.0	U
75-71-8	Dichlorodifluoromethane	1.0	U
142-28-9	1,3-Dichloropropane	1.0	U
75-69-4	Trichlorofluoromethane	1.0	U
637-92-3	Ethyl Tert-butyl ether	1.0	U

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VOLATILE ORGANICS ANALYSIS DATA SHEET

Case No.: C0506-24
Method: 8260
Matrix: (soil/water) WATER
Sample wt/vol: 5.0 (g/ml) ML
% Moisture
Soil Extract Volume: (uL)
Analyst's Initials: JO

Client Name: Cardno ATC
Lab Sample ID: VBLK050616
Lab File ID: C050608.D
Date Sampled: 5/5/2016
Date Analyzed: 5/6/2016
Dilution Factor: 1.0
Soil Aliquot Volume: (uL)

CAS NO.	COMPOUND	UNITS: ug/L	Q
108-20-3	Diisopropyl Ether	1.0	U
123-91-1	1,4-Dioxane	500	U

U=not detected, D=diluted, E=over range (another data sheet is included), J=below limit, B=found in blank

2A

WATER VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: New England Testing Laboratory Contract: 3010000191 – Ho

Lab Code: RI010 Case No.: C0506-24 SAS No.: Cardno AT

	EPA SAMPLE NO.	SMC1 #	SMC2 #	SMC3 #	TOT OUT
01	VLCS050616	98	102	107	0
02	VLCSD050616	98	102	94	0
03	VBLK050616	96	101	104	0
04	HVE-1	95	102	101	0
05	CEA-10	96	102	103	0

QC LIMITS

SMC1	=	4-Bromofluorobenzene	(70-130)
SMC2	=	Toluene-D8	(70-130)
SMC3	=	1,2-Dichloroethane-D4	(70-130)

Column to be used to flag recovery values

* Values outside of contract required QC limits

D System Monitoring Compound diluted out

Volatile Organics LCS and LCSD Duplicate Results

VLCS/LCSD050616

Compound	LCS True Value	LCS Result	Recovery, %	LCSD True Value	LCSD Result	Recovery, %	Recovery QC Limits	Units	RPD, %	RPD Limits
Dichlorodifluoromethane	50	51.37	**103**	50	51.02	**102**	70-130%	ug/L	**0.7**	20.0
Chloromethane	50	40.77	**82**	50	43.50	**87**	70-130%	ug/L	**6.5**	20.0
Vinyl Chloride	50	46.55	**93**	50	46.48	**93**	70-130%	ug/L	**0.2**	20.0
Bromomethane	50	26.86	**54**	50	30.65	**61**	70-130%	ug/L	**13.2**	20.0
Chloroethane	50	45.82	**92**	50	43.37	**87**	70-130%	ug/L	**5.5**	20.0
Trichlorofluoromethane	50	45.04	**90**	50	44.70	**89**	70-130%	ug/L	**0.8**	20.0
Diethyl Ether	50	52.44	**105**	50	54.00	**108**	70-130%	ug/L	**2.9**	20.0
1,1-Dichloroethene	50	53.66	**107**	50	52.96	**106**	70-130%	ug/L	**1.3**	20.0
Carbon Disulfide	50	57.50	**115**	50	57.37	**115**	70-130%	ug/L	**0.2**	20.0
Methylene Chloride	50	46.79	**94**	50	47.86	**96**	70-130%	ug/L	**2.3**	20.0
Acetone	50	64.56	**129**	50	60.55	**121**	70-130%	ug/L	**6.4**	20.0
Trans-1,2-dichloroethene	50	49.70	**99**	50	49.31	**99**	70-130%	ug/L	**0.8**	20.0
Tert-butyl Methyl Ether	50	56.51	**113**	50	57.01	**114**	70-130%	ug/L	**0.9**	20.0
Diisopropyl Ether	50	50.69	**101**	50	50.37	**101**	70-130%	ug/L	**0.6**	20.0
1,1-Dichloroethane	50	48.97	**98**	50	46.70	**93**	70-130%	ug/L	**4.7**	20.0
Ethyl Tert-butyl Ether	50	53.35	**107**	50	54.03	**108**	70-130%	ug/L	**1.3**	20.0
Cis-1,2-dichloroethene	50	49.36	**99**	50	49.76	**100**	70-130%	ug/L	**0.8**	20.0
2,2-Dichloropropane	50	51.67	**103**	50	50.46	**101**	70-130%	ug/L	**2.4**	20.0
Bromochloromethane	50	54.04	**108**	50	53.35	**107**	70-130%	ug/L	**1.3**	20.0
Chloroform	50	49.52	**99**	50	49.23	**98**	70-130%	ug/L	**0.6**	20.0
Carbon Tetrachloride	50	55.98	**112**	50	55.21	**110**	70-130%	ug/L	**1.4**	20.0
Tetrahydrofuran	50	61.54	**123**	50	62.82	**126**	70-130%	ug/L	**2.1**	20.0
1,1,1-Trichloroethane	50	53.10	**106**	50	52.44	**105**	70-130%	ug/L	**1.3**	20.0
2-Butanone	50	59.40	**119**	50	61.99	**124**	70-130%	ug/L	**4.3**	20.0
1,1-Dichloropropene	50	51.70	**103**	50	49.10	**98**	70-130%	ug/L	**5.2**	20.0
Benzene	50	50.73	**101**	50	49.99	**100**	70-130%	ug/L	**1.5**	20.0
Tert-butyl Alcohol	50	54.14	**108**	50	52.43	**105**	70-130%	ug/L	**3.2**	20.0
Tert-amyl Methyl Ether	50	52.32	**105**	50	52.97	**106**	70-130%	ug/L	**1.2**	20.0
1,2-Dichloroethane	50	52.27	**105**	50	51.97	**104**	70-130%	ug/L	**0.6**	20.0
Trichloroethene	50	50.71	**101**	50	49.89	**100**	70-130%	ug/L	**1.6**	20.0
Dibromomethane	50	53.47	**107**	50	53.00	**106**	70-130%	ug/L	**0.9**	20.0
1,2-Dichloropropane	50	50.77	**102**	50	50.05	**100**	70-130%	ug/L	**1.4**	20.0
Bromodichloromethane	50	55.67	**111**	50	55.33	**111**	70-130%	ug/L	**0.6**	20.0
Cis-1,3-dichloropropene	50	55.62	**111**	50	55.15	**110**	70-130%	ug/L	**0.8**	20.0
Toluene	50	50.04	**100**	50	49.23	**98**	70-130%	ug/L	**1.6**	20.0
4-Methyl-2-Pentanone	50	61.76	**124**	50	61.17	**122**	70-130%	ug/L	**1.0**	20.0
Tetrachloroethene	50	48.21	**96**	50	47.74	**95**	70-130%	ug/L	**1.0**	20.0
Trans-1,3-Dichloropropene	50	51.35	**103**	50	51.93	**104**	70-130%	ug/L	**1.1**	20.0
1,1,2-Trichloroethane	50	54.95	**110**	50	54.31	**109**	70-130%	ug/L	**1.2**	20.0
Dibromochloromethane	50	52.13	**104**	50	51.40	**103**	70-130%	ug/L	**1.4**	20.0
1,3-Dichloropropane	50	52.49	**105**	50	52.66	**105**	70-130%	ug/L	**0.3**	20.0
1,2-Dibromoethane	50	54.53	**109**	50	54.98	**110**	70-130%	ug/L	**0.8**	20.0
2-Hexanone	50	61.55	**123**	50	64.37	**129**	70-130%	ug/L	**4.5**	20.0
Chlorobenzene	50	47.90	**96**	50	47.28	**95**	70-130%	ug/L	**1.3**	20.0
Ethylbenzene	50	48.13	**96**	50	47.10	**94**	70-130%	ug/L	**2.2**	20.0
m,p-Xylene	100	96.80	**97**	100	94.56	**95**	70-130%	ug/L	**2.3**	20.0
1,1,1,2-Tetrachloroethane	50	50.76	**102**	50	50.54	**101**	70-130%	ug/L	**0.4**	20.0
o-Xylene	50	47.17	**94**	50	46.78	**94**	70-130%	ug/L	**0.8**	20.0
Styrene	50	48.20	**96**	50	48.22	**96**	70-130%	ug/L	**0.0**	20.0
Bromoform	50	62.94	**126**	50	63.10	**126**	70-130%	ug/L	**0.3**	20.0
Isopropylbenzene	50	47.81	**96**	50	47.84	**96**	70-130%	ug/L	**0.1**	20.0
Bromobenzene	50	48.34	**97**	50	48.24	**96**	70-130%	ug/L	**0.2**	20.0
n-Propylbenzene	50	47.11	**94**	50	47.48	**95**	70-130%	ug/L	**0.8**	20.0
1,1,2,2-Tetrachloroethene	50	55.74	**111**	50	57.50	**115**	70-130%	ug/L	**3.1**	20.0
2-Chlorotoluene	50	46.27	**93**	50	46.70	**93**	70-130%	ug/L	**0.9**	20.0
1,2,3-Trichloropropane	50	52.43	**105**	50	53.39	**107**	70-130%	ug/L	**1.8**	20.0
1,3,5-Trimethylbenzene	50	46.93	**94**	50	46.87	**94**	70-130%	ug/L	**0.1**	20.0
4-Chlorotoluene	50	46.93	**94**	50	47.10	**94**	70-130%	ug/L	**0.4**	20.0
Tert-butylbenzene	50	46.20	**92**	50	46.18	**92**	70-130%	ug/L	**0.0**	20.0
1,2,4-Trimethylbenzene	50	46.81	**94**	50	47.01	**94**	70-130%	ug/L	**0.4**	20.0
Sec-butylbenzene	50	47.31	**95**	50	47.38	**95**	70-130%	ug/L	**0.1**	20.0
p-Isopropyltoluene	50	47.34	**95**	50	47.43	**95**	70-130%	ug/L	**0.2**	20.0
1,3-Dichlorobenzene	50	46.52	**93**	50	47.32	**95**	70-130%	ug/L	**1.7**	20.0
1,4-Dichlorobenzene	50	48.15	**96**	50	47.57	**95**	70-130%	ug/L	**1.2**	20.0
n-Butyl Bezene	50	47.19	**94**	50	47.04	**94**	70-130%	ug/L	**0.3**	20.0
1,2-Dichlorbenzene	50	48.91	**98**	50	48.32	**97**	70-130%	ug/L	**1.2**	20.0
1,2-Dibromo-3-chloropr...	50	64.34	**129**	50	65.06	**130**	70-130%	ug/L	**1.1**	20.0
Hexachlorobutadiene	50	44.51	**89**	50	44.89	**90**	70-130%	ug/L	**0.9**	20.0
1,2,4-Trichlorobenzene	50	50.07	**100**	50	51.17	**102**	70-130%	ug/L	**2.2**	20.0
Naphthalene	50	55.02	**110**	50	62.42	**125**	70-130%	ug/L	**12.6**	20.0
1,2,3-Trichlorobenzene	50	50.85	**102**	50	54.48	**109**	70-130%	ug/L	**6.9**	20.0

COC0-24

CHAIN OF CUSTODY [NETLAB -401-353-3420]

ATC GROUP SERVICES

333 George Washington Highway
Smithfield, RI 02917
Tel: 401-349-3636

Date Collected	Time Collected	Sample Identification	Grab or Composite	# of Containers	Containers type	Preseravtion Code	Matrix	MCP-13 METALS	TPH 8100M	VOC 8260	SVOC 8270 - FULL LIST	VPH	TSS, RESIDUAL CHLORINE	CHLORIDE	FERROUS, FERRID IRON	SULFATE, NITRATE	PCB					
5/5/16		HVE-1	G	8	PGAV	I,H,S,N	GW	X	X	X	X	X	X				X					
5/5/16		HVE-2	G	6	VP	IH	GW					X			X	X						
5/5/16		HVE-3	G	6	VP	IH	GW					X			X	X						
5/5/16		AS-1	G	6	VP	IH	GW					X			X	X						
5/5/16		CEA-10	G	8	PGAV	I,H,S,N	GW	X	X	X	X	X	X				X					

Project Information:	ATC Lincoln Contact Information:
Project name: HOPKINTON GAS	Cardno ATC: Keith Sullivan
ATC Project Number: 3010000191	Email: keith.sullivan@atcassociates.com Tel: 401-349-3636, ext. 142
Sampled by: KS / AK	Report To: Keith Sullivan Phone: 401-349-3636, ext. 142 Fax: 401-232-1130

Relinquished By:	Date	Time	Received By:	Date	Time	LABORATORY	
[signature]	5/6/16	1440	Bruce Woodrow	5-6-16	1:40	Normal Turnaround	X
Bruce Woodrow	5-6-16	3:30				Rush Turnaround	
			[signature]	5/6/16	1530	Shipped on ice	X

Notes:
TPH by 8100M instead of DRO/GRO
Need EDB / TBA on 8260
Need GW-3 MDLs...this is for MA Remediation General Permit

Temp. on Arrival: 4°

Lab Workorder#

MCP Data Enhancement QC Package? (Yes) No

Container Types: P = Poly, G = Glass, A = Amber, V = Vial, St = Sterile S = Suma **Preservation Codes:** NP = None, N = HNO, H = HCl, S = H_2SO_4, SH = NaOH, SB = $NaHSO_4$, M = MeOH, T = $Na_2S_2O_3$, Z = ZnOAc, I = Ice

Matrix Codes: GW = Groundwater, SW = Surface Water, WW = Wastewater, DW = Drinking Water, S= Soil, SI = Sludge, A = Air, B = Bulk/Solid, w=Wipe

Attachment D
Review of Threatened or Endangered Species

United States Department of the Interior

FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5087
http://www.fws.gov/newengland

January 22, 2016

To Whom It May Concern:

This project was reviewed for the presence of federally listed or proposed, threatened or endangered species or critical habitat per instructions provided on the U.S. Fish and Wildlife Service's New England Field Office website:

http://www.fws.gov/newengland/EndangeredSpec-Consultation.htm (accessed January 2016)

Based on information currently available to us, no federally listed or proposed, threatened or endangered species or critical habitat under the jurisdiction of the U.S. Fish and Wildlife Service are known to occur in the project area(s). Preparation of a Biological Assessment or further consultation with us under section 7 of the Endangered Species Act is not required. No further Endangered Species Act coordination is necessary for a period of one year from the date of this letter, unless additional information on listed or proposed species becomes available.

Thank you for your cooperation. Please contact Maria Tur of this office at 603-223-2541 if we can be of further assistance.

Sincerely yours,

Thomas R. Chapman
Supervisor
New England Field Office

Attachment E
Review of National Register of Historic Places

ENVIRONMENTAL • GEOTECHNICAL
BUILDING SCIENCES • MATERIALS TESTING

Calart Tower
400 Reservoir Avenue, Suite 2C
Providence, RI 02907
Telephone 401-714-0306
www.atcgroupservices.com

February 13, 2017

Ms. Brona Simon, SHPO & Executive Director
Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, Massachusetts 02125

RE: National Register of Historic Places. 16 USC§ 470 et seq
Effects USEPA Remediation General Permit
Hopkinton Gas – Underground Storage Tank Upgrade
1 Grove Street, Hopkinton, MA 0174888
ATC Project No. 3010000235

VIA Email: Brona.Simon@state.ma.us
Ed.Bell@sec.state.ma.us
Michael.Steinitz@sec.state.ma.us

Dear Ms. Simon:

In accordance with the requirements of the forthcoming USEPA Remediation General Permit, ATC Group Services LLC is submitting this request for a determination by your office to ensure that a proposed underground storage tank upgrade project at the above-referenced property will not adversely affect properties listed in or eligible for listing in the National Register of Historic Places.

According to the Hopkinton Historical Society website, which has an inventory of historical properties in the town, the 1 Grove Street property is not a historical property. It is a gas station. The two structures consist of a canopy, and small service station building. I attach Google Street view photograph of the station. Two abutting properties are listed (45 Main Street, and 5 Grove Street.) Historical profiles for these properties are attached.

Project Description

1 Grove Street, Hopkinton, MA - The property is approximately 8,000 square-feet in size. The property is an existing gasoline station located near the center of Hopkinton, Massachusetts at the intersection of Massachusetts Routes 85 and 135. In February/March of 2017, the two existing single-walled underground gasoline and diesel tanks are proposed to be removed and replaced. The project may take three weeks to complete. Since groundwater may infiltrate excavation where the tanks will be placed, a Notice of Intent for a Remediation General Permit to temporarily treat and discharge groundwater is being filed with the USEPA Office in Boston, Massachusetts. We believe the scope, location, and short duration of this project will not have any long-term negative effects on the historical attributes of the nearest historical properties. We appreciate your assistance in this matter.

Attached for your review please find a topographic map indicating the project location, and conceptual plan showing the work-zone is attached.

If you have any questions or comments concerning our request, please contact the undersigned at (401) 714-0306, extension 142. I have copied Mr. Bell and Mr. Steinitz, because it is not clear who I should send this request too.

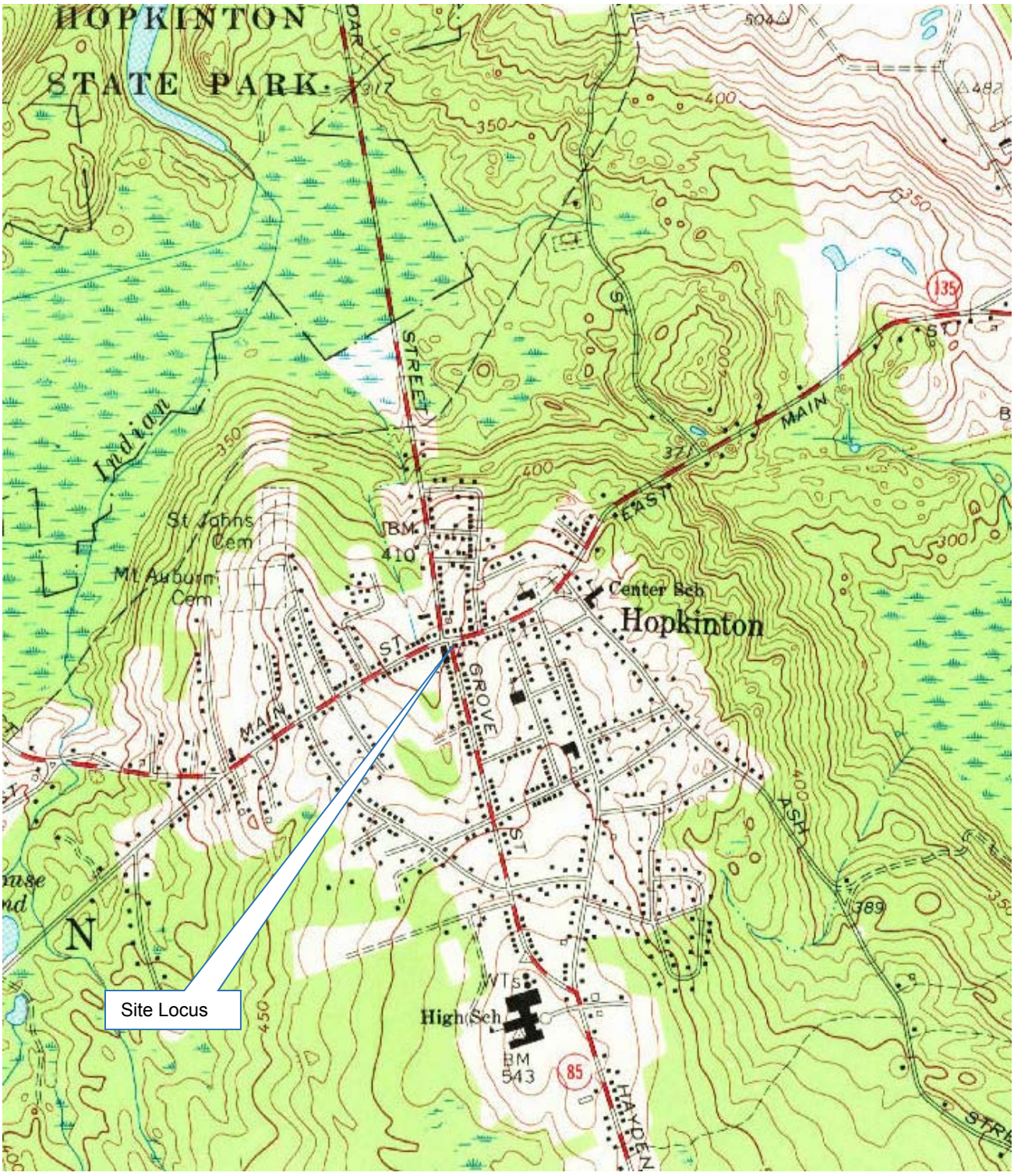
Sincerely,

Keith Sullivan, LSP #1259
Project Manager
Direct Line 401 714-0306 X142

Email: keith.sullivan@atcassociates.com

Attachments (1): locus map, work zone plan, (3) historical profiles

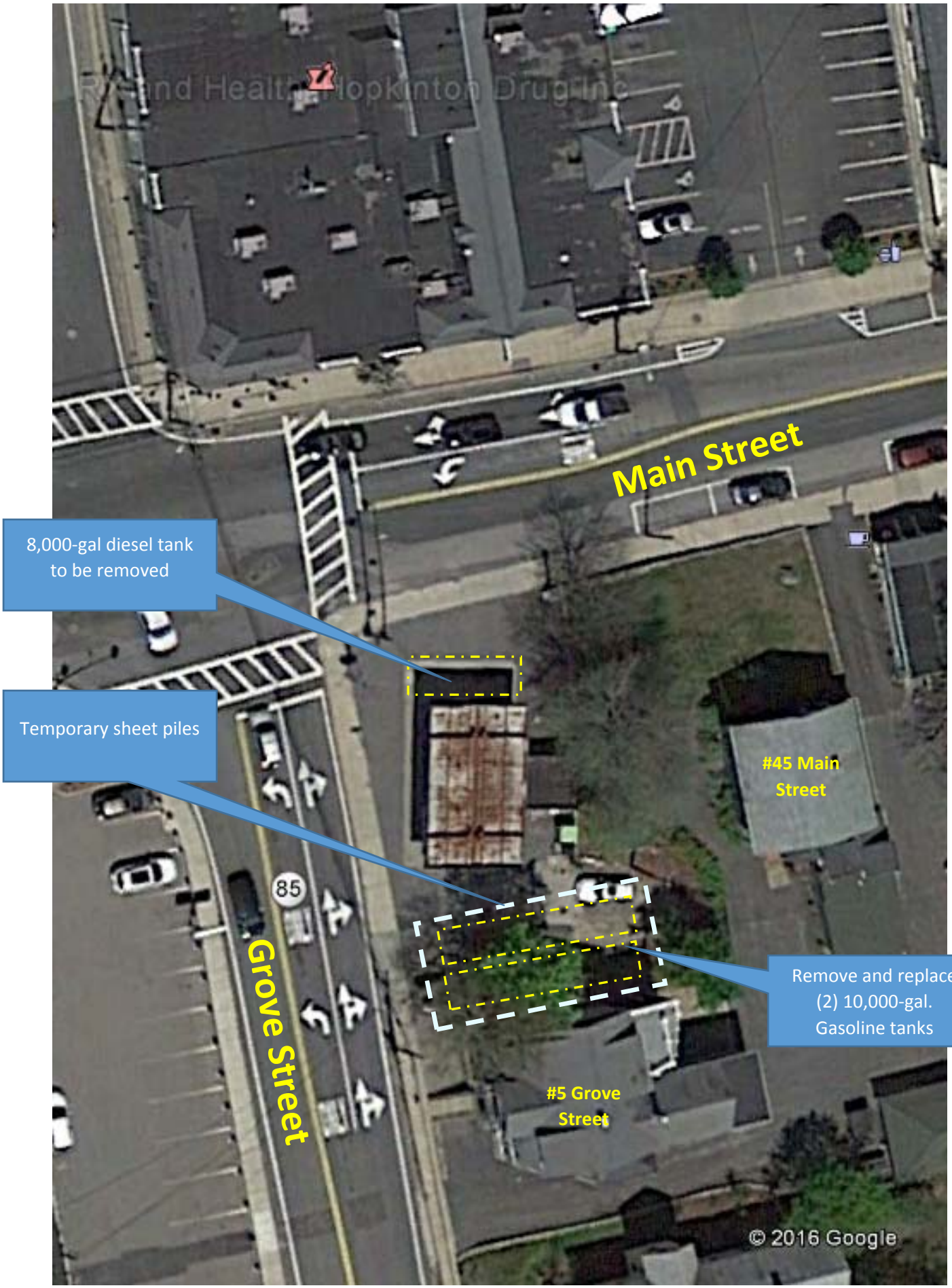
Locus Map



Site Locus Map
1 Grove Street
Hopkinton, Massachusetts

Source:
USGS 7.5 Minute
Milford, MA Quadrangle Map
(1968)

Work-Zone Map


Main Street
8,000-gal diesel tank to be removed
Temporary sheet piles
#45 Main Street
85
Grove Street
Remove and replace (2) 10,000-gal. Gasoline tanks
#5 Grove Street
© 2016 Google

Google Street View


1 Massachusetts 85, Hopkinton, Massachusetts, United States
Address is approximate
85 SOUTH
TO RTE 16
MILFORD
135
ASHLAND

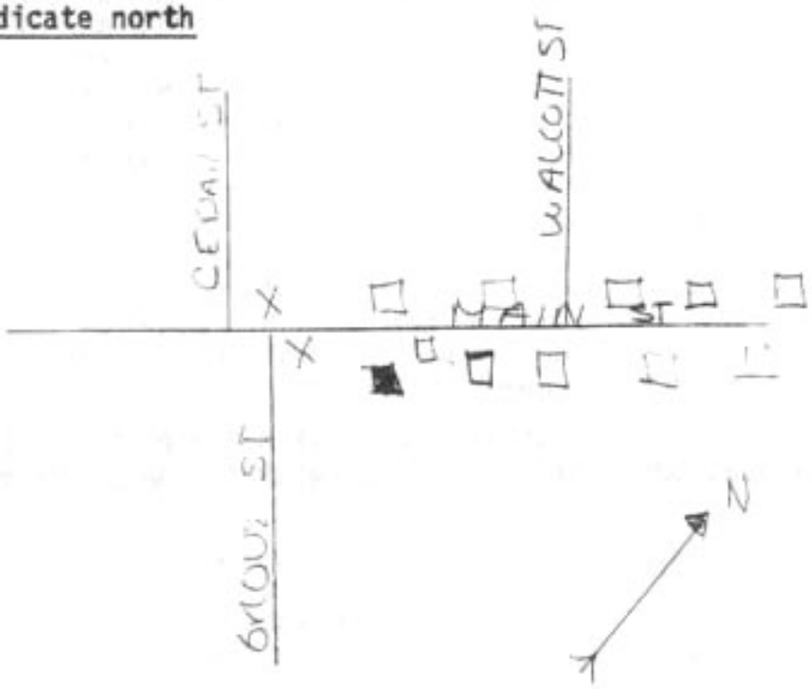
Historical Profiles

FORM B - BUILDING

AREA	FORM NO.
D	195

MASSACHUSETTS HISTORICAL COMMISSION
80 BOYLSTON STREET
BOSTON, MA 02116

Sketch Map: Draw map showing property's location in relation to nearest cross streets and/or geographical features. Indicate all buildings between inventoried property and nearest intersection(s).
Indicate north



UTM REFERENCE _____

USGS QUADRANGLE _____

SCALE _____

Town HOPKINTON

Address 45 Main Street

Historic Name Thompson (1857)
W.B. Coburn (1875)

Use: Present residential
Original residential

DESCRIPTION

Date ca. 1850

Source visual / maps

Style Greek Revival

Architect unknown

Exterior Wall Fabric clapboards

Outbuildings five-car garage, hipped roof.

Major Alterations (with dates) dormer
veranda with concrete floor

Condition good

Moved no Date n/a

Acreage .305 acres

Setting South side of Main St. near Cedar/Grove St. intersectn

commercial and civic center of two with some residential surrounds.

Recorded by Gretchen Schuler

Organization Hopkinton Hist. Comm.

Date May 1989

NATIONAL REGISTER CRITERIA STATEMENT (if applicable)

The first Thompson House is significant as part of a National Register district for Criteria:

A - its association with the development of the community as a substantial house on the main street associated with local prominent businessmen;
C - its representation of a good examples of a mid nineteenth substantial Greek Revival house in Hopkinton.

ARCHITECTURAL SIGNIFICANCE Describe important architectural features and evaluate in terms of other buildings within the community.

The four-bay gable-end Greek Revival House faces east with its main entrance on the side. Built on a granite block foundation the two and one-half story has a one and one-half and a one-story rear ell, and a full-length side porch that abuts the first rear ell. Trim that well articulates the building's structure includes wide corner pilasters with narrow pointed arched channels, heavy square molded caps, a wide frieze and rake boards, and a deeply boxed cornice. The replaced window sash are surrounded by flat architraves with a projecting, shallow peaked window cap. Although narrow new shutters have been added the boldly capped windows create an interesting rhythm on the gable-end facade. The Colonial Revival porch with turned columns shelters two entries; one center double-door entrance on the east side of the main house and one entry in the protruding gable-end part of the rear ell.

HISTORICAL SIGNIFICANCE Explain the role owners played in local or state history and how the building relates to the development of the community.

The extant substantial houses on the south side of Main Street, between Church and Grove Streets, are interestingly related and depict the growth and affluence of nineteenth century Hopkinton. Once a residential street with the finest houses owned by Hopkinton's most prominent businessmen, this part of Main Street has become the commercial and civic center of the community. The first commercial building was the small gable-end shop on the same lot as this house and may have been built at approximately the same time as this fine Greek Revival structure. Other commercial buildings replaced fine residences on the north side of Main Street and by the turn of the century the Episcopal Church, the Public Library, and the Town Hall were all within a block of the once high style residential district.

Built in circa 1850 this house was the home of Erastus Thompson, proprietor of an important boot factory located on the corner of Main and Grove Streets from 1857. Thompson who married Catharine Oakes of Boston in 1843 lived here from the time of construction until he built the pretentious Greek Revival templar front residence at #35 Main Street. This house was sold to William Burrage Coburn (b.1846 in Medway), merchant who ran a meat market in the small shop on this property. Coburn lived here by 1875.

BIBLIOGRAPHY and/or REFERENCES

Atlas: 1875 Beers, 1889 Walker
Map: 1857 Walling
See Master Bibliography

FORM B - BUILDING

AREA: E

FORM NO.: 324

MASSACHUSETTS HISTORICAL COMMISSION
80 BOYLSTON STREET
BOSTON, MA 02116

Sketch Map: Draw map showing property's location in relation to nearest cross streets and/or geographical features. Indicate all buildings between inventoried property and nearest intersection(s). Indicate north

UTM REFERENCE

USGS QUADRANGLE

SCALE

wn HOPKINTON

dress 5 Grove St.

storic Name Levingston House

e: Present residential

Original residential

CRIPTION

e ca. 1876-87

rce maps, directories, style

yle eclectic

chitect unknown

Exterior Wall Fabric synthetic siding

Outbuildings none

Major Alterations (with dates) dormers & facade bays added, 1890-94

Condition good

Moved no Date

Acreage 3,899 sq. ft.

Setting On long residential st. with 19th-C. houses of varying styles. Near corner of main commercial st. Gas station next door.

Recorded by A. Forbes

Organization for Hopkinton Hist. Comm.

Date 5/89

NATIONAL REGISTER CRITERIA STATEMENT (if applicable)

ARCHITECTURAL SIGNIFICANCE Describe important architectural features and evaluate in terms of other buildings within the community.

The main body of this house is relatively conventional in form for its late 1870's-1880's date, being a high, solid 2 1/2-story building with pedimented gable ends. It has a two-story rear wing, and a 2-story, flat-roofed rectangular bay on each side. Unusual in Hopkinton, however, is the configuration of the facade, where a pair of 2-story shed-roofed rectangular bays flank a cross-gabled, pedimented pavilion that incorporates an open porch at both first and second story. It probably represents an alteration of the early 1890's, as an 1889 map indicates only a single polygonal facade bay.

HISTORICAL SIGNIFICANCE Explain the role owners played in local or state history and how the building relates to the development of the community.

This house appears to have been built as a two-family home for Peter and Austin Levingston, (or Livingston,) one of whom was a proprietor, with Patrick Lenihan, of Levingston and Lenihan's grocery store on Main St. during the 1880's and 90's.

BIBLIOGRAPHY and/or REFERENCES

See Master Bibliography.
Maps: 1888 and 1894 Sanborn; 1889 Walker.
Town Directories: 1891, 1896.

INVENTORY FORM CONTINUATION SHEET

MASSACHUSETTS HISTORICAL COMMISSION
Office of the Secretary, Boston

Community:	Form No:
HOPKINTON	G-324
Property Name:	

Indicate each item on inventory form which is being continued below.

5 Grove St.

ARCHITECTURAL SIGNIFICANCE, cont.

The house is also unique in Hopkinton as the only one that reflects the Swiss-inspired "alpine" taste that became popular in some locales by the 1880's. European influences are evident especially in the detail of the 2-story central balcony, which has a combination of square and turned posts, brackets, and flat, cut-out patterned balustrade and "stick"-detail at the corners.

The fenestration is also unusual here, with long, paired 1-over-1-sash windows in the bays; more conventional 2-over-2-sash on the sides. The foundation is dressed granite.

Staple to Inventory form at bottom

Attachment F
Correspondence Regarding Using Hopkinton Drain As RGP Discharge Outfall

Keith Sullivan

From: Dave Daltorio <ddaltorio@hopkintonma.gov>
Sent: Thursday, February 23, 2017 10:14 AM
To: Keith Sullivan
Subject: Re: Hopkinton Gas, 1 Grove Street - Underground Storage Tank Upgrade

I don't. We tried to find where it daylights when we did tv inspection but the pipe was flooded before we hit daylight. Ground inspections never found it either. Sorry, that's all the info I definitively have.

The theory is it daylights somewhere behind Subway/Post Office and makes it way to Indian Brook/Cedar Swamp (down at the bottom of the hill on Cedar Street going towards Southborough).

On Thu, Feb 23, 2017 at 9:51 AM, Keith Sullivan <keith.sullivan@atcassociates.com> wrote:

> Dave,
>
> Do you have a rough idea where the storm drain reaches "day light"….is there a headwall, or impoundment near "A Street." Or does the concrete drain extend further down the hill?
>
> Thanks
>
> **Keith Sullivan, LSP, CHMM** | SENIOR PROJECT MANAGER | **ATC Group Services LLC**
> Office: (401) 714-0306, Extension 142 | Mobile: (401) 255-9730
>
> Calart Tower | 400 Reservoir Avenue | Suite 2C | Providence, RI 02907
>
>
>
> 
>
>
> **From:** Dave Daltorio [mailto:ddaltorio@hopkintonma.gov]
> **Sent:** Thursday, February 23, 2017 9:39 AM
> **To:** Keith Sullivan <keith.sullivan@atcassociates.com>
> **Cc:** Kevin Gottwald (kgottwald@globalcontractingservices.com) <kgottwald@globalcontractingservices.com>

Subject: Re: Hopkinton Gas, 1 Grove Street - Underground Storage Tank Upgrade

Shouldn't be an issue from a flow standpoint.

Good Luck.

On Thu, Feb 23, 2017 at 9:14 AM, Keith Sullivan <keith.sullivan@atcassociates.com> wrote:

> Likely 50 GPM….but if we only fill one frac tank, and part of a second, we may opt to truck the water to a treatment facility
>
> **Keith Sullivan, LSP, CHMM** | SENIOR PROJECT MANAGER | **ATC Group Services LLC**
> Office: (401) 714-0306, Extension 142 | Mobile: (401) 255-9730
>
> Calart Tower | 400 Reservoir Avenue | Suite 2C | Providence, RI 02907
>
>
>
> GSA Advantage! www.gsaAdvantage.gov
>
> **From:** Dave Daltorio [mailto:ddaltorio@hopkintonma.gov]
> **Sent:** Thursday, February 23, 2017 8:01 AM
> **To:** Keith Sullivan <keith.sullivan@atcassociates.com>
>
> **Subject:** Re: Hopkinton Gas, 1 Grove Street - Underground Storage Tank Upgrade
>
> I reviewed the existing storm drain system in this area. As shown on your plan, in general, yes it is accurate.

What would be the proposed flow rate of any discharge? In this area the storm drain system likely goes from CB to CB not CB to drain manhole so there could be a small chance there's a capacity issue.

Any further questions let me know.

On Wed, Feb 22, 2017 at 8:05 AM, Keith Sullivan <keith.sullivan@atcassociates.com> wrote:

> Dave,
>
> The second figure shows my crude representation of the storm drain at the4 intersection of Grove and Main Street
>
> Thanks.

Keith Sullivan, LSP, CHMM | SENIOR PROJECT MANAGER | **ATC Group Services LLC**
Office: (401) 714-0306, Extension 142 | Mobile: (401) 255-9730

Calart Tower | 400 Reservoir Avenue | Suite 2C | Providence, RI 02907

GSA Advantage! www.gsaAdvantage.gov

From: Dave Daltorio [mailto:ddaltorio@hopkintonma.gov]
Sent: Wednesday, February 22, 2017 7:58 AM
To: Keith Sullivan <keith.sullivan@atcassociates.com>
Cc: Jeffrey Barnes <jbarnes@hopkintonma.gov>; Kevin Gottwald (kgottwald@globalcontractingservices.com) <kgottwald@globalcontractingservices.com>; Don MacAdam <dmacadam@hopkintonma.gov>; samyounes1400@gmail.com; Mike Mansir <mikemansir@hopkintonma.gov>; John Westerling <jwesterling@hopkintonma.gov>; Marcus Waldron <mwaldron@hopkintonma.gov>

Subject: Re: Hopkinton Gas, 1 Grove Street - Underground Storage Tank Upgrade

I'm out of the office today but will review the plan first thing. If I can get you a copy of the proposed downtown project before then I send them over.

On Feb 22, 2017 5:45 AM, "Keith Sullivan" <keith.sullivan@atcassociates.com> wrote:

> Thanks, John.
>
> Get Outlook for Android
>
> On Tue, Feb 21, 2017 at 6:23 PM -0500, "John Westerling" <jwesterling@hopkintonma.gov<mailto:jwesterling@hopkintonma.gov>> wrote:
>
> Keith
>
> You will have more success speaking with Dave Daltorio, Town Engineer, as he has plans of the downtown corridor and they reflect current conditions. He is included on this email cc list.
>
> Thank you.
>
> Sincerely,
> John K. Westerling
> Director of Public Works
>
> Town of Hopkinton
> Department of Public Works
> 66 Fruit Street
> PO Box 209
> Hopkinton, MA 01748
>
> Email: jwesterling@hopkintonma.gov<mailto:jwesterling@hopkintonma.gov>
> Phone: 508-497-9740
> Fax: 508-497-9761
>
> On Mon, Feb 20, 2017 at 4:11 PM, Keith Sullivan <keith.sullivan@atcassociates.com<mailto:keith.sullivan@atcassociates.com>> wrote:
> Hello John,
>
> Please have a look at my mark-up of the Town Base Map. Does the dashed red-line roughly show the storm drain layout? It doesn't need to be perfect. I know that the drain discharge ultimately reaches the Indian Brook, Hopkinton Town Reservoir, and Sudbury River.

Do you have PDF drawings of the town storm drains? If not, I will slightly edit the attached map for inclusion in the EPA Notice of Intent

Keith Sullivan, LSP, CHMM | SENIOR PROJECT MANAGER | ATC Group Services LLC
Office: (401) 714-0306<tel:(401)%20714-0306>, Extension 142 | Mobile: (401) 255-9730<tel:(401)%20255-9730>

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[cid:image002.jpg@01D28B93.EB17E1F0]

From: John Westerling [mailto:jwesterling@hopkintonma.gov<mailto:jwesterling@hopkintonma.gov>]
Sent: Thursday, February 16, 2017 2:20 PM
To: Keith Sullivan <keith.sullivan@atcassociates.com<mailto:keith.sullivan@atcassociates.com>>
Cc: Don MacAdam <dmacadam@hopkintonma.gov<mailto:dmacadam@hopkintonma.gov>>; Mike Mansir <mikemansir@hopkintonma.gov<mailto:mikemansir@hopkintonma.gov>>; samyounes1400@gmail.com<mailto:samyounes1400@gmail.com>; Jeff Barnes <jbarnes@hopkintonma.gov<mailto:jbarnes@hopkintonma.gov>>; Marcus Waldron <mwaldron@hopkintonma.gov<mailto:mwaldron@hopkintonma.gov>>; Kevin Gottwald (kgottwald@globalcontractingservices.com<mailto:kgottwald@globalcontractingservices.com>) <kgottwald@globalcontractingservices.com<mailto:kgottwald@globalcontractingservices.com>>

Subject: Re: Hopkinton Gas, 1 Grove Street - Underground Storage Tank Upgrade

Keith

WIll the process that you described remove any petroleum contamination, if encountered?

Thank you.

Sincerely,
John K. Westerling
Director of Public Works

Town of Hopkinton
Department of Public Works
66 Fruit Street
PO Box 209
Hopkinton, MA 01748

Email: jwesterling@hopkintonma.gov<mailto:jwesterling@hopkintonma.gov>
Phone: 508-497-9740<tel:(508)%20497-9740>
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On Thu, Feb 16, 2017 at 12:06 PM, Keith Sullivan <keith.sullivan@atcassociates.com<mailto:keith.sullivan@atcassociates.com>> wrote:
Don,

Thanks for preparing the concise summary of our discussion.

With respect to the "quality" of the water that could potentially be discharged to the catch basin, the effluent will be "cleaner" than the snowmelt that is entering all of Hopkinton's catch basin today.

Sediment ill first settle out in two frac tanks. Then the effluent will be pumped through two bag filters (50 microns and thereafter I believe 5 microns). After sediment filtration, the effluent will be polished with 2,000-lbs of carbon.

The water will essentially be "drinkable" before it is discharged to the catch basin. The treatment will be summarized in the Remediation General Permit – Notice of Intent(NOI). When the NOI becomes available, I will email a copy to you.

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From: Don MacAdam [mailto:dmacadam@hopkintonma.gov<mailto:dmacadam@hopkintonma.gov>]
Sent: Thursday, February 16, 2017 11:04 AM
To: Mike Mansir <mikemansir@hopkintonma.gov<mailto:mikemansir@hopkintonma.gov>>; Keith Sullivan <keith.sullivan@atcassociates.com<mailto:keith.sullivan@atcassociates.com>>
Cc: samyounes1400@gmail.com<mailto:samyounes1400@gmail.com>; John Westerling <jwesterling@hopkintonma.gov<mailto:jwesterling@hopkintonma.gov>>; Jeff Barnes <jbarnes@hopkintonma.gov<mailto:jbarnes@hopkintonma.gov>>; Marcus Waldron <mwaldron@hopkintonma.gov<mailto:mwaldron@hopkintonma.gov>>
Subject: Re: Hopkinton Gas, 1 Grove Street - Underground Storage Tank Upgrade

Hi Keith and Mike,

I'm following up on the discussion that I had with Keith at Town Hall yesterday. Keith was going to reach out to the Hopkinton DPW to notify the DPW about the potential for de-watering from the work area into an existing street catch basin.

Keith noted initial indications are that groundwater issues may not be problematic with installing the new underground storage tanks at the gas station. Keith noted if manageable amounts of de-watering needs to

occur that the preferred method would be to truck any contaminated water off-site.

Keith noted the un-preferred option of treating contaminated water on-site and discharging the treated water into a catch basin via a USEPA and MassDEP issued permit would need to be an immediate option if the site could not be managed by trucking the contaminated water off-site.

Keith wanted to know if the catch basin at Grove & Main Streets were Town or State infrastructure, and if Town, whether the DPW had any specific requirements?

I had a phone conversation yesterday with John Westerling, DPW Director, and John informed me that the catch basins are Town infrastructures. John noted that only clean water could be discharged into Town infrastructure.

Keith and I discussed the characteristics of the existing outfall for the downtown stormwater management system which they un-preferably may need to discharge into. The collected downtown stormwater daylights into defined channels which flow North directly into Indian Brook, which flows directly into the Hopkinton State Park Reservoir, which flows directly into the Sudbury River.

I told Keith that I believe the Hopkinton Conservation Commission would insist that if any water needed to be discharged into a catch basin that it be fully permitted and treated to both USEPA and MasDEP Standards.

Sincerely,
Don

On Wed, Feb 15, 2017 at 12:45 PM, Mike Mansir <mikemansir@hopkintonma.gov<mailto:mikemansir@hopkintonma.gov>> wrote:
Hi Keith,

I am forwarding your email to our Conservation agent Dan MacAdam to better help answer question on their rules & regs regarding your proposed work.

Thank you,

On Mon, Feb 13, 2017 at 1:37 PM, Keith Sullivan <keith.sullivan@atcassociates.com<mailto:keith.sullivan@atcassociates.com>> wrote:
Hello Mike,

Hopkinton Gas is proposing to upgrade their gasoline and diesel USTs. In doing so, they will apply to the USEPA and MassDEP to temporarily discharge treated groundwater to the catch basin located in the road near the intersection of Main and Grove Street.

Does the Town of Hopkinton have any specific requirements to discharge treated effluent to the storm drain system?

Thank you for your assistance.

Keith Sullivan

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Don MacAdam, M.S.
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David T. Daltorio, P.E.
Town of Hopkinton

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