February 18, 2022

Ms. Shauna Little
U.S. Environmental Protection Agency
Office of Ecosystem Protection
EPA/OEP RGP Applications Coordinator
5 Post Office Square - Suite 100 (OEP06-01)
Boston, MA 02109-3912

Re: Notice of Intent for Application of a Remediation General Permit
Cumberland Farms, Inc. Property #MA8691
60 West Main St
Norton, MA 02766

Dear Ms. Little:

Kleinfelder, on behalf of Cumberland Farms, Inc. (CFI), has prepared the enclosed Notice of Intent (NOI), included as Attachment A, for application of Remediation General Permit (RGP) for upcoming activities at Cumberland Farms, Inc. Property #MA8691, located at 60 West Main Street Norton, Massachusetts. This NOI is for the discharge anticipated to be generated during temporary groundwater dewatering activities associated with the excavation required for the foundation of a 4,384 square foot convenience store, installation of a fuel dispenser area with a canopy structure, and installation of two 20,000 gallon compartmental underground storage tanks (USTs) containing either gasoline and/or diesel fuel. Refer to Attachment B for Figure 1 for a Subject Property Location Map, Figure 2 for a Site Plan and Proposed Construction Plan, and Figure 3 for a NOI Site Plan with proposed treatment system and discharge locations.

Groundwater Characterization

Depth to water across the site has been gauged to be approximately 3 to 7 feet below ground surface. In preparation for groundwater dewatering activities, representative groundwater samples were collected on October 11, 2018. The sample was submitted to Eurofins Spectrum Analytical Laboratory of Agawam, Massachusetts for analysis of Volatile Organic Compounds (VOCs) via EPA method 8260, Semi-volatile Organic Compounds (SVOCs) via EPA method 8270, Metals (total and dissolved) via EPA methods 6010, Mercury (Hg) via EPA methods 7470/7471, Total Petroleum Hydrocarbons (TPH) via EPA Method 8100, Volatile Petroleum Hydrocarbons (VPH) via MassDEP methodology and Extractable Petroleum Hydrocarbons (EPH) via MassDEP methodology. Samples were also analyzed for total suspended solids, flashpoint, pH and reactivity.

Based on the groundwater analytical results derived from the October 2018 groundwater sampling event, total suspended solids were detected above applicable Technology Based Effluent Limitations (TBEL) and/or Water Quality Based Effluent Limitations (WQBEL). Note that concentrations of dissolved metals were either below applicable effluent limitations and/or laboratory detection limits.

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Concentrations of carbon tetrachloride and pentachlorophenol were below laboratory reporting limits, however, the laboratory reporting limits exceeded applicable TBELs and/or WQBELs.

All appropriate groundwater analytical methodologies were implemented in conformance with Appendix VII of the RGP. Groundwater analytical results from the October 2018 groundwater sampling event are included as Attachment C.

Receiving Water Characterization

Treated effluent will be discharged to a storm water catch basin located on West Main Street immediately southwest of the property and will discharge to an unnamed wetland located near 162 West Main Street. This wetland eventually flows to the southwest to Barrowsville Pond which then discharges into the Wading River.

The water exiting Barrowsville Pond into the Wading River was sampled on January 26, 2022. The surface water sample was submitted to Eurofins Environmental Testing New England of North Kingstown, Rhode Island for analysis of total metals via EPA Method 200.7, 200.8, and 245.1, total cyanide via EPA Method 335.4, ammonia via EPA Method 350.1, chloride via EPA Method 300.0, residual chloride via EPA method 4500 Cl G, total suspended solids via SM 2540D, hardness via SM 2340B, hexavalent chromium via 3500 Cr B, and pH via D1293-99B-. The temperature of the Wading River (33.1 degrees Fahrenheit) was measured as part of the January 26, 2022 sampling activities.

The Barrowsville Pond receiving water eventually drains to Wading River, waterbody identification MA62-61, which is classified as a Class B waterbody within the state of Massachusetts. Receiving water analytical results are included as Attachment D and see Figure 4 for the receiving water sampling location.

Proposed Treatment System

A design flow treatment system discharge rate of 150 gallons per minute (gpm) was used to evaluate the applicable RGP discharge standards. Extracted water from the excavation activities will be initially pumped into one 20,000-gallon fractionation tank.

Following settling, extracted groundwater will be treated by passage through (at minimum) 50-micron particle filters. Granular activated carbon vessels (up to 2) will be available as needed. Flow will be measured using an in-line flowmeter and totalizer prior to the discharge into stormwater drain located on West Main Street, Norton. This catch basin is located immediately southwest of the property as indicated on Figure 3.

Kleinfelder anticipates that the dewatering system will operate from approximately mid-March 2022 through May 2022. A Work Plan for the groundwater extraction and treatment systems satisfying the requirements of Section 2.5 of the RGP will be available at the site prior to initiating dewatering activities. See Figure 5 for the Proposed Treatment System Schematic.

The proposed treatment system has been designed to reduce contaminants of concern below the applicable effluent limits. Effluent compliance monitoring will be conducted in compliance with the RGP. Additionally, the flow rate, pH, and temperature of the effluent will be monitored in the field and recorded.

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Notice of Intent

Preparation of this NOI has included a review of the literature pertaining to Areas of Critical Environmental Concern (ACECs), the Endangered Species Act, and the National Historic Preservation Act:

- Review of the Massachusetts Geographic Information Systems MassDEP Priority Resource Map (Figure 6) shows the site is not within an ACEC.
- An "informal consultation" with the Fish and Wildlife Service resulted in a consistency letter stating that, although one threatened and one candidate species may exist within the project site area (Northern Long-eared Bat (*Myotis septentrionalis)*, threatened, and Monarch Butterfly (*Danaus plexippus)*, candidate), groundwater discharge into Wading River is "not likely" to result in unauthorized take of the threatened species. Furthermore, no critical habitats were found within the project defined area. The Fish and Wildlife Service consistency letter and official list of threatened and endangered species has been provided as Attachment E.
- According to the National Park Service's National Register of Historic Places and the Massachusetts Cultural Resource Information System (MACRIS), the 60 West Main Street property located in Norton, Massachusetts is not located in a Historic District. Based on historical information reviewed including aerial photographs, Sanborn maps and topographic maps, provided in Attachment F, the 60 West Main Street property historically contained a building utilized as an "American Legion" in 1944, which was demolished by 1975. The property was developed with a bank building in 1975 until it was demolished in 2014. Based on available records and visual observation, there are no aboveground historic building remains located within the 60 West Main Street property. Research related to the site's historical and current uses can be found in Attachment F.

We appreciate your assistance in processing this Notice of Intent. Should you have any questions regarding this correspondence, please do not hesitate to contact the undersigned at (508) 370-8256.

Sincerely,
KLEINFELDER

Patrick Monahan
Staff Professional

Moira S. Johnson
Senior Project Manager

cc: Ms. Elise Farrington, Cumberland Farms, Inc. (file)
John Thomas, Chairman, Norton Conservation Commission (electronic)
Cathy Vakalopoulos, Massachusetts Department of Environmental Protection, Surface Water Discharge Permit Program, One Winter Street, 5th Floor, Boston, MA 02108

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List of Attachments:

Attachment A – RGP NOI Form

Attachment B – Figures

1 – Subject Property Location Map
2 – Site Plan and Proposed Construction Plan
3 – NOI Site Plan
4 – Sample Location Map
5 – Proposed Treatment System Schematic
6 – Priority Resource Map

Attachment C – Groundwater Laboratory Analytical Data

Attachment D – Receiving Water Laboratory Analytical Data

Attachment E – Fish and Wildlife Service Consistency Letter and Official List of Threatened and Endangered Species

Attachment F – Historic Documentation

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ATTACHMENT A – RGP NOI Form

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

A. General site information:

<table>
<tr><td rowspan="2">1. Name of site:
Cumberland Farms proposed Convenience store and Fuel station</td><td colspan="3">Site address: 60 West Main Street
Street:</td></tr>
<tr><td>City: Norton</td><td>State: MA</td><td>Zip: 02766</td></tr>
<tr><td rowspan="4">2. Site owner
Cumberland Farms, Inc.

Owner is (check one): ☐ Federal ☐ State/Tribal ■ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: Elise Farrington</td></tr>
<tr><td colspan="2">Telephone: 508-270-3103</td><td>Email: Elise.Farrington@eg-america.com</td></tr>
<tr><td colspan="3">Mailing address: 165 Flanders Road
Street:</td></tr>
<tr><td>City: Westborough</td><td>State: MA</td><td>Zip: 01581</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
Same as Above</td><td colspan="3">Contact Person: Elise Farrington</td></tr>
<tr><td colspan="2">Telephone: 508-270-3103</td><td>Email: Elise.Farrington@eg-america.com</td></tr>
<tr><td colspan="3">Mailing address:
Street: 165 Flanders Road</td></tr>
<tr><td>City: Westborough</td><td>State: MA</td><td>Zip: 01581</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="3">5. Other regulatory program(s) that apply to the site (check all that apply):
☐ MA Chapter 21e; list RTN(s):
☐ 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):
Wading River	MA62-61	2

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: unnamed wetland that storm water flows into

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. listed as Category 2, no TMDLs required

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.	2.2 cfs (USGS report 84-4283)
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.	72

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:

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 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	☐ Contaminated surface water 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	☐ The receiving water ☐ A surface water other than the receiving water; if so, indicate waterbody:	☐ Potable water; if so, indicate municipality or origin: ☐ Other; if so, specify:

2. Source water contaminants: Total Arsenic, Total Barium, Total Cadmium, Total Chromium, Total Lead	
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): Wetland Outfall	Outfall location(s): (Latitude, Longitude) 41° 57' 32.364" N 71° 12' 20.556" W
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ■ Indirect discharge, if so, specify: Discharge to storm water catch basin that drains to wetland appropriately 0.8 miles Southwest of site ■ 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: Mass DOT permit in progress 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): 3/14/2022 through 5/31/2022 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	✓		0					Report mg/L	---
Chloride	✓		0					Report µg/l	---
Total Residual Chlorine	✓		0					0.2 mg/L	
Total Suspended Solids		✓	4	SM2540D	2,5		196	30 mg/L	---
Antimony	✓		0					206 µg/L	
Arsenic		✓	4	SW846	0.4		4.2	104 µg/L	
Cadmium		✓	4	SW846	0.25		0.4	10.2 µg/L	
Chromium III		✓	4	SW846	0.5		0.56	323 µg/L	
Chromium VI	✓		0					323 µg/L	
Copper	✓		0					242 µg/L	
Iron	✓		0					5,000 µg/L	
Lead		✓	4	SW846	0.75		5.9	160 µg/L	
Mercury	✓		4	EPA	.02		<.02	0.739 µg/L	
Nickel	✓		0					1,450 µg/L	
Selenium	✓		4	SW846	1.5		<1.5	235.8 µg/L	
Silver	✓		4	SW846	0.5		<0.5	35.1 µg/L	
Zinc	✓		0					420 µg/L	
Cyanide	✓		0					178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX	✓		0					100 µg/L	---
Benzene	✓		4	MA VPH	1.0		<1.0	5.0 µg/L	---
1,4 Dioxane	✓		0					200 µg/L	---
Acetone	✓		4	SW8260C	25		<25	7.97 mg/L	---
Phenol	✓		4	SW846	5.38		<5.38	1,080 µg/L	

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	✓		4	SW8260C	5.0		<5.0	4.4 µg/L	
1,2 Dichlorobenzene	✓		4	SW8260C	1.0		<1.0	600 µg/L	---
1,3 Dichlorobenzene	✓		4	SW8260C	1.0		<1.0	320 µg/L	---
1,4 Dichlorobenzene	✓		4	SW8260C	1.0		<1.0	5.0 µg/L	---
Total dichlorobenzene	✓		0					763 µg/L in NH	---
1,1 Dichloroethane	✓		4	SW8260C	1.0		<1.0	70 µg/L	---
1,2 Dichloroethane	✓		4	SW8260C	0.6		<0.6	5.0 µg/L	---
1,1 Dichloroethylene	✓		0					3.2 µg/L	---
Ethylene Dibromide	✓		0					0.05 µg/L	---
Methylene Chloride	✓		4	SW8260C	1.0		<1.0	4.6 µg/L	---
1,1,1 Trichloroethane	✓		4	SW8260C	1.0		<1.0	200 µg/L	---
1,1,2 Trichloroethane	✓		4	SW8260C	1.0		<1.0	5.0 µg/L	---
Trichloroethylene	✓		0					5.0 µg/L	---
Tetrachloroethylene	✓		0					5.0 µg/L	
cis-1,2 Dichloroethylene	✓		0					70 µg/L	---
Vinyl Chloride	✓		4	SW8260C	1.0		<1.0	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✓		0					190 µg/L	
Diethylhexyl phthalate	✓		0					101 µg/L	
Total Group I PAHs	✓		0					1.0 µg/L	---
Benzo(a)anthracene	✓		4	MADEP	5.62	<5.62		As Total PAHs	
Benzo(a)pyrene	✓		4	MADEP	5.62	<5.62			
Benzo(b)fluoranthene	✓		4	MADEP	5.62	<5.62			
Benzo(k)fluoranthene	✓		4	MADEP	5.62	<5.62			
Chrysene	✓		4	MADEP	5.62	<5.62			
Dibenzo(a,h)anthracene	✓		4	MADEP	5.62	<5.62			
Indeno(1,2,3-cd)pyrene	✓		4	MADEP	5.62	<5.62			

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	✓		0					100 µg/L	---
Naphthalene	✓			MA VPH	5.0		<5.0	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✓		0					0.000064 µg/L	---
Pentachlorophenol	✓		1	SW846	21.5		<21.5	1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons	✓		1	SW846	0.2		<0.2	5.0 mg/L	---
Ethanol								Report mg/L	---
Methyl-tert-Butyl Ether	✓		4	MAVPH	1.0		<1.0	70 µg/L	
tert-Butyl Alcohol	✓		0					120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✓		0					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		✓	1	ASTM D			4.63		
Flashpoint		✓	1	SW846			>150 Degrees F		

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:

GAC is most likely not needed to treat groundwater from site but may be added as precaution

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

Influent groundwater will first enter up to two 21,000 gallon fractionation tanks (in series of two if needed). Groundwater will then flow through a series of (at a minimum) 50 micron size particle bag filters. Treated groundwater will be discharged at the designated discharge location (storm water catch basin). The volume of water being discharged will be tracked using a flow totalizer. GAC units will be installed if needed.

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: pump Is use of a flow meter feasible? (check one): ☐ Yes ☐ No, if so, provide justification:	150
Provide the proposed maximum effluent flow in gpm.	150
Provide the average effluent flow in gpm.	50
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:

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.

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:	I certify that 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: Elise J. Farrington	Date: February 16, 2022
Print Name and Title:	Elise Farrington, Environmental Project Manager, EG America

ATTACHMENT B – Figures

SOURCE :
USGS 7.5' TOPOGRPAHIC MAP, NORTON
MASSACHUSETTS QUADRANGLE LOCATON

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PROJECT NO.	MA8691
DRAWN:	OCTOBER 2018
DRAWN BY:	CTH
CHECKED BY:	
FILE NAME:	MA8691_LOCUS.mxd

SUBJECT PROPERTY LOCATION MAP

CUMBERLAND FARMS #MA8691
60 WEST MAIN STREET
NORTON, MASSACHUSETTS

FIGURE

1

– ZONING DATA TABLE –

PROJECT DATA		
TOTAL SITE AREA	1.4± ACRES	
BUILDING FOOTPRINT	4,384 S.F. CUMBERLAND FARMS	
TOTAL PARKING REQUIRED	1 SPACE/100 S.F. OF FLOOR AREA OPEN TO CUSTOMERS, VISITORS, AND THE PUBLIC OR USED FOR SALES OR CUSTOMER SERVICE	
	1,846 GFA/100 S.F. GFA = 19 SPACES	
TOTAL PARKING PROVIDED	21	
LAND INFORMATION		
ASSESSORS MAP	22	
BLOCK/LOT NUMBER	LOT 157	
ZONING INFORMATION		
ZONING DISTRICT	VILLAGE COMMERCIAL & WRPD Z3	
MIN. LOT AREA	REQUIRED	PROVIDED
	18,000 S.F.	62,672± S.F.
MIN. FRONTAGE	REQUIRED	PROVIDED
	120 FT	346.33 FT
BUILDING HEIGHT LIMIT	REQUIRED	PROVIDED
	3 STORIES OR 45 FT	32.83 FT
MAX. LOT COVERAGE	REQUIRED	PROVIDED
	50% (STRUCTURE)	6.9% (STRUCTURE)
STRUCTURE SETBACKS	REQUIRED	PROVIDED
FRONT YARD	10 FT	10.0 FT
SIDE YARD	10 FT	26.4 FT
REAR YARD	20 FT	50.3 FT
LANDSCAPING/OPEN SPACE	N/A	N/A

WHERE COMMERCIAL PROPERTIES ADJOIN RESIDENTIAL PROPERTIES REGARDLESS OF ZONING DISTRICT, A BUFFER OF 20 FEET SHALL BE RESERVED AND SCREENING ADEQUATE FOR THE SITUATION AND CHARACTERISTICS OF THE USE SHALL BE PROVIDED IN THE FORM OF THICK PLANTING, WALLS OR EARTHEN BERMS TO BE AT LEAST 4 FEET HIGH OR HIGHER IF PRESCRIBED. SUCH BUFFER STRIP SHALL BE LANDSCAPED AND PLANTED WITH GRASS, SHRUBS, TREES, OR OTHER PLANTS WHICH MAY PROVIDE A VISUAL SCREEN, AND MAY CONTAIN FENCES, ORNAMENTAL AND ACOUSTIC WALLS, DRIVEWAYS, AND WALKS, BUT NO PART OF ANY BUILDING, STRUCTURE, OR PAVED SPACE INTENDED OR USED AS A PARKING AREA SHALL BE LOCATED WITHIN SUCH BUFFER STRIP

LANDSCAPE BUFFER STRIPS SHALL BE PROVIDED SEPARATING ALL BUILDINGS, PARKING AREAS, VEHICULAR CIRCULATION FACILITIES OR SIMILAR IMPROVEMENTS FROM THE RIGHT-OF-WAY LINE OF ANY PUBLIC STREET. THE DEPTH OF SUCH BUFFER STRIPS SHALL BE ONE-THIRD OF THE DISTANCE BETWEEN THE STREET RIGHT-OF-WAY AND ANY BUILDING LINE BUT SHALL NOT BE LESS THAN TEN FEET IN DEPTH AND NEED NOT EXCEED FIFTY FEET IN DEPTH.

DOT INFORMATION	
CURB CUT PERMIT	REQUIRED
MAJOR ROAD JURISDICTION	WEST MAIN STREET (ROUTE 123) – STATE HIGHWAY LAYOUT
PROJECT NOTES	

FLOOD NOTE:
BY GRAPHIC PLOTTING ONLY, THE PROPERTY DEPICTED ON THIS PLAN FALLS IN ZONE X, AS SHOWN ON THE FLOOD INSURANCE RATE MAP NUMBER: 25005C0129G, EFFECTIVE DATE: JULY 16, 2015.

CURBING:

VGC — VERTICAL GRANITE CURB = 449 L.F.

SGC — SLOPED GRANITE CURB = 237 L.F.

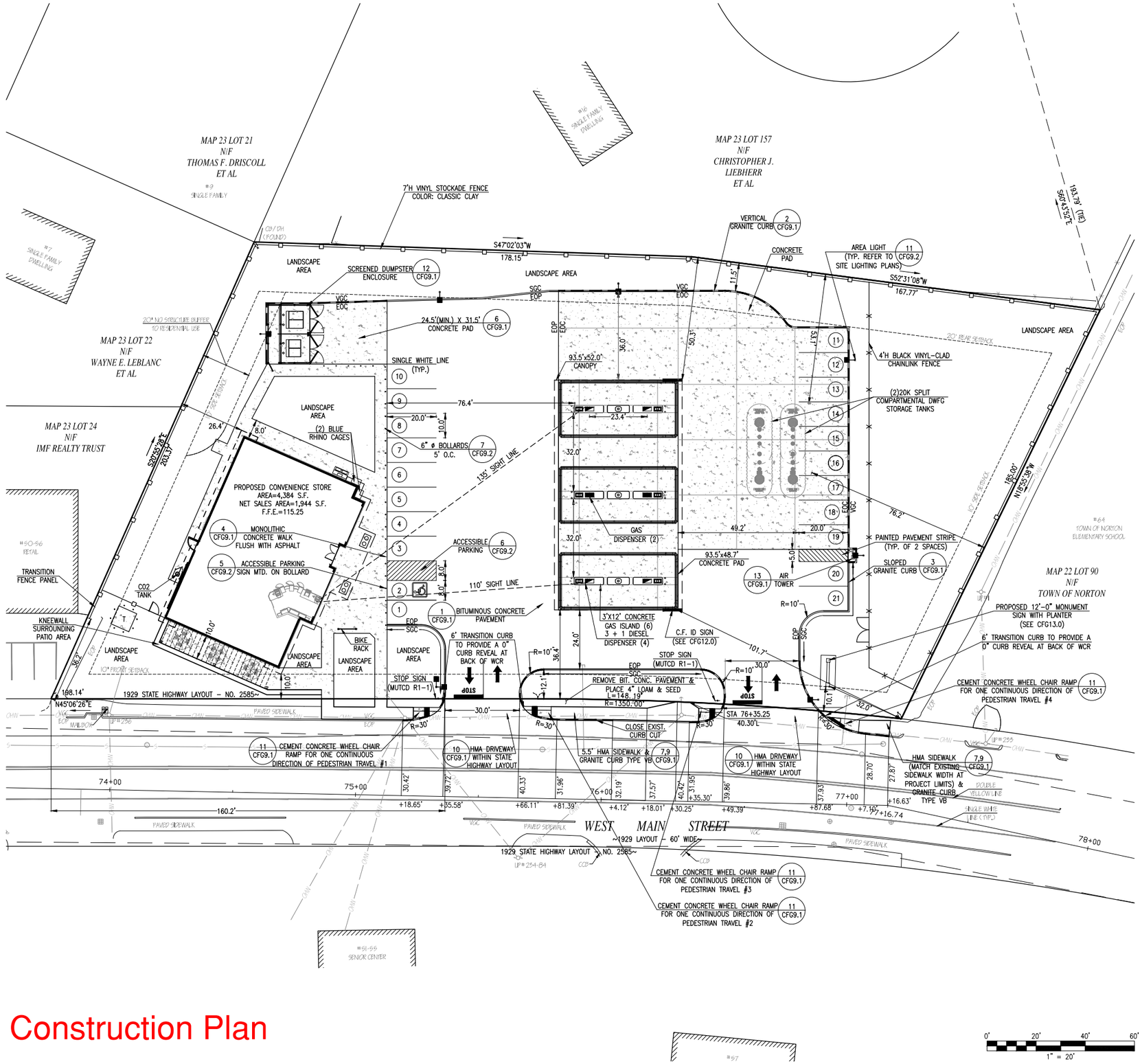

Figure 2
Site Plan and Proposed Construction Plan

REVISIONS

1	101421	CONSTRUCTION SET

COMMONWEALTH OF MASSACHUSETTS
CHRISTIAN ALBERT FARLAND
No. 47544
CIVIL
REGISTERED PROFESSIONAL ENGINEER

FARLAND CORP.
www.FarlandCorp.com
401 COUNTY STREET
NEW BEDFORD, MA 02740
P.508.717.3479
OFFICES IN:
•TAUNTON
•MARLBOROUGH
•WARWICK, RI

DRAWN BY: JKM
DESIGNED BY: CAF
CHECKED BY: CAF

SITE PLAN
60 WEST MAIN STREET
ASSESSORS MAP 22 LOT 157
NORTON, MASSACHUSETTS

PREPARED FOR: T.M. CROWLEY & ASSOCIATES
14 BREAKNECK HILL ROAD, SUITE 101
LINCOLN, RI 02865

AUGUST 27, 2021
SCALE: 1"= 20'
JOB NO. 18-231
LATEST REVISION: 101421

SITE PLAN
CFG04.0

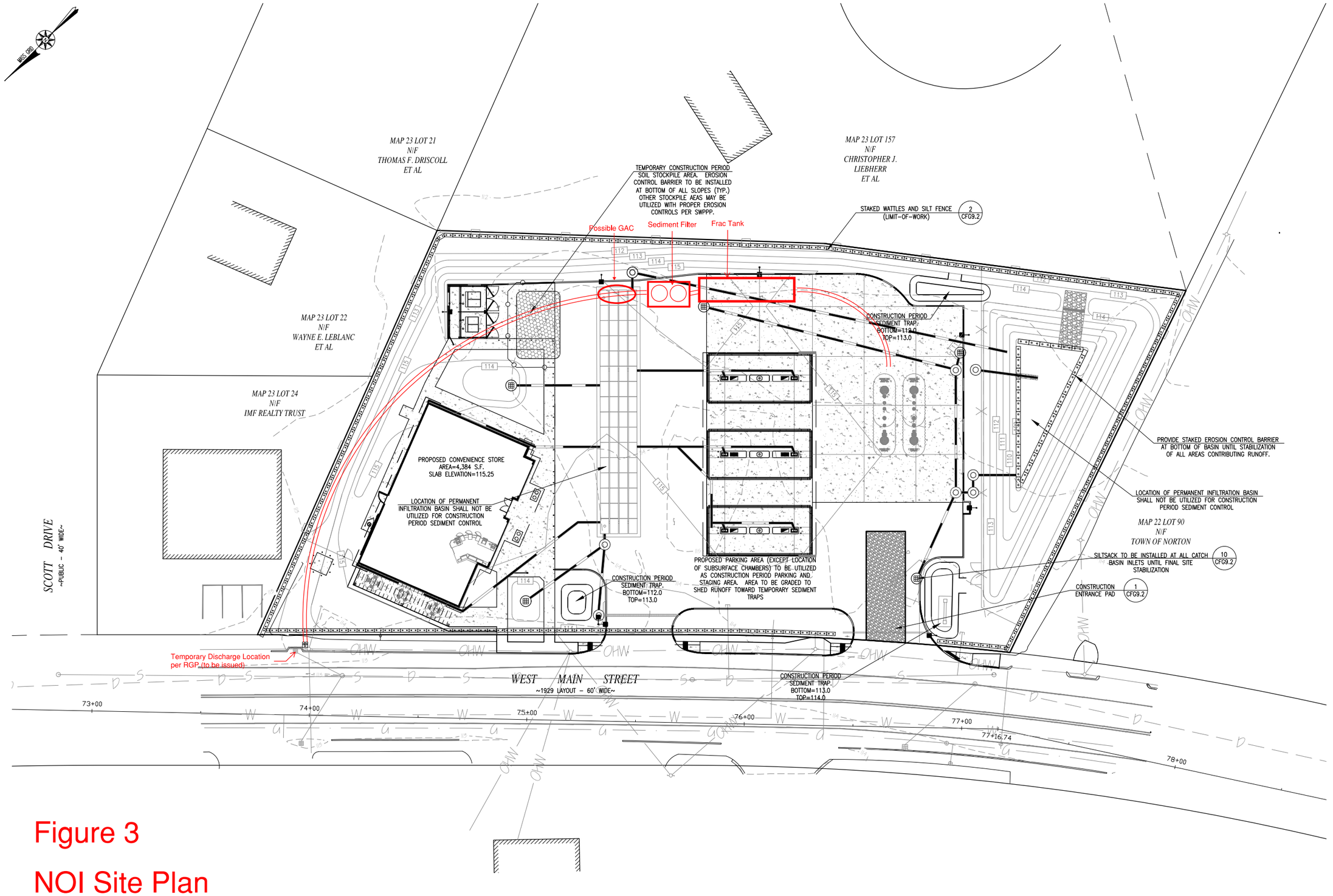

Figure 3

NOI Site Plan

REVISIONS

1	101421	CONSTRUCTION SET

COMMONWEALTH OF MASSACHUSETTS
CHRISTIAN ALBERT FARLAND
No. 47544
CIVIL
REGISTERED PROFESSIONAL ENGINEER

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DRAWN BY: JKM
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CHECKED BY: CAF

SITE PLAN
60 WEST MAIN STREET
ASSESSORS MAP 22 LOT 157
NORTON, MASSACHUSETTS

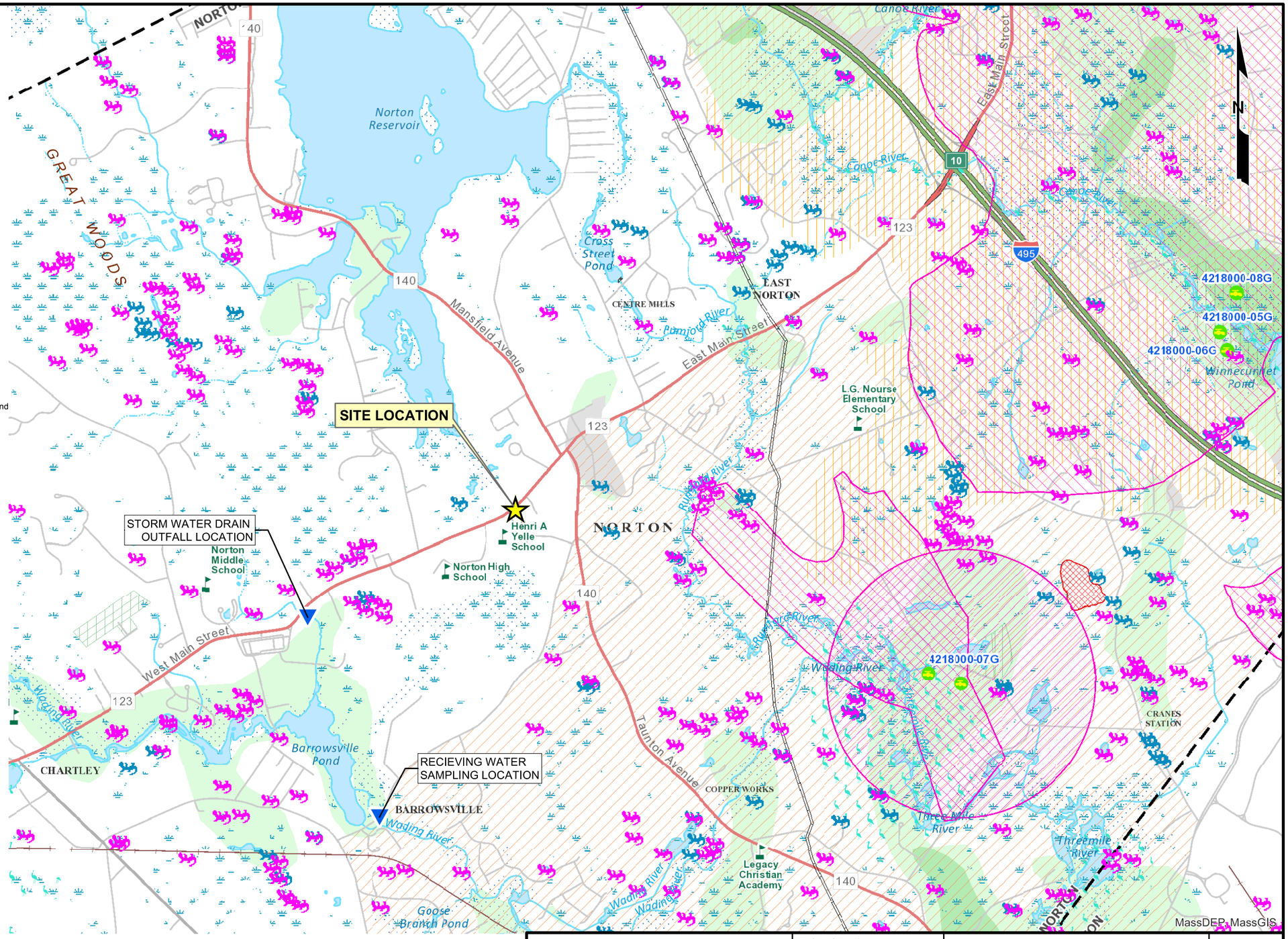
PREPARED FOR: T.M. CROWLEY & ASSOCIATES
14 BREAKNECK HILL ROAD, SUITE 101
LINCOLN, RI 02865

AUGUST 27, 2021
SCALE: 1"= 20'
JOB NO. 18-231
LATEST REVISION: 101421

EROSION CONTROL PLAN
CFG06.0

LEGEND

- Site Location
- Sampling Location
- NHESP Potential Vernal Pool
- NHESP Certified Vernal Pool
- PWS Community Groundwater Source
- PWS Surface Water Intake
- PWS Emergency Surface Water Intake
- PWS Non-Community Groundwater Source
- School
- Hospital
- Prison
- Airport Landing Strip
- Pipeline
- Powerline
- Ski Lift
- SWP Watersheds
- Major Basin Divide
- Interim Wellhead Protection Area (IWPA) Boundary - Remove From Legend
- Approved Wellhead Protection Area (Zone II) Boundary - Remove From Legend
- MA Town Boundary; MA Interstate Boundary
- DEP Region Boundary
- County Boundaries
- NHESP Estimated Habitats of Rare Wildlife
- Interim Wellhead Protection Area (IWPA)
- Approved Wellhead Protection Area (Zone II)
- Surface Water Protection Area (Zone A)
- Active Rail Lines
- Highway Exit Locations
- Limited Access Highway
- Multi-lane Hwy, not limited access
- Other Numbered Highway
- Major Road, Collector
- Minor Road, Arterial
- Ramp
- Tunnel
- Tunnel (Limited Access Hwy)
- Tunnel (Multi-lane Hwy)
- Tunnel (Other Numbered Hwy)
- Solid Waste Landfill
- Areas of Critical Environmental Concern (ACEC)
- Perennial Stream; Shoreline
- Intermittent Stream
- Intermittent Shoreline
- Manmade Shoreline
- Ditch/Canal
- Aqueduct
- Dam
- Channel in Water
- Fresh Water Wetlands
- Cranberry Bog
- Salt Water Wetlands
- Pond, Lake or Ocean
- Reservoir
- Tidal Flat
- Inundated Area
- FEMA 100-Year Floodplain
- Protected Open Space
- Non-Potential Drinking Water Source Area: High Yield
- Non-Potential Drinking Water Source Area: Medium Yield
- Potentially Productive High Yield Aquifer
- Potentially Productive Medium Yield Aquifer
- Cape Cod/Islands Potentially Productive Medium Yield Aquifer
- EPA Designated Sole Source Aquifers



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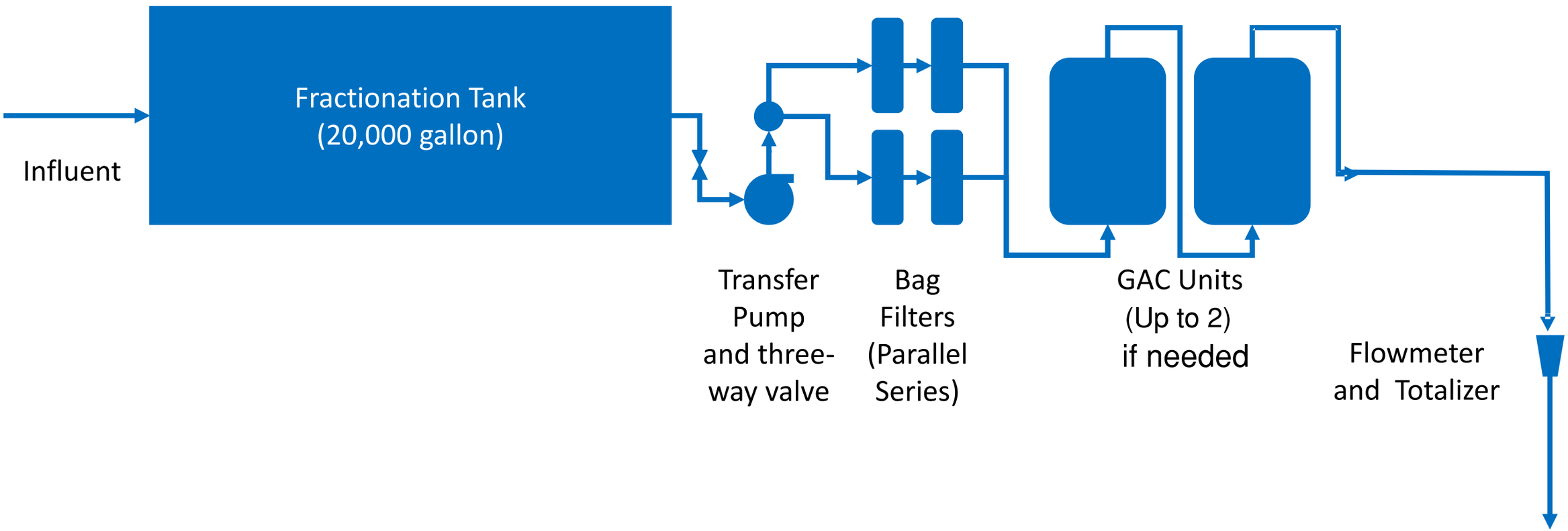
PROJECT NO.	MA8691
DRAWN:	2/4/2022
DRAWN BY:	CTH
CHECKED BY:	---
FILE NAME:	MA8691_SAM.mxd

SAMPLE LOCATION MAP

CUMBERLAND FARMS, INC. #MA8691
60 WEST MAIN STREET
NORTON, MASSACHUSETTS

FIGURE
4

Figure 5
Proposed Treatment System Schematic



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LEGEND

- Site Location
- NHESP Potential Vernal Pool
- NHESP Certified Vernal Pool
- PWS Community Groundwater Source
- PWS Surface Water Intake
- PWS Emergency Surface Water Intake
- PWS Non-Community Groundwater Source
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- SWP Watersheds
- Major Basin Divide
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- County Boundaries
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- Tidal Flat
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- FEMA 100-Year Floodplain
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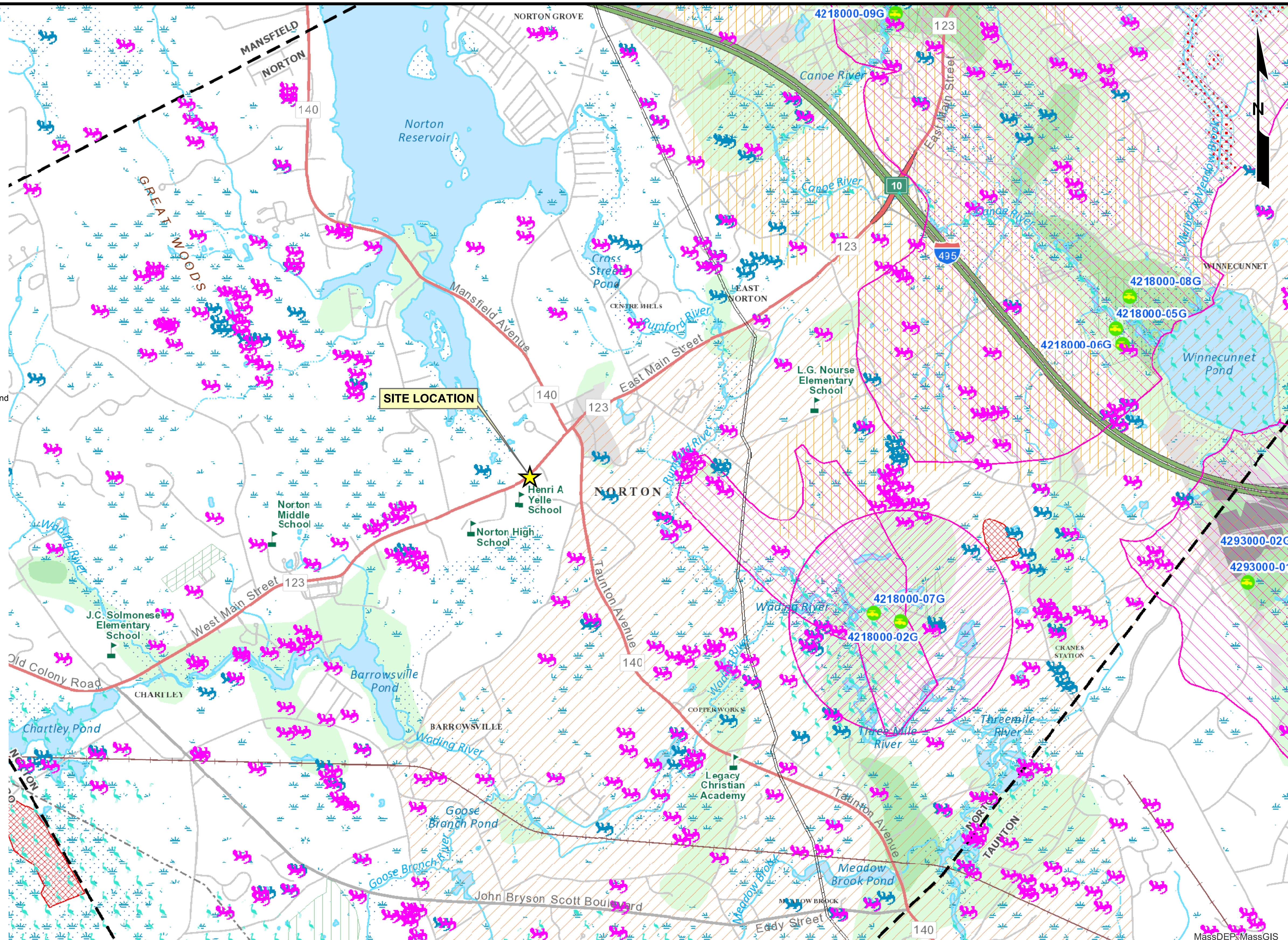

2,400 0 2,400
Feet

PROJECT NO.	MA8691	PRIORITY RESOURCE MAP	FIGURE
DRAWN:	1/20/2022		6
DRAWN BY:	CTH		
CHECKED BY:	-----	CUMBERLAND FARMS, INC. #MA8691 60 WEST MAIN STREET NORTON, MASSACHUSETTS	
FILE NAME:	MA8691_PRM.mxd		

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ATTACHMENT C – Groundwater Laboratory Analytical Data

☑ Final Report
☐ Revised Report

Report Date:
30-Oct-18 18:10

Laboratory Report
SC51094

Kleinfelder, Inc.
4 Technology Drive, Suite 110
Westborough, MA 01851
Attn: Emily Straley

Project: CFI - 60 W. Main St - Norton, MA
Project #: MA8691 Norton, MA

I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the sample(s) as received.
All applicable NELAC requirements have been met.

Massachusetts # M-MA138/MA1110
Connecticut # PH-0777
Florida # E87936
Maine # MA138
New Hampshire # 2972/2538
New Jersey # MA011
New York # 11393
Pennsylvania # 68-04426/68-02924
Rhode Island # LAO00348
USDA # P330-15-00375
Vermont # VT-11393

Authorized by:

Dawn Wojcik
Laboratory Director

Eurofins Spectrum Analytical holds primary certification in the State of Massachusetts for the analytes as indicated with an X in the "Cert." column within this report. Please note that the State of Massachusetts does not offer certification for all analytes. Please refer to our website for specific certification holdings in each state.
Please note that this report contains 75 pages of analytical data plus Chain of Custody document(s). When the Laboratory Report is indicated as revised, this report supersedes any previously dated reports for the laboratory ID(s) referenced above. Where this report identifies subcontracted analyses, copies of the subcontractor's test report are available upon request. This report may not be reproduced, except in full, without written approval from Eurofins Spectrum Analytical, Inc.

Eurofins Spectrum Analytical, Inc. is a NELAC accredited laboratory organization and meets NELAC testing standards. Use of the NELAC logo however does not insure that Eurofins Spectrum Analytical, Inc. is currently accredited for the specific method or analyte indicated. Please refer to our "Quality" web page at www.spectrum-analytical.com for a full listing of our current certifications and fields of accreditation. States in which Eurofins Spectrum Analytical, Inc. holds NELAC certification are New York, New Hampshire, New Jersey, Pennsylvania and Florida. All analytical work for Volatile Organic and Air analysis are transferred to and conducted at our 830 Silver Street location (PA-68-04426).

Please contact the Laboratory or Technical Director at 800-789-9115 with any questions regarding the data contained in this laboratory report.

Sample Summary

Work Order: SC51094

Project: CFI - 60 W. Main St - Norton, MA

Project Number: MA8691 Norton, MA

Laboratory ID	Client Sample ID	Matrix	Date Sampled	Date Received
SC51094-01	MW-1	Ground Water	11-Oct-18 13:00	15-Oct-18 15:50
SC51094-02	MW-4	Ground Water	11-Oct-18 12:30	15-Oct-18 15:50
SC51094-03	MW-6	Ground Water	11-Oct-18 12:00	15-Oct-18 15:50
SC51094-04	MW-7	Ground Water	11-Oct-18 11:30	15-Oct-18 15:50

The following outlines the condition of all VPH samples contained within this report upon laboratory receipt.

Matrices	Ground Water		
Containers	✓ Satisfactory		
Sample Preservative	**Aqueous** (acid preserved)	N/A ✓ pH≤2 pH>2	
	Soil or Sediment	✓ N/A Samples not received in Methanol	ml Methanol/g soil 1:1 +/-25% Other
		Samples received in Methanol: covering soil/sediment not covering soil/sediment	
		Samples received in air-tight container	
Temperature	Received on ice Received at 4 ± 2 ºC ✓ Other: 1.9ºC		

Were all QA/QC procedures followed as required by the VPH method? *Yes*
Were any significant modifications made to the VPH method as specified in section 11.3? *No*
Were all performance/acceptance standards for required QA/QC procedures achieved? *Yes*

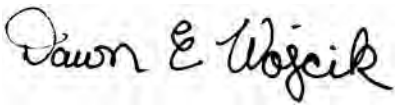
The following outlines the condition of all EPH samples contained within this report upon laboratory receipt.

Matrices	Ground Water
Containers	✓ Satisfactory
Aqueous Preservative	N/A ✓ pH≤2 pH>2 pH adjusted to <2 in lab
Temperature	Received on ice Received at 4 ± 2 ºC ✓ Other: 1.9ºC

Were all QA/QC procedures followed as required by the EPH method? *Yes*
Were any significant modifications made to the EPH method as specified in Section 11.3? *No*
Were all performance/acceptance standards for required QA/QC procedures achieved? *Yes*

I attest 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.

Authorized by:



Dawn E. Wojcik
Laboratory Director

MassDEP Analytical Protocol Certification Form

Laboratory Name: Eurofins Spectrum Analytical, Inc.	**Project #:** MA8691 Norton, MA
Project Location: CFI - 60 W. Main St - Norton, MA	**RTN:**
This form provides certifications for the following data set:	SC51094-01 through SC51094-04
Matrices: Ground Water	

CAM Protocol

✓ 8260 VOC CAM II A	✓ 7470/7471 Hg CAM III B	✓ MassDEP VPH CAM IV A	8081 Pesticides CAM V B	7196 Hex Cr CAM VI B	MassDEP APH CAM IX A
✓ 8270 SVOC CAM II B	7010 Metals CAM III C	✓ MassDEP EPH CAM IV B	8151 Herbicides CAM V C	8330 Explosives CAM VIII A	TO-15 VOC CAM IX B
✓ 6010 Metals CAM III A	6020 Metals CAM III D	8082 PCB CAM V A	9012 Total Cyanide/PAC CAM VI A	9014 Total Cyanide/PAC CAM VI A	6860 Perchlorate CAM VIII B

Affirmative responses to questions A through F are required for Presumptive Certainty status

A	Were all samples received in a condition consistent with those described on the Chain of Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	✓ Yes No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	✓ Yes No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	✓ Yes No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	✓ Yes No
E	a. VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	✓ Yes No Yes No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to questions A through E)?	✓ Yes No

Responses to questions G, H and I below are required for Presumptive Certainty status

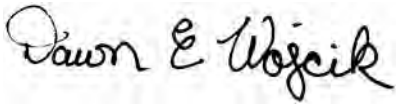
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	Yes ✓ No

***Data User Note:* Data that achieve Presumptive Certainty status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.**

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	Yes ✓ No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	Yes ✓ No

All negative responses are addressed in a case narrative on the cover page of this report.

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



Dawn E. Wojcik
Laboratory Director
Date: 10/30/2018

CASE NARRATIVE:

Data has been reported to the RDL. This report excludes estimated concentrations detected below the RDL and above the MDL (J-Flag).

All non-detects and all results below the reporting limit are reported as "<" (less than) the reporting limit in this report.

The samples were received 1.9 degrees Celsius, please refer to the Chain of Custody for details specific to temperature upon receipt. An infrared thermometer with a tolerance of +/- 1.0 degrees Celsius was used immediately upon receipt of the samples.

If a Matrix Spike (MS), Matrix Spike Duplicate (MSD) or Duplicate (DUP) was not requested on the Chain of Custody, method criteria may have been fulfilled with a source sample not of this Sample Delivery Group. If method or program required MS/MSD/Dup were not performed, sufficient sample was not provided to the laboratory.

MADEP has published a list of analytical methods (CAM) which provides a series of recommended protocols for the acquisition, analysis and reporting of analytical data in support of MCP decisions. "Presumptive Certainty" can be established only for those methods published by the MADEP in the MCP CAM. The compounds and/or elements reported were specifically requested by the client on the Chain of Custody and in some cases may not include the full analyte list as defined in the method. Regulatory limits may not be achieved if specific method and/or technique was not requested on the Chain of Custody.

According to WSC-CAM 5/2009 Rev.1, Table 11 A-1, recovery for some VOC analytes have been deemed potentially difficult. Although they may still be within the recommended recovery range, a range has been set based on historical control limits.

Some target analytes which are not listed as exceptions in the Summary of CAM Reporting Limits may exceed the recommended RL based on sample initial volume or weight provided, % moisture content, or responsiveness of a particular analyte to purge and trap instrumentation.

Analyses for Total Hardness, pH, and Total Residual Chlorine fall under the state of Pennsylvania code Chapter 252.6 accreditation by rule.

Reactivity (40 CFR 261.23) Case Narrative:

These samples do not exhibit the characteristics of reactivity as defined in 40 CFR 261.23, sections (1), (2) and (4); however, Eurofins Spectrum Analytical, Inc. does not test for detonation, explosive reaction or potential, or forbidden explosives as defined in 40 CFR 261.23, sections (3), (6), (7) and (8).

Reactive sulfide and cyanide are tested at a pH of 2 and not tested at all conditions between pH 2 and12.5 as stated in 40 CFR 261.23, section (5); thus reactive cyanide and sulfide results as reported in this document can not be used to support the nonreactive properties of these samples.

The responsibility falls on the generator to use knowledge of the waste to determine if the waste meets or does not meet the descriptive, prose definition of reactivity.

SDG Comments

8260 Volatile Organics:
The following compounds from the MCP 8260 analyte list were not performed: TAME, diethyl ether, diisopropyl ether, 1,4 dioxane, and ETBE. 1,2-Dibromoethane doesn't meet GW-1 criteria, this compound is analyzed by GC/FID to achieve this criteria.
Phoenix reporting levels may exceed those referenced in the CAM protocol. Please refer to criteria sheet for comparisons to requested MCP standards.

VOA Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CB73222

CHEM17 10/16/18-2 Michael Hahn, Chemist 10/16/18
Initial Calibration Verification (CHEM17/VT-S1016):
96% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 30% (20%), Acetone 27% (20%), trans-1,4-dichloro-2-butene 24% (20%)
The following compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.030 (0.05), 2-Hexanone 0.065 (0.1), Acetone 0.042 (0.1), Bromoform 0.074 (0.1), Methyl ethyl ketone 0.068 (0.1), Tetrahydrofuran (THF) 0.045 (0.05)
The following compounds did not meet a minimum response factors: None.
Continuing Calibration Verification (CHEM17/1016_21-VT-S1016) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
100% of target compounds met criteria.
The following compounds did not meet % deviation criteria: None.
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.034 (0.05), 2-Hexanone 0.071 (0.1), Acetone 0.038 (0.1), Bromoform 0.083 (0.1), Methyl ethyl ketone 0.069 (0.1), Tetrahydrofuran (THF) 0.044 (0.05)
The following compounds did not meet minimum response factors: None.

CB73223, CB73224, CB73225

CHEM17 10/17/18-1 Michael Hahn, Chemist 10/17/18
Initial Calibration Verification (CHEM17/VT-S1016):
96% of target compounds met criteria.
The following compounds had %RSDs >20%: 1,2-Dibromo-3-chloropropane 30% (20%), Acetone 27% (20%), trans-1,4-dichloro-2-butene 24% (20%)
The following compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.030 (0.05), 2-Hexanone 0.065 (0.1), Acetone 0.042 (0.1), Bromoform 0.074 (0.1), Methyl ethyl ketone 0.068 (0.1), Tetrahydrofuran (THF) 0.045 (0.05)
The following compounds did not meet a minimum response factors: None.
Continuing Calibration Verification (CHEM17/1017_06-VT-S1016) (MCP Compliance):
Internal standard areas were within 50 to 200% of the initial calibration with the following exceptions: None.
96% of target compounds met criteria.
The following compounds did not meet % deviation criteria: Acetone 29%L (20%)
The following compounds did not meet maximum % deviations: None.
The following compounds did not meet recommended response factors: 1,2-Dibromo-3-chloropropane 0.030 (0.05), 2-Hexanone 0.055 (0.1), 4-Methyl-2-pentanone 0.085 (0.1), Acetone 0.030 (0.1), Bromoform 0.070 (0.1), Methyl ethyl ketone 0.058 (0.1), Tetrahydrofuran (THF) 0.036 (0.05)
The following compounds did not meet minimum response factors: None.

VOA Narration

QC (Batch Specific):

CB73222

Batch 452159 (CB73203)
All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.

CB73223, CB73224, CB73225

Batch 452380 (CB72457)
All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 30% with the following exceptions: None.
A LCS and LCS Duplicate were performed instead of a matrix spike and matrix spike duplicate.
Additional 8260 criteria: 10% of compounds can be outside of acceptance criteria as long as recovery is 10%.
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.

VPH Narration

Were all QA/QC performance criteria specified in the MADEP document CAM achieved? Yes.

Instrument:

CB73222, CB73223, CB73224, CB73225

PIDFID 10/21/18-1 Amanda Campelli, Chemist 10/21/18
A seven level calibration was performed. All RSDs were within limits.

The continuing calibration standards were within control limits.

QC (Batch Specific):

CB73222, CB73223, CB73224, CB73225

Batch 452755 (CB71743)

All LCS recoveries were within 70 - 130 with the following exceptions: None.
All LCSD recoveries were within 70 - 130 with the following exceptions: None.
All LCS/LCSD RPDs were less than 20% with the following exceptions: None.
A blank MS/MSD was analyzed with this batch.

See below for any non-conformances and issues relating to quality control samples and/or sample analysis/matrix.

MADEP EPH 5/2004 R

Blanks:

1814119-BLK1

Low surrogate recovery from the preparation process. all sample volume has been re-extracted.

1-Chlorooctadecane

Laboratory Control Samples:

1813945 BS/BSD

2-Methylnaphthalene percent recoveries (27/33) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1
MW-4
MW-6
MW-7

Acenaphthene percent recoveries (37/41) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1
MW-4
MW-6
MW-7

Acenaphthylene percent recoveries (35/41) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1
MW-4
MW-6
MW-7

C9-C18 Aliphatic Hydrocarbons percent recoveries (31/31) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1
MW-4
MW-6
MW-7

Fluorene percent recoveries (37/43) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1
MW-4
MW-6
MW-7

MADEP EPH 5/2004 R

Laboratory Control Samples:

1813945 BS/BSD

Naphthalene percent recoveries (28/34) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1
MW-4
MW-6
MW-7

1814119 BS/BSD

2-Methylnaphthalene percent recoveries (42/29) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1
MW-6
MW-7

Acenaphthene percent recoveries (49/37) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1
MW-6
MW-7

Acenaphthylene percent recoveries (46/34) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1
MW-6
MW-7

Benzo (a) pyrene percent recoveries (31/45) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1
MW-6
MW-7

Benzo (b) fluoranthene percent recoveries (33/46) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1
MW-6
MW-7

Benzo (g,h,i) perylene percent recoveries (30/49) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1
MW-6
MW-7

C9-C18 Aliphatic Hydrocarbons percent recoveries (39/38) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1
MW-6
MW-7

MADEP EPH 5/2004 R

Laboratory Control Samples:

1814119 BS/BSD

Dibenzo (a,h) anthracene percent recoveries (31/49) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1
MW-6
MW-7

Fluorene percent recoveries (52/38) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1
MW-6
MW-7

Indeno (1,2,3-cd) pyrene percent recoveries (26/41) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1
MW-6
MW-7

Naphthalene percent recoveries (40/34) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1
MW-6
MW-7

1814119 BSD

2-Methylnaphthalene RPD 35% (25%) is outside individual acceptance criteria.

Acenaphthene RPD 27% (25%) is outside individual acceptance criteria.

Acenaphthylene RPD 29% (25%) is outside individual acceptance criteria.

Benzo (a) pyrene RPD 37% (25%) is outside individual acceptance criteria.

Benzo (b) fluoranthene RPD 33% (25%) is outside individual acceptance criteria.

Benzo (g,h,i) perylene RPD 46% (25%) is outside individual acceptance criteria.

Benzo (k) fluoranthene RPD 34% (25%) is outside individual acceptance criteria.

Chrysene RPD 36% (25%) is outside individual acceptance criteria.

Dibenzo (a,h) anthracene RPD 46% (25%) is outside individual acceptance criteria.

Fluorene RPD 31% (25%) is outside individual acceptance criteria.

Indeno (1,2,3-cd) pyrene RPD 44% (25%) is outside individual acceptance criteria.

Phenanthrene RPD 33% (25%) is outside individual acceptance criteria.

1814119-BS1

MADEP EPH 5/2004 R

Laboratory Control Samples:

1814119-BS1

Low surrogate recovery from the preparation process. All sample volume has been re-extracted.

1-Chlorooctadecane

1814119-BSD1

Low surrogate recovery from the preparation process. All sample volume has been re-extracted.

1-Chlorooctadecane

RPD out of acceptance range. The batch is accepted based upon LCS and/or LCSD recovery.

Benzo (a) pyrene
Benzo (b) fluoranthene
Benzo (g,h,i) perylene
Benzo (k) fluoranthene
Chrysene
Dibenzo (a,h) anthracene
Indeno (1,2,3-cd) pyrene

Duplicates:

1813945-DUP1 *Source: SC51094-02*

Low surrogate recovery from the preparation process. All sample volume has been re-extracted.

1-Chlorooctadecane

Samples:

SC51094-01 *MW-1*

Low surrogate recovery from the preparation process. All sample volume has been re-extracted.

1-Chlorooctadecane

SC51094-01RE1 *MW-1*

Low surrogate recovery from the preparation process. All sample volume has been re-extracted.

1-Chlorooctadecane

SC51094-02 *MW-4*

Low surrogate recovery from the preparation process. All sample volume has been re-extracted.

1-Chlorooctadecane

SC51094-03 *MW-6*

Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the re-extract.

1-Chlorooctadecane

SC51094-04 *MW-7*

Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the re-extract.

1-Chlorooctadecane

SW846 8270D

Calibration:

1810041

SW846 8270D

Calibration:

1810041

Analyte quantified by quadratic equation type calibration.

2,4-Dinitrophenol
4,6-Dinitro-2-methylphenol
4-Nitrophenol
Benzidine
Benzoic acid
Pentachlorophenol

This affected the following samples:

1813846-BLK1
1813846-BS1
1813846-BSD1
1813846-DUP1
MW-1
S822810-ICV1
S822810-ICV2
S822851-CCV1
S822852-CCV1

S822810-ICV1

Analyte percent recovery is outside individual acceptance criteria.

Benzidine (35%)

This affected the following samples:

1813846-BLK1
1813846-BS1
1813846-BSD1
1813846-DUP1
MW-1
S822851-CCV1
S822852-CCV1

Laboratory Control Samples:

1813846 BS/BSD

4-Chloroaniline percent recoveries (37/38) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1

Aniline percent recoveries (27/27) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1

Benzidine percent recoveries (14/13) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1

Bis(2-chloroisopropyl)ether percent recoveries (40/38) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1

SW846 8270D

Laboratory Control Samples:

1813846 BS/BSD

N-Nitrosodimethylamine percent recoveries (36/34) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1

Phenol percent recoveries (27/26) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1

Pyridine percent recoveries (20/18) are outside individual acceptance criteria, but within overall method allowances. All reported results of the following samples are considered to have a potentially low bias:

MW-1

1813846-BS1

Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.

4-Chloroaniline
Aniline
Benzidine
N-Nitrosodimethylamine
Phenol
Pyridine

1813846-BSD1

Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.

4-Chloroaniline
Aniline
Benzidine
Bis(2-chloroisopropyl)ether
N-Nitrosodimethylamine
Phenol
Pyridine

Samples:

S822851-CCV1

Analyte percent drift is outside individual acceptance criteria (20), but within overall method allowances.

Benzidine (32.6%)

This affected the following samples:

1813846-BLK1
1813846-BS1
1813846-BSD1

S822852-CCV1

Analyte percent drift is outside individual acceptance criteria (20), but within overall method allowances.

Benzidine (127%)

This affected the following samples:

1813846-DUP1
MW-1

Sample Acceptance Check Form

Client:	Kleinfelder, Inc. - Westborough, MA
Project:	CFI - 60 W. Main St - Norton, MA / MA8691 Norton, MA
Work Order:	SC51094
Sample(s) received on:	10/15/2018

The following outlines the condition of samples for the attached Chain of Custody upon receipt.

	Yes	No	N/A
Were custody seals present?	☐	☑	☐
Were custody seals intact?	☐	☐	☑
Were samples received at a temperature of ≤ 6°C?	☑	☐	☐
Were samples refrigerated upon transfer to laboratory representative?	☑	☐	☐
Were sample containers received intact?	☑	☐	☐
Were samples properly labeled (labels affixed to sample containers and include sample ID, site location, and/or project number and the collection date)?	☑	☐	☐
Were samples accompanied by a Chain of Custody document?	☑	☐	☐
Does Chain of Custody document include proper, full, and complete documentation, which shall include sample ID, site location, and/or project number, date and time of collection, collector's name, preservation type, sample matrix and any special remarks concerning the sample?	☑	☐	☐
Did sample container labels agree with Chain of Custody document?	☑	☐	☐
Were samples received within method-specific holding times?	☑	☐	☐

Summary of Hits

Lab ID: SC51094-01 **Client ID:** MW-1

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Total Dissolved Solids	87		5	mg/l	SM18-22 2540C
Total Suspended Solids	196		2.5	mg/l	SM2540D (11)
Barium	0.0654		0.0050	mg/l	SW846 6010C
Barium (dissolved)	0.0456		0.0050	mg/l	SW846 6010C
Chromium	0.0056		0.0050	mg/l	SW846 6010C

Lab ID: SC51094-03 **Client ID:** MW-6

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Barium	0.0724		0.0050	mg/l	SW846 6010C
Barium (dissolved)	0.0710		0.0050	mg/l	SW846 6010C

Lab ID: SC51094-04 **Client ID:** MW-7

Parameter	Result	Flag	Reporting Limit	Units	Analytical Method
Chloroform	1.7		1.0	ug/L	SW8260C
Arsenic	0.04205		0.00400	mg/l	SW846 6010C
Barium	0.187		0.0050	mg/l	SW846 6010C
Barium (dissolved)	0.0344		0.0050	mg/l	SW846 6010C
Cadmium	0.0040		0.0025	mg/l	SW846 6010C
Chromium	0.0676		0.0050	mg/l	SW846 6010C
Lead	0.0590		0.0075	mg/l	SW846 6010C

Please note that because there are no reporting limits associated with hazardous waste characterizations or micro analyses, this summary does not include hits from these analyses if included in this work order.

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1	MA8691 Norton, MA	Ground Water	11-Oct-18 13:00	15-Oct-18
SC51094-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds Prepared by method SW846 3510C													
83-32-9	Acenaphthene	< 5.38		µg/l	5.38	1.17	1	SW846 8270D	18-Oct-18	24-Oct-18	MSL	1813846	
208-96-8	Acenaphthylene	< 5.38		µg/l	5.38	1.24	1	"	"	"	"	"	
62-53-3	Aniline	< 5.38		µg/l	5.38	0.531	1	"	"	"	"	"	
120-12-7	Anthracene	< 5.38		µg/l	5.38	1.26	1	"	"	"	"	"	
103-33-3	Azobenzene/Diphenyldiazene	< 5.38		µg/l	5.38	1.04	1	"	"	"	"	"	
92-87-5	Benzidine	< 10.8		µg/l	10.8	4.91	1	"	"	"	"	"	
56-55-3	Benzo (a) anthracene	< 5.38		µg/l	5.38	0.934	1	"	"	"	"	"	
50-32-8	Benzo (a) pyrene	< 5.38		µg/l	5.38	0.772	1	"	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	< 5.38		µg/l	5.38	0.719	1	"	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	< 5.38		µg/l	5.38	0.753	1	"	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	< 5.38		µg/l	5.38	1.06	1	"	"	"	"	"	
65-85-0	Benzoic acid	< 5.38		µg/l	5.38	1.87	1	"	"	"	"	"	
100-51-6	Benzyl alcohol	< 5.38		µg/l	5.38	1.13	1	"	"	"	"	"	
111-91-1	Bis(2-chloroethoxy)methane	< 5.38		µg/l	5.38	0.940	1	"	"	"	"	"	
111-44-4	Bis(2-chloroethyl)ether	< 5.38		µg/l	5.38	1.19	1	"	"	"	"	"	
108-60-1	Bis(2-chloroisopropyl)ether	< 5.38		µg/l	5.38	1.09	1	"	"	"	"	"	
117-81-7	Bis(2-ethylhexyl)phthalate	< 5.38		µg/l	5.38	0.778	1	"	"	"	"	"	
101-55-3	4-Bromophenyl phenyl ether	< 5.38		µg/l	5.38	1.01	1	"	"	"	"	"	
85-68-7	Butyl benzyl phthalate	< 5.38		µg/l	5.38	0.502	1	"	"	"	"	"	
86-74-8	Carbazole	< 5.38		µg/l	5.38	1.68	1	"	"	"	"	"	
59-50-7	4-Chloro-3-methylphenol	< 5.38		µg/l	5.38	0.896	1	"	"	"	"	"	
106-47-8	4-Chloroaniline	< 5.38		µg/l	5.38	1.26	1	"	"	"	"	"	
91-58-7	2-Chloronaphthalene	< 5.38		µg/l	5.38	1.45	1	"	"	"	"	"	
95-57-8	2-Chlorophenol	< 5.38		µg/l	5.38	1.19	1	"	"	"	"	"	
7005-72-3	4-Chlorophenyl phenyl ether	< 5.38		µg/l	5.38	0.535	1	"	"	"	"	"	
218-01-9	Chrysene	< 5.38		µg/l	5.38	1.01	1	"	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	< 5.38		µg/l	5.38	0.729	1	"	"	"	"	"	
132-64-9	Dibenzofuran	< 5.38		µg/l	5.38	1.31	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 5.38		µg/l	5.38	1.83	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 5.38		µg/l	5.38	1.70	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 5.38		µg/l	5.38	1.62	1	"	"	"	"	"	
91-94-1	3,3´-Dichlorobenzidine	< 5.38		µg/l	5.38	0.911	1	"	"	"	"	"	
120-83-2	2,4-Dichlorophenol	< 5.38		µg/l	5.38	1.01	1	"	"	"	"	"	
84-66-2	Diethyl phthalate	< 5.38		µg/l	5.38	1.95	1	"	"	"	"	"	
131-11-3	Dimethyl phthalate	< 5.38		µg/l	5.38	1.87	1	"	"	"	"	"	
105-67-9	2,4-Dimethylphenol	< 5.38		µg/l	5.38	1.14	1	"	"	"	"	"	
84-74-2	Di-n-butyl phthalate	< 5.38		µg/l	5.38	0.668	1	"	"	"	"	"	
534-52-1	4,6-Dinitro-2-methylphenol	< 5.38		µg/l	5.38	1.16	1	"	"	"	"	"	
51-28-5	2,4-Dinitrophenol	< 5.38		µg/l	5.38	1.30	1	"	"	"	"	"	
121-14-2	2,4-Dinitrotoluene	< 5.38		µg/l	5.38	1.28	1	"	"	"	"	"	
606-20-2	2,6-Dinitrotoluene	< 5.38		µg/l	5.38	1.34	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1	MA8691 Norton, MA	Ground Water	11-Oct-18 13:00	15-Oct-18
SC51094-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Semivolatile Organic Compounds by GCMS													
Semivolatile Organic Compounds													
117-84-0	Di-n-octyl phthalate	< 5.38		µg/l	5.38	1.35	1	SW846 8270D	18-Oct-18	24-Oct-18	MSL	1813846	
206-44-0	Fluoranthene	< 5.38		µg/l	5.38	1.10	1	"	"	"	"	"	
86-73-7	Fluorene	< 5.38		µg/l	5.38	1.05	1	"	"	"	"	"	
118-74-1	Hexachlorobenzene	< 5.38		µg/l	5.38	1.44	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 5.38		µg/l	5.38	1.63	1	"	"	"	"	"	
77-47-4	Hexachlorocyclopentadiene	< 5.38		µg/l	5.38	1.34	1	"	"	"	"	"	
67-72-1	Hexachloroethane	< 5.38		µg/l	5.38	1.80	1	"	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	< 5.38		µg/l	5.38	0.625	1	"	"	"	"	"	
78-59-1	Isophorone	< 5.38		µg/l	5.38	0.878	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 5.38		µg/l	5.38	1.77	1	"	"	"	"	"	
95-48-7	2-Methylphenol	< 5.38		µg/l	5.38	1.14	1	"	"	"	"	"	
108-39-4, 106-44-5	3 & 4-Methylphenol	< 10.8		µg/l	10.8	1.22	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.38		µg/l	5.38	1.46	1	"	"	"	"	"	
88-74-4	2-Nitroaniline	< 5.38		µg/l	5.38	0.540	1	"	"	"	"	"	
99-09-2	3-Nitroaniline	< 5.38		µg/l	5.38	0.684	1	"	"	"	"	"	
100-01-6	4-Nitroaniline	< 5.38		µg/l	5.38	0.676	1	"	"	"	"	"	
98-95-3	Nitrobenzene	< 5.38		µg/l	5.38	1.39	1	"	"	"	"	"	
88-75-5	2-Nitrophenol	< 5.38		µg/l	5.38	0.771	1	"	"	"	"	"	
100-02-7	4-Nitrophenol	< 21.5		µg/l	21.5	0.838	1	"	"	"	"	"	
62-75-9	N-Nitrosodimethylamine	< 5.38		µg/l	5.38	0.644	1	"	"	"	"	"	
621-64-7	N-Nitrosodi-n-propylamine	< 5.38		µg/l	5.38	1.11	1	"	"	"	"	"	
86-30-6	N-Nitrosodiphenylamine	< 5.38		µg/l	5.38	1.09	1	"	"	"	"	"	
87-86-5	Pentachlorophenol	< 21.5		µg/l	21.5	0.835	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 5.38		µg/l	5.38	1.26	1	"	"	"	"	"	
108-95-2	Phenol	< 5.38		µg/l	5.38	1.34	1	"	"	"	"	"	
129-00-0	Pyrene	< 5.38		µg/l	5.38	1.06	1	"	"	"	"	"	
110-86-1	Pyridine	< 5.38		µg/l	5.38	0.438	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 5.38		µg/l	5.38	1.69	1	"	"	"	"	"	
90-12-0	1-Methylnaphthalene	< 5.38		µg/l	5.38	1.27	1	"	"	"	"	"	
95-95-4	2,4,5-Trichlorophenol	< 5.38		µg/l	5.38	0.840	1	"	"	"	"	"	
88-06-2	2,4,6-Trichlorophenol	< 5.38		µg/l	5.38	0.752	1	"	"	"	"	"	
82-68-8	Pentachloronitrobenzene	< 5.38		µg/l	5.38	0.863	1	"	"	"	"	"	
95-94-3	1,2,4,5-Tetrachlorobenzene	< 5.38		µg/l	5.38	1.18	1	"	"	"	"	"	
Surrogate recoveries:													
321-60-8	*2-Fluorobiphenyl*	*80*			*30-130 %*			"	"	"	"	"	
367-12-4	*2-Fluorophenol*	*50*			*15-110 %*			"	"	"	"	"	
4165-60-0	*Nitrobenzene-d5*	*75*			*30-130 %*			"	"	"	"	"	
4165-62-2	*Phenol-d5*	*32*			*15-110 %*			"	"	"	"	"	
1718-51-0	*Terphenyl-dl4*	*86*			*30-130 %*			"	"	"	"	"	
118-79-6	*2,4,6-Tribromophenol*	*79*			*15-110 %*			"	"	"	"	"	
Extractable Petroleum Hydrocarbons													
MADEP EPH													
Prepared by method SW846 3510C													

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1	MA8691 Norton, MA	Ground Water	11-Oct-18 13:00	15-Oct-18
SC51094-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Extractable Petroleum Hydrocarbons													
MADEP EPH Prepared by method SW846 3510C													
	C9-C18 Aliphatic Hydrocarbons	< 103		µg/l	103	15.4	1	MADEP EPH 5/2004 R	20-Oct-18	24-Oct-18	EDT	1813945	
	C19-C36 Aliphatic Hydrocarbons	< 103		µg/l	103	20.9	1	"	"	"	"	"	
	C11-C22 Aromatic Hydrocarbons	< 103		µg/l	103	76.3	1	"	"	"	"	"	
	Unadjusted C11-C22 Aromatic Hydrocarbons	< 103		µg/l	103	76.3	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.15		µg/l	5.15	1.48	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 5.15		µg/l	5.15	1.28	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 5.15		µg/l	5.15	1.36	1	"	"	"	"	"	
83-32-9	Acenaphthene	< 5.15		µg/l	5.15	1.71	1	"	"	"	"	"	
86-73-7	Fluorene	< 5.15		µg/l	5.15	1.32	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 5.15		µg/l	5.15	1.63	1	"	"	"	"	"	
120-12-7	Anthracene	< 5.15		µg/l	5.15	1.31	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 5.15		µg/l	5.15	1.47	1	"	"	"	"	"	
129-00-0	Pyrene	< 5.15		µg/l	5.15	1.62	1	"	"	"	"	"	
56-55-3	Benzo (a) anthracene	< 5.15		µg/l	5.15	1.48	1	"	"	"	"	"	
218-01-9	Chrysene	< 5.15		µg/l	5.15	1.48	1	"	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	< 5.15		µg/l	5.15	1.63	1	"	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	< 5.15		µg/l	5.15	1.46	1	"	"	"	"	"	
50-32-8	Benzo (a) pyrene	< 5.15		µg/l	5.15	1.36	1	"	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	< 5.15		µg/l	5.15	1.38	1	"	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	< 5.15		µg/l	5.15	1.47	1	"	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	< 5.15		µg/l	5.15	1.29	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chlorooctadecane*	*24*	Z-2		*40-140 %*			"	"	"	"	"	
84-15-1	*Ortho-Terphenyl*	*50*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*76*			*40-140 %*			"	"	"	"	"	
Re-analysis of MADEP EPH Prepared by method SW846 3510C													
	C9-C18 Aliphatic Hydrocarbons	< 105		µg/l	105	15.7	1	MADEP EPH 5/2004 R	25-Oct-18	29-Oct-18	EDT	1814119	
	C19-C36 Aliphatic Hydrocarbons	< 105		µg/l	105	21.4	1	"	"	"	"	"	
	C11-C22 Aromatic Hydrocarbons	< 105		µg/l	105	77.9	1	"	"	"	"	"	
	Unadjusted C11-C22 Aromatic Hydrocarbons	< 105		µg/l	105	77.9	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.26		µg/l	5.26	1.52	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 5.26		µg/l	5.26	1.31	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 5.26		µg/l	5.26	1.39	1	"	"	"	"	"	
83-32-9	Acenaphthene	< 5.26		µg/l	5.26	1.75	1	"	"	"	"	"	
86-73-7	Fluorene	< 5.26		µg/l	5.26	1.35	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 5.26		µg/l	5.26	1.66	1	"	"	"	"	"	
120-12-7	Anthracene	< 5.26		µg/l	5.26	1.34	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 5.26		µg/l	5.26	1.51	1	"	"	"	"	"	
129-00-0	Pyrene	< 5.26		µg/l	5.26	1.65	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1	MA8691 Norton, MA	Ground Water	11-Oct-18 13:00	15-Oct-18
SC51094-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Extractable Petroleum Hydrocarbons													
Re-analysis of MADEP EPH													
56-55-3	Benzo (a) anthracene	< 5.26		µg/l	5.26	1.52	1	MADEP EPH 5/2004 R	25-Oct-18	29-Oct-18	EDT	1814119	
218-01-9	Chrysene	< 5.26		µg/l	5.26	1.52	1	"	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	< 5.26		µg/l	5.26	1.66	1	"	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	< 5.26		µg/l	5.26	1.49	1	"	"	"	"	"	
50-32-8	Benzo (a) pyrene	< 5.26		µg/l	5.26	1.39	1	"	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	< 5.26		µg/l	5.26	1.41	1	"	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	< 5.26		µg/l	5.26	1.51	1	"	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	< 5.26		µg/l	5.26	1.32	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chlorooctadecane*	*24*	*Z-2*		*40-140 %*			"	"	"	"	"	
84-15-1	*Ortho-Terphenyl*	*74*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*71*			*40-140 %*			"	"	"	"	"	
Fingerprinting by GC Prepared by method SW846 3510C													
8006-61-9	Gasoline	< 0.2		mg/l	0.2	0.2	1	SW846 8100Mod.	18-Oct-18	22-Oct-18	DJS	1813848	
68476-30-2	Fuel Oil #2	< 0.2		mg/l	0.2	0.2	1	"	"	"	"	"	
68476-31-3	Fuel Oil #4	< 0.2		mg/l	0.2	0.2	1	"	"	"	"	"	
68553-00-4	Fuel Oil #6	< 0.2		mg/l	0.2	0.2	1	"	"	"	"	"	
M09800000	Motor Oil	< 0.2		mg/l	0.2	0.2	1	"	"	"	"	"	
8032-32-4	Ligroin	< 0.2		mg/l	0.2	0.2	1	"	"	"	"	"	
J00100000	Aviation Fuel	< 0.2		mg/l	0.2	0.2	1	"	"	"	"	"	
	Hydraulic Oil	< 0.2		mg/l	0.2	0.2	1	"	"	"	"	"	
	Dielectric Fluid	< 0.2		mg/l	0.2	0.2	1	"	"	"	"	"	
	Unidentified	< 0.2		mg/l	0.2	0.2	1	"	"	"	"	"	
	Other Oil	< 0.2		mg/l	0.2	0.2	1	"	"	"	"	"	
	Total Petroleum Hydrocarbons	< 0.2		mg/l	0.2	0.2	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chlorooctadecane*	*86*			*40-140 %*			"	"	"	"	"	
Total Metals by EPA 200/6000 Series Methods Prepared by method General Prep-Metal													
	Preservation	**Field Preserved; pH<2 confirmed**		N/A			1	EPA 200/6000 methods	16-Oct-18		JS	1813742	
Total Metals by EPA 6000/7000 Series Methods Prepared by method SW846 3005A													
7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0006	1	SW846 6010C	22-Oct-18	23-Oct-18	SC/EDT	1813852	
7440-38-2	Arsenic	< 0.00400		mg/l	0.00400	0.00138	1	"	"	"	"	"	
7440-39-3	Barium	**0.0654**		mg/l	0.0050	0.0007	1	"	"	"	"	"	
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0004	1	"	"	"	"	"	
7440-47-3	Chromium	**0.0056**		mg/l	0.0050	0.0009	1	"	"	"	"	"	
7439-92-1	Lead	< 0.0075		mg/l	0.0075	0.0062	1	"	"	"	"	"	
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0042	1	"	"	"	"	"	
Total Metals by EPA 200 Series Methods													

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1 SC51094-01	MA8691 Norton, MA	Ground Water	11-Oct-18 13:00	15-Oct-18

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Total Metals by EPA 200 Series Methods													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.00014	1	EPA 245.1/7470A	22-Oct-18	23-Oct-18	ABW	1813853	X
Soluble Metals by EPA 200/6000 Series Methods													
Prepared by method General Prep-Metal													
	Filtration	**Field Filtered**		N/A			1	EPA 200.7/3005A/6010			JS	1813743	
Soluble Metals by EPA 6000/7000 Series Methods													
Prepared by method SW846 3005A													
7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0006	1	SW846 6010C	22-Oct-18	23-Oct-18	SC/TBC	1813854	
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0014	1	"	"	"	"	"	
7440-39-3	Barium	**0.0456**		mg/l	0.0050	0.0007	1	"	"	"	"	"	
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0004	1	"	"	"	"	"	
7440-47-3	Chromium	< 0.0050		mg/l	0.0050	0.0009	1	"	"	"	"	"	
7439-92-1	Lead	< 0.0075		mg/l	0.0075	0.0062	1	"	"	"	"	"	
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0042	1	"	"	"	"	"	
Soluble Metals by EPA 200 Series Methods													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.00014	1	EPA 245.1/7470A	22-Oct-18	23-Oct-18	ABW	1813855	X
General Chemistry Parameters													
	Flashpoint	**>150**		°F			1	SW846 1010A	24-Oct-18	26-Oct-18	BD	1814147	
	pH	**4.63**	pH	pH Units			1	ASTM D 1293-99B	16-Oct-18 17:15	16-Oct-18 18:30	BD	1813783	X
Reactivity Cyanide/Sulfide													
	Reactivity	**See Narrative**		mg/l			1	SW846 Ch. 7.3	16-Oct-18	16-Oct-18	TN	1813774	
57-12-5	Reactive Cyanide	< 25.0		mg/l	25.0	25.0	1	"	"	"	"	"	
18496-25-8	Reactive Sulfide	< 50.0		mg/l	50.0	50.0	1	"	"	"	"	"	
	Total Dissolved Solids	**87**		mg/l	5	3	1	SM18-22 2540C	18-Oct-18	19-Oct-18	CMB	1813863	X
	Total Suspended Solids	**196**		mg/l	2.5	1.1	1	SM2540D (11)	16-Oct-18	17-Oct-18	CMB	1813764	X
Subcontracted Analyses													
Subcontracted Analyses													
Prepared by method MA VPH 5/2004													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
71-43-2	Benzene	< 1.0		ug/L	1.0	1.0	1	MA VPH 5/2004	11-Oct-18 13:00	21-Oct-18 18:55	M-CT007	452755A	
	C5-C8 Aliphatic Hydrocarbons *1,2	< 100		ug/L	100	100	1	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons *1	< 100		ug/L	100	100	1	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons *1,3	< 100		ug/L	100	100	1	"	"	"	"	"	
100-41-4	Ethyl Benzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 2.0		ug/L	2.0	2.0	1	"	"	"	"	"	
1634-04-4	MTBE	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
108-88-3	Toluene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatics (*1)	< 100		ug/L	100	100	1	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatics (*1)	< 100		ug/L	100	100	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1	MA8691 Norton, MA	Ground Water	11-Oct-18 13:00	15-Oct-18
SC51094-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
*Analysis performed by Phoenix Environmental Labs, Inc. * - M-CT007*													
Surrogate recoveries:													
615-59-8 FID	*% 2,5-Dibromotoluene (FID)*	*93*			*70-130 %*			MA VPH 5/2004	11-Oct-18 13:00	-Oct-18 18:!	M-CT007	452755A	
615-59-8	*% 2,5-Dibromotoluene (PID)*	*83*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW8260C													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
630-20-6	1,1,1,2-Tetrachloroethane	< 1.0		ug/L	1.0	1.0	1	SW8260C	"	17-Oct-18 00:20	M-CT007	452159A	
71-55-6	1,1,1-Trichloroethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 0.50		ug/L	0.50	0.50	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.60		ug/L	0.60	0.60	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
591-78-6	2-Hexanone	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
67-64-1	Acetone	< 25		ug/L	25	25	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
71-43-2	Benzene	< 0.70		ug/L	0.70	0.70	1	"	"	"	"	"	
108-86-1	Bromobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
74-97-5	Bromochloromethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 0.50		ug/L	0.50	0.50	1	"	"	"	"	"	
75-25-2	Bromoform	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
74-83-9	Bromomethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-15-0	Carbon Disulfide	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-1	MA8691 Norton, MA	Ground Water	11-Oct-18 13:00	15-Oct-18
SC51094-01				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
75-00-3	Chloroethane	< 1.0		ug/L	1.0	1.0	1	SW8260C	11-Oct-18 13:00	17-Oct-18 00:20	M-CT007	452159A	
67-66-3	Chloroform	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
74-87-3	Chloromethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 0.40		ug/L	0.40	0.40	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.50		ug/L	0.50	0.50	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 0.40		ug/L	0.40	0.40	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
179601-23-1	m&p-Xylene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
78-93-3	Methyl ethyl ketone	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether (MTBE)	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-09-2	Methylene chloride	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
91-20-3	Naphthalene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
100-42-5	Styrene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran (THF)	< 2.5		ug/L	2.5	2.5	1	"	"	"	"	"	
108-88-3	Toluene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 0.40		ug/L	0.40	0.40	1	"	"	"	"	"	
110-57-6	trans-1,4-dichloro-2-buten e	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
79-01-6	Trichloroethene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
76-13-1	Trichlorotrifluoroethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-01-4	Vinyl chloride	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
Surrogate recoveries:													
2199-69-1	*% 1,2-dichlorobenzene-d4*	*95*			*70-130 %*			"	"	"	"	"	
460-00-4	*% Bromofluorobenzene*	*97*			*70-130 %*			"	"	"	"	"	
1868-53-7	*% Dibromofluoromethane*	*96*			*70-130 %*			"	"	"	"	"	
2037-26-5	*% Toluene-d8*	*98*			*70-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-4	MA8691 Norton, MA	Ground Water	11-Oct-18 12:30	15-Oct-18
SC51094-02				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Extractable Petroleum Hydrocarbons													
MADEP EPH Prepared by method SW846 3510C													
	C9-C18 Aliphatic Hydrocarbons	< 112		µg/l	112	16.7	1	MADEP EPH 5/2004 R	20-Oct-18	24-Oct-18	EDT	1813945	
	C19-C36 Aliphatic Hydrocarbons	< 112		µg/l	112	22.8	1	"	"	"	"	"	
	C11-C22 Aromatic Hydrocarbons	< 112		µg/l	112	83.2	1	"	"	"	"	"	
	Unadjusted C11-C22 Aromatic Hydrocarbons	< 112		µg/l	112	83.2	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.62		µg/l	5.62	1.62	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 5.62		µg/l	5.62	1.39	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 5.62		µg/l	5.62	1.48	1	"	"	"	"	"	
83-32-9	Acenaphthene	< 5.62		µg/l	5.62	1.87	1	"	"	"	"	"	
86-73-7	Fluorene	< 5.62		µg/l	5.62	1.44	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 5.62		µg/l	5.62	1.78	1	"	"	"	"	"	
120-12-7	Anthracene	< 5.62		µg/l	5.62	1.43	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 5.62		µg/l	5.62	1.61	1	"	"	"	"	"	
129-00-0	Pyrene	< 5.62		µg/l	5.62	1.76	1	"	"	"	"	"	
56-55-3	Benzo (a) anthracene	< 5.62		µg/l	5.62	1.62	1	"	"	"	"	"	
218-01-9	Chrysene	< 5.62		µg/l	5.62	1.62	1	"	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	< 5.62		µg/l	5.62	1.78	1	"	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	< 5.62		µg/l	5.62	1.60	1	"	"	"	"	"	
50-32-8	Benzo (a) pyrene	< 5.62		µg/l	5.62	1.48	1	"	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	< 5.62		µg/l	5.62	1.51	1	"	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	< 5.62		µg/l	5.62	1.61	1	"	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	< 5.62		µg/l	5.62	1.40	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chlorooctadecane*	*24*	Z-2		*40-140 %*			"	"	"	"	"	
84-15-1	*Ortho-Terphenyl*	*48*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*68*			*40-140 %*			"	"	"	"	"	
Subcontracted Analyses													
Subcontracted Analyses Prepared by method MA VPH 5/2004													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
71-43-2	Benzene	< 1.0		ug/L	1.0	1.0	1	MA VPH 5/2004	11-Oct-18 12:30	21-Oct-18 19:29	M-CT007	452755A	
	C5-C8 Aliphatic Hydrocarbons *1,2	< 100		ug/L	100	100	1	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons *1	< 100		ug/L	100	100	1	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons *1,3	< 100		ug/L	100	100	1	"	"	"	"	"	
100-41-4	Ethyl Benzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 2.0		ug/L	2.0	2.0	1	"	"	"	"	"	
1634-04-4	MTBE	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
108-88-3	Toluene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
	Unadjusted C5-C8 Aliphatics (*1)	< 100		ug/L	100	100	1	MA VPH 5/2004	11-Oct-18 12:30	21-Oct-18 19:29	M-CT007	452755A	
	Unadjusted C9-C12 Aliphatics (*1)	< 100		ug/L	100	100	1	"	"	"	"	"	
Surrogate recoveries:													
615-59-8 FID	*% 2,5-Dibromotoluene (FID)*	*100*			*70-130 %*			"	"	"	"	"	
615-59-8	*% 2,5-Dibromotoluene (PID)*	*90*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW8260C													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
630-20-6	1,1,1,2-Tetrachloroethane	< 1.0		ug/L	1.0	1.0	1	SW8260C	"	17-Oct-18 18:45	M-CT007	452380A	
71-55-6	1,1,1-Trichloroethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 0.50		ug/L	0.50	0.50	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.60		ug/L	0.60	0.60	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
106-46-7	1,4-Dichlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
594-20-7	2,2-Dichloropropane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
591-78-6	2-Hexanone	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
67-64-1	Acetone	< 25		ug/L	25	25	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
71-43-2	Benzene	< 0.70		ug/L	0.70	0.70	1	"	"	"	"	"	
108-86-1	Bromobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
74-97-5	Bromochloromethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 0.50		ug/L	0.50	0.50	1	"	"	"	"	"	
75-25-2	Bromoform	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
74-83-9	Bromomethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-4	MA8691 Norton, MA	Ground Water	11-Oct-18 12:30	15-Oct-18
SC51094-02				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
75-15-0	Carbon Disulfide	< 5.0		ug/L	5.0	5.0	1	SW8260C	11-Oct-18 12:30	17-Oct-18 18:45	M-CT007	452380A	
56-23-5	Carbon tetrachloride	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-00-3	Chloroethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
67-66-3	Chloroform	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
74-87-3	Chloromethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 0.40		ug/L	0.40	0.40	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.50		ug/L	0.50	0.50	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 0.40		ug/L	0.40	0.40	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
179601-23-1	m&p-Xylene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
78-93-3	Methyl ethyl ketone	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether (MTBE)	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-09-2	Methylene chloride	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
91-20-3	Naphthalene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
100-42-5	Styrene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran (THF)	< 2.5		ug/L	2.5	2.5	1	"	"	"	"	"	
108-88-3	Toluene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
156-60-5	trans-1,2-Dichloroethene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
10061-02-6	trans-1,3-Dichloropropene	< 0.40		ug/L	0.40	0.40	1	"	"	"	"	"	
110-57-6	trans-1,4-dichloro-2-buten e	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
79-01-6	Trichloroethene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
76-13-1	Trichlorotrifluoroethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-01-4	Vinyl chloride	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
Surrogate recoveries:													
2199-69-1	*% 1,2-dichlorobenzene-d4*	*96*			*70-130 %*			"	"	"	"	"	
460-00-4	*% Bromofluorobenzene*	*100*			*70-130 %*			"	"	"	"	"	
1868-53-7	*% Dibromofluoromethane*	*109*			*70-130 %*			"	"	"	"	"	
2037-26-5	*% Toluene-d8*	*97*			*70-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-6	MA8691 Norton, MA	Ground Water	11-Oct-18 12:00	15-Oct-18
SC51094-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Extractable Petroleum Hydrocarbons													
MADEP EPH Prepared by method SW846 3510C													
	C9-C18 Aliphatic Hydrocarbons	< 103		µg/l	103	15.4	1	MADEP EPH 5/2004 R	20-Oct-18	24-Oct-18	EDT	1813945	
	C19-C36 Aliphatic Hydrocarbons	< 103		µg/l	103	20.9	1	"	"	"	"	"	
	C11-C22 Aromatic Hydrocarbons	< 103		µg/l	103	76.3	1	"	"	"	"	"	
	Unadjusted C11-C22 Aromatic Hydrocarbons	< 103		µg/l	103	76.3	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.15		µg/l	5.15	1.48	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 5.15		µg/l	5.15	1.28	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 5.15		µg/l	5.15	1.36	1	"	"	"	"	"	
83-32-9	Acenaphthene	< 5.15		µg/l	5.15	1.71	1	"	"	"	"	"	
86-73-7	Fluorene	< 5.15		µg/l	5.15	1.32	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 5.15		µg/l	5.15	1.63	1	"	"	"	"	"	
120-12-7	Anthracene	< 5.15		µg/l	5.15	1.31	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 5.15		µg/l	5.15	1.47	1	"	"	"	"	"	
129-00-0	Pyrene	< 5.15		µg/l	5.15	1.62	1	"	"	"	"	"	
56-55-3	Benzo (a) anthracene	< 5.15		µg/l	5.15	1.48	1	"	"	"	"	"	
218-01-9	Chrysene	< 5.15		µg/l	5.15	1.48	1	"	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	< 5.15		µg/l	5.15	1.63	1	"	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	< 5.15		µg/l	5.15	1.46	1	"	"	"	"	"	
50-32-8	Benzo (a) pyrene	< 5.15		µg/l	5.15	1.36	1	"	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	< 5.15		µg/l	5.15	1.38	1	"	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	< 5.15		µg/l	5.15	1.47	1	"	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	< 5.15		µg/l	5.15	1.29	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chlorooctadecane*	*30*	SGCRE		*40-140 %*			"	"	"	"	"	
84-15-1	*Ortho-Terphenyl*	*48*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*60*			*40-140 %*			"	"	"	"	"	
Re-analysis of MADEP EPH Prepared by method SW846 3510C													
	C9-C18 Aliphatic Hydrocarbons	< 105		µg/l	105	15.7	1	MADEP EPH 5/2004 R	25-Oct-18	30-Oct-18	EDT	1814119	
	C19-C36 Aliphatic Hydrocarbons	< 105		µg/l	105	21.4	1	"	"	"	"	"	
	C11-C22 Aromatic Hydrocarbons	< 105		µg/l	105	77.9	1	"	"	"	"	"	
	Unadjusted C11-C22 Aromatic Hydrocarbons	< 105		µg/l	105	77.9	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.26		µg/l	5.26	1.52	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 5.26		µg/l	5.26	1.31	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 5.26		µg/l	5.26	1.39	1	"	"	"	"	"	
83-32-9	Acenaphthene	< 5.26		µg/l	5.26	1.75	1	"	"	"	"	"	
86-73-7	Fluorene	< 5.26		µg/l	5.26	1.35	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 5.26		µg/l	5.26	1.66	1	"	"	"	"	"	
120-12-7	Anthracene	< 5.26		µg/l	5.26	1.34	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 5.26		µg/l	5.26	1.51	1	"	"	"	"	"	
129-00-0	Pyrene	< 5.26		µg/l	5.26	1.65	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-6	MA8691 Norton, MA	Ground Water	11-Oct-18 12:00	15-Oct-18
SC51094-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Extractable Petroleum Hydrocarbons													
Re-analysis of MADEP EPH													
56-55-3	Benzo (a) anthracene	< 5.26		µg/l	5.26	1.52	1	MADEP EPH 5/2004 R	25-Oct-18	30-Oct-18	EDT	1814119	
218-01-9	Chrysene	< 5.26		µg/l	5.26	1.52	1	"	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	< 5.26		µg/l	5.26	1.66	1	"	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	< 5.26		µg/l	5.26	1.49	1	"	"	"	"	"	
50-32-8	Benzo (a) pyrene	< 5.26		µg/l	5.26	1.39	1	"	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	< 5.26		µg/l	5.26	1.41	1	"	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	< 5.26		µg/l	5.26	1.51	1	"	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	< 5.26		µg/l	5.26	1.32	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chlorooctadecane*	*44*			*40-140 %*			"	"	"	"	"	
84-15-1	*Ortho-Terphenyl*	*54*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*50*			*40-140 %*			"	"	"	"	"	
Total Metals by EPA 200/6000 Series Methods													
Prepared by method General Prep-Metal													
	Preservation	**Field Preserved; pH<2 confirmed**		N/A			1	EPA 200/6000 methods	16-Oct-18		JS	1813742	
Total Metals by EPA 6000/7000 Series Methods													
Prepared by method SW846 3005A													
7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0006	1	SW846 6010C	22-Oct-18	23-Oct-18	SC/EDT	1813852	
7440-38-2	Arsenic	< 0.00400		mg/l	0.00400	0.00138	1	"	"	"	"	"	
7440-39-3	Barium	**0.0724**		mg/l	0.0050	0.0007	1	"	"	"	"	"	
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0004	1	"	"	"	"	"	
7440-47-3	Chromium	< 0.0050		mg/l	0.0050	0.0009	1	"	"	"	"	"	
7439-92-1	Lead	< 0.0075		mg/l	0.0075	0.0062	1	"	"	"	"	"	
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0042	1	"	"	"	"	"	
Total Metals by EPA 200 Series Methods													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.00014	1	EPA 245.1/7470A	22-Oct-18	23-Oct-18	ABW	1813853	X
Soluble Metals by EPA 200/6000 Series Methods													
Prepared by method General Prep-Metal													
	Filtration	**Field Filtered**		N/A			1	EPA 200.7/3005A/6010			JS	1813743	
Soluble Metals by EPA 6000/7000 Series Methods													
Prepared by method SW846 3005A													
7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0006	1	SW846 6010C	22-Oct-18	23-Oct-18	SC/TBC	1813854	
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0014	1	"	"	"	"	"	
7440-39-3	Barium	**0.0710**		mg/l	0.0050	0.0007	1	"	"	"	"	"	
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0004	1	"	"	"	"	"	
7440-47-3	Chromium	< 0.0050		mg/l	0.0050	0.0009	1	"	"	"	"	"	
7439-92-1	Lead	< 0.0075		mg/l	0.0075	0.0062	1	"	"	"	"	"	
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0042	1	"	"	"	"	"	
Soluble Metals by EPA 200 Series Methods													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.00014	1	EPA 245.1/7470A	22-Oct-18	23-Oct-18	ABW	1813855	X
Subcontracted Analyses													

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-6	MA8691 Norton, MA	Ground Water	11-Oct-18 12:00	15-Oct-18
SC51094-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses Prepared by method MA VPH 5/2004													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
71-43-2	Benzene	< 1.0		ug/L	1.0	1.0	1	MA VPH 5/2004	11-Oct-18 12:00	21-Oct-18 20:02	M-CT007	452755A	
	C5-C8 Aliphatic Hydrocarbons *1,2	< 100		ug/L	100	100	1	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons *1	< 100		ug/L	100	100	1	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons *1,3	< 100		ug/L	100	100	1	"	"	"	"	"	
100-41-4	Ethyl Benzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 2.0		ug/L	2.0	2.0	1	"	"	"	"	"	
1634-04-4	MTBE	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
108-88-3	Toluene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatics (*1)	< 100		ug/L	100	100	1	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatics (*1)	< 100		ug/L	100	100	1	"	"	"	"	"	
Surrogate recoveries:													
615-59-8 FID	*% 2,5-Dibromotoluene (FID)*	*98*			*70-130 %*			"	"	"	"	"	
615-59-8	*% 2,5-Dibromotoluene (PID)*	*88*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW8260C													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
630-20-6	1,1,1,2-Tetrachloroethane	< 1.0		ug/L	1.0	1.0	1	SW8260C	"	17-Oct-18 19:10	M-CT007	452380A	
71-55-6	1,1,1-Trichloroethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 0.50		ug/L	0.50	0.50	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.60		ug/L	0.60	0.60	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-6	MA8691 Norton, MA	Ground Water	11-Oct-18 12:00	15-Oct-18
SC51094-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
106-46-7	1,4-Dichlorobenzene	< 1.0		ug/L	1.0	1.0	1	SW8260C	11-Oct-18 12:00	17-Oct-18 19:10	M-CT007	452380A	
594-20-7	2,2-Dichloropropane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
591-78-6	2-Hexanone	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
67-64-1	Acetone	< 25		ug/L	25	25	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
71-43-2	Benzene	< 0.70		ug/L	0.70	0.70	1	"	"	"	"	"	
108-86-1	Bromobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
74-97-5	Bromochloromethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 0.50		ug/L	0.50	0.50	1	"	"	"	"	"	
75-25-2	Bromoform	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
74-83-9	Bromomethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-15-0	Carbon Disulfide	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-00-3	Chloroethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
67-66-3	Chloroform	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
74-87-3	Chloromethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 0.40		ug/L	0.40	0.40	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.50		ug/L	0.50	0.50	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 0.40		ug/L	0.40	0.40	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
179601-23-1	m&p-Xylene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
78-93-3	Methyl ethyl ketone	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether (MTBE)	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-09-2	Methylene chloride	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
91-20-3	Naphthalene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
100-42-5	Styrene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran (THF)	< 2.5		ug/L	2.5	2.5	1	"	"	"	"	"	
108-88-3	Toluene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-6	MA8691 Norton, MA	Ground Water	11-Oct-18 12:00	15-Oct-18
SC51094-03				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
156-60-5	trans-1,2-Dichloroethene	< 1.0		ug/L	1.0	1.0	1	SW8260C	11-Oct-18 12:00	17-Oct-18 19:10	M-CT007	452380A	
10061-02-6	trans-1,3-Dichloropropene	< 0.40		ug/L	0.40	0.40	1	"	"	"	"	"	
110-57-6	trans-1,4-dichloro-2-buten e	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
79-01-6	Trichloroethene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
76-13-1	Trichlorotrifluoroethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-01-4	Vinyl chloride	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
Surrogate recoveries:													
2199-69-1	*% 1,2-dichlorobenzene-d4*	*94*			*70-130 %*			"	"	"	"	"	
460-00-4	*% Bromofluorobenzene*	*99*			*70-130 %*			"	"	"	"	"	
1868-53-7	*% Dibromofluoromethane*	*99*			*70-130 %*			"	"	"	"	"	
2037-26-5	*% Toluene-d8*	*98*			*70-130 %*			"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-7	MA8691 Norton, MA	Ground Water	11-Oct-18 11:30	15-Oct-18
SC51094-04				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Extractable Petroleum Hydrocarbons													
MADEP EPH Prepared by method SW846 3510C													
	C9-C18 Aliphatic Hydrocarbons	< 100		µg/l	100	14.9	1	MADEP EPH 5/2004 R	20-Oct-18	24-Oct-18	EDT	1813945	
	C19-C36 Aliphatic Hydrocarbons	< 100		µg/l	100	20.3	1	"	"	"	"	"	
	C11-C22 Aromatic Hydrocarbons	< 100		µg/l	100	74.0	1	"	"	"	"	"	
	Unadjusted C11-C22 Aromatic Hydrocarbons	< 100		µg/l	100	74.0	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.00		µg/l	5.00	1.44	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 5.00		µg/l	5.00	1.24	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 5.00		µg/l	5.00	1.32	1	"	"	"	"	"	
83-32-9	Acenaphthene	< 5.00		µg/l	5.00	1.66	1	"	"	"	"	"	
86-73-7	Fluorene	< 5.00		µg/l	5.00	1.28	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 5.00		µg/l	5.00	1.58	1	"	"	"	"	"	
120-12-7	Anthracene	< 5.00		µg/l	5.00	1.27	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 5.00		µg/l	5.00	1.43	1	"	"	"	"	"	
129-00-0	Pyrene	< 5.00		µg/l	5.00	1.57	1	"	"	"	"	"	
56-55-3	Benzo (a) anthracene	< 5.00		µg/l	5.00	1.44	1	"	"	"	"	"	
218-01-9	Chrysene	< 5.00		µg/l	5.00	1.44	1	"	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	< 5.00		µg/l	5.00	1.58	1	"	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	< 5.00		µg/l	5.00	1.42	1	"	"	"	"	"	
50-32-8	Benzo (a) pyrene	< 5.00		µg/l	5.00	1.32	1	"	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	< 5.00		µg/l	5.00	1.34	1	"	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	< 5.00		µg/l	5.00	1.43	1	"	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	< 5.00		µg/l	5.00	1.25	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chlorooctadecane*	*17*	SGCRE		*40-140 %*			"	"	"	"	"	
84-15-1	*Ortho-Terphenyl*	*62*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*86*			*40-140 %*			"	"	"	"	"	
Re-analysis of MADEP EPH Prepared by method SW846 3510C													
	C9-C18 Aliphatic Hydrocarbons	< 105		µg/l	105	15.7	1	MADEP EPH 5/2004 R	25-Oct-18	29-Oct-18	EDT	1814119	
	C19-C36 Aliphatic Hydrocarbons	< 105		µg/l	105	21.4	1	"	"	"	"	"	
	C11-C22 Aromatic Hydrocarbons	< 105		µg/l	105	77.9	1	"	"	"	"	"	
	Unadjusted C11-C22 Aromatic Hydrocarbons	< 105		µg/l	105	77.9	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.26		µg/l	5.26	1.52	1	"	"	"	"	"	
91-57-6	2-Methylnaphthalene	< 5.26		µg/l	5.26	1.31	1	"	"	"	"	"	
208-96-8	Acenaphthylene	< 5.26		µg/l	5.26	1.39	1	"	"	"	"	"	
83-32-9	Acenaphthene	< 5.26		µg/l	5.26	1.75	1	"	"	"	"	"	
86-73-7	Fluorene	< 5.26		µg/l	5.26	1.35	1	"	"	"	"	"	
85-01-8	Phenanthrene	< 5.26		µg/l	5.26	1.66	1	"	"	"	"	"	
120-12-7	Anthracene	< 5.26		µg/l	5.26	1.34	1	"	"	"	"	"	
206-44-0	Fluoranthene	< 5.26		µg/l	5.26	1.51	1	"	"	"	"	"	
129-00-0	Pyrene	< 5.26		µg/l	5.26	1.65	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-7	MA8691 Norton, MA	Ground Water	11-Oct-18 11:30	15-Oct-18
SC51094-04				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Extractable Petroleum Hydrocarbons													
Re-analysis of MADEP EPH													
56-55-3	Benzo (a) anthracene	< 5.26		µg/l	5.26	1.52	1	MADEP EPH 5/2004 R	25-Oct-18	29-Oct-18	EDT	1814119	
218-01-9	Chrysene	< 5.26		µg/l	5.26	1.52	1	"	"	"	"	"	
205-99-2	Benzo (b) fluoranthene	< 5.26		µg/l	5.26	1.66	1	"	"	"	"	"	
207-08-9	Benzo (k) fluoranthene	< 5.26		µg/l	5.26	1.49	1	"	"	"	"	"	
50-32-8	Benzo (a) pyrene	< 5.26		µg/l	5.26	1.39	1	"	"	"	"	"	
193-39-5	Indeno (1,2,3-cd) pyrene	< 5.26		µg/l	5.26	1.41	1	"	"	"	"	"	
53-70-3	Dibenzo (a,h) anthracene	< 5.26		µg/l	5.26	1.51	1	"	"	"	"	"	
191-24-2	Benzo (g,h,i) perylene	< 5.26		µg/l	5.26	1.32	1	"	"	"	"	"	
Surrogate recoveries:													
3386-33-2	*1-Chlorooctadecane*	*49*			*40-140 %*			"	"	"	"	"	
84-15-1	*Ortho-Terphenyl*	*64*			*40-140 %*			"	"	"	"	"	
321-60-8	*2-Fluorobiphenyl*	*50*			*40-140 %*			"	"	"	"	"	
Total Metals by EPA 200/6000 Series Methods													
Prepared by method General Prep-Metal													
	Preservation	**Field Preserved; pH<2 confirmed**		N/A			1	EPA 200/6000 methods	16-Oct-18		JS	1813742	
Total Metals by EPA 6000/7000 Series Methods													
Prepared by method SW846 3005A													
7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0006	1	SW846 6010C	22-Oct-18	23-Oct-18	SC/EDT	1813852	
7440-38-2	Arsenic	**0.04205**		mg/l	0.00400	0.00138	1	"	"	"	"	"	
7440-39-3	Barium	**0.187**		mg/l	0.0050	0.0007	1	"	"	"	"	"	
7440-43-9	Cadmium	**0.0040**		mg/l	0.0025	0.0004	1	"	"	"	"	"	
7440-47-3	Chromium	**0.0676**		mg/l	0.0050	0.0009	1	"	"	"	"	"	
7439-92-1	Lead	**0.0590**		mg/l	0.0075	0.0062	1	"	"	"	"	"	
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0042	1	"	"	"	"	"	
Total Metals by EPA 200 Series Methods													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.00014	1	EPA 245.1/7470A	22-Oct-18	23-Oct-18	ABW	1813853	X
Soluble Metals by EPA 200/6000 Series Methods													
Prepared by method General Prep-Metal													
	Filtration	**Field Filtered**		N/A			1	EPA 200.7/3005A/6010			JS	1813743	
Soluble Metals by EPA 6000/7000 Series Methods													
Prepared by method SW846 3005A													
7440-22-4	Silver	< 0.0050		mg/l	0.0050	0.0006	1	SW846 6010C	22-Oct-18	23-Oct-18	SC/TBC	1813854	
7440-38-2	Arsenic	< 0.0040		mg/l	0.0040	0.0014	1	"	"	"	"	"	
7440-39-3	Barium	**0.0344**		mg/l	0.0050	0.0007	1	"	"	"	"	"	
7440-43-9	Cadmium	< 0.0025		mg/l	0.0025	0.0004	1	"	"	"	"	"	
7440-47-3	Chromium	< 0.0050		mg/l	0.0050	0.0009	1	"	"	"	"	"	
7439-92-1	Lead	< 0.0075		mg/l	0.0075	0.0062	1	"	"	"	"	"	
7782-49-2	Selenium	< 0.0150		mg/l	0.0150	0.0042	1	"	"	"	"	"	
Soluble Metals by EPA 200 Series Methods													
7439-97-6	Mercury	< 0.00020		mg/l	0.00020	0.00014	1	EPA 245.1/7470A	22-Oct-18	23-Oct-18	ABW	1813855	X
Subcontracted Analyses													

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-7	MA8691 Norton, MA	Ground Water	11-Oct-18 11:30	15-Oct-18
SC51094-04				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses Prepared by method MA VPH 5/2004													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
71-43-2	Benzene	< 1.0		ug/L	1.0	1.0	1	MA VPH 5/2004	11-Oct-18 11:30	21-Oct-18 20:36	M-CT007	452755A	
	C5-C8 Aliphatic Hydrocarbons *1,2	< 100		ug/L	100	100	1	"	"	"	"	"	
	C9-C10 Aromatic Hydrocarbons *1	< 100		ug/L	100	100	1	"	"	"	"	"	
	C9-C12 Aliphatic Hydrocarbons *1,3	< 100		ug/L	100	100	1	"	"	"	"	"	
100-41-4	Ethyl Benzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
179601-23-1	m,p-Xylenes	< 2.0		ug/L	2.0	2.0	1	"	"	"	"	"	
1634-04-4	MTBE	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
91-20-3	Naphthalene	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
108-88-3	Toluene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
	Unadjusted C5-C8 Aliphatics (*1)	< 100		ug/L	100	100	1	"	"	"	"	"	
	Unadjusted C9-C12 Aliphatics (*1)	< 100		ug/L	100	100	1	"	"	"	"	"	
Surrogate recoveries:													
615-59-8 FID	*% 2,5-Dibromotoluene (FID)*	*99*			*70-130 %*			"	"	"	"	"	
615-59-8	*% 2,5-Dibromotoluene (PID)*	*86*			*70-130 %*			"	"	"	"	"	
Subcontracted Analyses Prepared by method SW8260C													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
630-20-6	1,1,1,2-Tetrachloroethane	< 1.0		ug/L	1.0	1.0	1	SW8260C	"	17-Oct-18 19:34	M-CT007	452380A	
71-55-6	1,1,1-Trichloroethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
79-34-5	1,1,2,2-Tetrachloroethane	< 0.50		ug/L	0.50	0.50	1	"	"	"	"	"	
79-00-5	1,1,2-Trichloroethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-34-3	1,1-Dichloroethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-35-4	1,1-Dichloroethene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
563-58-6	1,1-Dichloropropene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
87-61-6	1,2,3-Trichlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
96-18-4	1,2,3-Trichloropropane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
120-82-1	1,2,4-Trichlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
95-63-6	1,2,4-Trimethylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
96-12-8	1,2-Dibromo-3-chloropropane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
106-93-4	1,2-Dibromoethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
95-50-1	1,2-Dichlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
107-06-2	1,2-Dichloroethane	< 0.60		ug/L	0.60	0.60	1	"	"	"	"	"	
78-87-5	1,2-Dichloropropane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
108-67-8	1,3,5-Trimethylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
541-73-1	1,3-Dichlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
142-28-9	1,3-Dichloropropane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-7	MA8691 Norton, MA	Ground Water	11-Oct-18 11:30	15-Oct-18
SC51094-04				

CAS No.	Analyte(s)	Result	Flag	Units	*RDL	MDL	Dilution	Method Ref.	Prepared	Analyzed	Analyst	Batch	Cert.
Subcontracted Analyses													
Subcontracted Analyses													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
106-46-7	1,4-Dichlorobenzene	< 1.0		ug/L	1.0	1.0	1	SW8260C	11-Oct-18 11:30	17-Oct-18 19:34	M-CT007	452380A	
594-20-7	2,2-Dichloropropane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
95-49-8	2-Chlorotoluene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
591-78-6	2-Hexanone	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
106-43-4	4-Chlorotoluene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
108-10-1	4-Methyl-2-pentanone	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
67-64-1	Acetone	< 25		ug/L	25	25	1	"	"	"	"	"	
107-13-1	Acrylonitrile	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
71-43-2	Benzene	< 0.70		ug/L	0.70	0.70	1	"	"	"	"	"	
108-86-1	Bromobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
74-97-5	Bromochloromethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-27-4	Bromodichloromethane	< 0.50		ug/L	0.50	0.50	1	"	"	"	"	"	
75-25-2	Bromoform	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
74-83-9	Bromomethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-15-0	Carbon Disulfide	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
56-23-5	Carbon tetrachloride	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
108-90-7	Chlorobenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-00-3	Chloroethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
67-66-3	Chloroform	1.7		ug/L	1.0	1.0	1	"	"	"	"	"	
74-87-3	Chloromethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
156-59-2	cis-1,2-Dichloroethene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
10061-01-5	cis-1,3-Dichloropropene	< 0.40		ug/L	0.40	0.40	1	"	"	"	"	"	
124-48-1	Dibromochloromethane	< 0.50		ug/L	0.50	0.50	1	"	"	"	"	"	
74-95-3	Dibromomethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-71-8	Dichlorodifluoromethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
100-41-4	Ethylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
87-68-3	Hexachlorobutadiene	< 0.40		ug/L	0.40	0.40	1	"	"	"	"	"	
98-82-8	Isopropylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
179601-23-1	m&p-Xylene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
78-93-3	Methyl ethyl ketone	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
1634-04-4	Methyl t-butyl ether (MTBE)	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-09-2	Methylene chloride	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
91-20-3	Naphthalene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
104-51-8	n-Butylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
103-65-1	n-Propylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
95-47-6	o-Xylene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
99-87-6	p-Isopropyltoluene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
135-98-8	sec-Butylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
100-42-5	Styrene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
98-06-6	tert-Butylbenzene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
127-18-4	Tetrachloroethene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
109-99-9	Tetrahydrofuran (THF)	< 2.5		ug/L	2.5	2.5	1	"	"	"	"	"	
108-88-3	Toluene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	

Sample Identification	Client Project #	Matrix	Collection Date/Time	Received
MW-7	MA8691 Norton, MA	Ground Water	11-Oct-18 11:30	15-Oct-18
SC51094-04				

CAS No.	*Analyte(s)*	*Result*	*Flag*	*Units*	**RDL*	*MDL*	*Dilution*	*Method Ref.*	*Prepared*	*Analyzed*	*Analyst*	*Batch*	*Cert.*
Subcontracted Analyses													
Subcontracted Analyses													
*Analysis performed by Phoenix Environmental Labs, Inc. * - MACT007*													
156-60-5	trans-1,2-Dichloroethene	< 1.0		ug/L	1.0	1.0	1	SW8260C	11-Oct-18 11:30	17-Oct-18 19:34	M-CT007	452380A	
10061-02-6	trans-1,3-Dichloropropene	< 0.40		ug/L	0.40	0.40	1	"	"	"	"	"	
110-57-6	trans-1,4-dichloro-2-buten e	< 5.0		ug/L	5.0	5.0	1	"	"	"	"	"	
79-01-6	Trichloroethene	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-69-4	Trichlorofluoromethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
76-13-1	Trichlorotrifluoroethane	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
75-01-4	Vinyl chloride	< 1.0		ug/L	1.0	1.0	1	"	"	"	"	"	
Surrogate recoveries:													
2199-69-1	*% 1,2-dichlorobenzene-d4*	*97*			*70-130 %*			"	"	"	"	"	
460-00-4	*% Bromofluorobenzene*	*98*			*70-130 %*			"	"	"	"	"	
1868-53-7	*% Dibromofluoromethane*	*112*			*70-130 %*			"	"	"	"	"	
2037-26-5	*% Toluene-d8*	*98*			*70-130 %*			"	"	"	"	"	

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 1813846 - SW846 3510C										
Blank (1813846-BLK1)					Prepared: 18-Oct-18 Analyzed: 23-Oct-18					
Acenaphthene	< 5.00		µg/l	5.00						
Acenaphthylene	< 5.00		µg/l	5.00						
Aniline	< 5.00		µg/l	5.00						
Anthracene	< 5.00		µg/l	5.00						
Azobenzene/Diphenyldiazene	< 5.00		µg/l	5.00						
Benzidine	< 10.0		µg/l	10.0						
Benzo (a) anthracene	< 5.00		µg/l	5.00						
Benzo (a) pyrene	< 5.00		µg/l	5.00						
Benzo (b) fluoranthene	< 5.00		µg/l	5.00						
Benzo (g,h,i) perylene	< 5.00		µg/l	5.00						
Benzo (k) fluoranthene	< 5.00		µg/l	5.00						
Benzoic acid	< 5.00		µg/l	5.00						
Benzyl alcohol	< 5.00		µg/l	5.00						
Bis(2-chloroethoxy)methane	< 5.00		µg/l	5.00						
Bis(2-chloroethyl)ether	< 5.00		µg/l	5.00						
Bis(2-chloroisopropyl)ether	< 5.00		µg/l	5.00						
Bis(2-ethylhexyl)phthalate	< 5.00		µg/l	5.00						
4-Bromophenyl phenyl ether	< 5.00		µg/l	5.00						
Butyl benzyl phthalate	< 5.00		µg/l	5.00						
Carbazole	< 5.00		µg/l	5.00						
4-Chloro-3-methylphenol	< 5.00		µg/l	5.00						
4-Chloroaniline	< 5.00		µg/l	5.00						
2-Chloronaphthalene	< 5.00		µg/l	5.00						
2-Chlorophenol	< 5.00		µg/l	5.00						
4-Chlorophenyl phenyl ether	< 5.00		µg/l	5.00						
Chrysene	< 5.00		µg/l	5.00						
Dibenzo (a,h) anthracene	< 5.00		µg/l	5.00						
Dibenzofuran	< 5.00		µg/l	5.00						
1,2-Dichlorobenzene	< 5.00		µg/l	5.00						
1,3-Dichlorobenzene	< 5.00		µg/l	5.00						
1,4-Dichlorobenzene	< 5.00		µg/l	5.00						
3,3´-Dichlorobenzidine	< 5.00		µg/l	5.00						
2,4-Dichlorophenol	< 5.00		µg/l	5.00						
Diethyl phthalate	< 5.00		µg/l	5.00						
Dimethyl phthalate	< 5.00		µg/l	5.00						
2,4-Dimethylphenol	< 5.00		µg/l	5.00						
Di-n-butyl phthalate	< 5.00		µg/l	5.00						
4,6-Dinitro-2-methylphenol	< 5.00		µg/l	5.00						
2,4-Dinitrophenol	< 5.00		µg/l	5.00						
2,4-Dinitrotoluene	< 5.00		µg/l	5.00						
2,6-Dinitrotoluene	< 5.00		µg/l	5.00						
Di-n-octyl phthalate	< 5.00		µg/l	5.00						
Fluoranthene	< 5.00		µg/l	5.00						
Fluorene	< 5.00		µg/l	5.00						
Hexachlorobenzene	< 5.00		µg/l	5.00						
Hexachlorobutadiene	< 5.00		µg/l	5.00						
Hexachlorocyclopentadiene	< 5.00		µg/l	5.00						
Hexachloroethane	< 5.00		µg/l	5.00						
Indeno (1,2,3-cd) pyrene	< 5.00		µg/l	5.00						
Isophorone	< 5.00		µg/l	5.00						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 1813846 - SW846 3510C										
Blank (1813846-BLK1)						Prepared: 18-Oct-18 Analyzed: 23-Oct-18				
2-Methylnaphthalene	< 5.00		µg/l	5.00						
2-Methylphenol	< 5.00		µg/l	5.00						
3 & 4-Methylphenol	< 10.0		µg/l	10.0						
Naphthalene	< 5.00		µg/l	5.00						
2-Nitroaniline	< 5.00		µg/l	5.00						
3-Nitroaniline	< 5.00		µg/l	5.00						
4-Nitroaniline	< 5.00		µg/l	5.00						
Nitrobenzene	< 5.00		µg/l	5.00						
2-Nitrophenol	< 5.00		µg/l	5.00						
4-Nitrophenol	< 20.0		µg/l	20.0						
N-Nitrosodimethylamine	< 5.00		µg/l	5.00						
N-Nitrosodi-n-propylamine	< 5.00		µg/l	5.00						
N-Nitrosodiphenylamine	< 5.00		µg/l	5.00						
Pentachlorophenol	< 20.0		µg/l	20.0						
Phenanthrene	< 5.00		µg/l	5.00						
Phenol	< 5.00		µg/l	5.00						
Pyrene	< 5.00		µg/l	5.00						
Pyridine	< 5.00		µg/l	5.00						
1,2,4-Trichlorobenzene	< 5.00		µg/l	5.00						
1-Methylnaphthalene	< 5.00		µg/l	5.00						
2,4,5-Trichlorophenol	< 5.00		µg/l	5.00						
2,4,6-Trichlorophenol	< 5.00		µg/l	5.00						
Pentachloronitrobenzene	< 5.00		µg/l	5.00						
1,2,4,5-Tetrachlorobenzene	< 5.00		µg/l	5.00						
Surrogate: 2-Fluorobiphenyl	*33.8*		µg/l		*50.0*		*68*	*30-130*		
Surrogate: 2-Fluorophenol	*25.1*		µg/l		*50.0*		*50*	*15-110*		
Surrogate: Nitrobenzene-d5	*33.8*		µg/l		*50.0*		*68*	*30-130*		
Surrogate: Phenol-d5	*15.7*		µg/l		*50.0*		*31*	*15-110*		
Surrogate: Terphenyl-dl4	*37.6*		µg/l		*50.0*		*75*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*36.2*		µg/l		*50.0*		*72*	*15-110*		
LCS (1813846-BS1)						Prepared: 18-Oct-18 Analyzed: 23-Oct-18				
Acenaphthene	**26.6**		µg/l	4.95	49.5		54	40-140		
Acenaphthylene	**25.9**		µg/l	4.95	49.5		52	40-140		
Aniline	**13.5**	QC6	µg/l	4.95	49.5		27	40-140		
Anthracene	**26.9**		µg/l	4.95	49.5		54	40-140		
Azobenzene/Diphenyldiazene	**23.7**		µg/l	4.95	49.5		48	40-140		
Benzidine	**6.93**	QC6	µg/l	9.90	49.5		14	40-140		
Benzo (a) anthracene	**27.8**		µg/l	4.95	49.5		56	40-140		
Benzo (a) pyrene	**31.6**		µg/l	4.95	49.5		64	40-140		
Benzo (b) fluoranthene	**32.3**		µg/l	4.95	49.5		65	40-140		
Benzo (g,h,i) perylene	**31.9**		µg/l	4.95	49.5		64	40-140		
Benzo (k) fluoranthene	**29.3**		µg/l	4.95	49.5		59	40-140		
Benzoic acid	**18.1**		µg/l	4.95	49.5		37	30-130		
Benzyl alcohol	**24.0**		µg/l	4.95	49.5		48	40-140		
Bis(2-chloroethoxy)methane	**22.3**		µg/l	4.95	49.5		45	40-140		
Bis(2-chloroethyl)ether	**23.3**		µg/l	4.95	49.5		47	40-140		
Bis(2-chloroisopropyl)ether	**20.0**		µg/l	4.95	49.5		40	40-140		
Bis(2-ethylhexyl)phthalate	**27.7**		µg/l	4.95	49.5		56	40-140		
4-Bromophenyl phenyl ether	**27.1**		µg/l	4.95	49.5		55	40-140		
Butyl benzyl phthalate	**28.0**		µg/l	4.95	49.5		57	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 1813846 - SW846 3510C										
LCS (1813846-BS1)					Prepared: 18-Oct-18 Analyzed: 23-Oct-18					
Carbazole	**27.4**		µg/l	4.95	49.5		55	40-140		
4-Chloro-3-methylphenol	**26.8**		µg/l	4.95	49.5		54	30-130		
4-Chloroaniline	**18.4**	QC6	µg/l	4.95	49.5		37	40-140		
2-Chloronaphthalene	**30.4**		µg/l	4.95	49.5		61	40-140		
2-Chlorophenol	**24.6**		µg/l	4.95	49.5		50	30-130		
4-Chlorophenyl phenyl ether	**27.1**		µg/l	4.95	49.5		55	40-140		
Chrysene	**27.5**		µg/l	4.95	49.5		55	40-140		
Dibenzo (a,h) anthracene	**32.6**		µg/l	4.95	49.5		66	40-140		
Dibenzofuran	**30.4**		µg/l	4.95	49.5		61	40-140		
1,2-Dichlorobenzene	**29.3**		µg/l	4.95	49.5		59	40-140		
1,3-Dichlorobenzene	**28.9**		µg/l	4.95	49.5		58	40-140		
1,4-Dichlorobenzene	**29.0**		µg/l	4.95	49.5		59	40-140		
3,3´-Dichlorobenzidine	**28.9**		µg/l	4.95	49.5		58	40-140		
2,4-Dichlorophenol	**27.3**		µg/l	4.95	49.5		55	30-130		
Diethyl phthalate	**27.4**		µg/l	4.95	49.5		55	40-140		
Dimethyl phthalate	**27.0**		µg/l	4.95	49.5		55	40-140		
2,4-Dimethylphenol	**24.0**		µg/l	4.95	49.5		48	30-130		
Di-n-butyl phthalate	**28.3**		µg/l	4.95	49.5		57	40-140		
4,6-Dinitro-2-methylphenol	**31.1**		µg/l	4.95	49.5		63	30-130		
2,4-Dinitrophenol	**22.9**		µg/l	4.95	49.5		46	30-130		
2,4-Dinitrotoluene	**35.7**		µg/l	4.95	49.5		72	40-140		
2,6-Dinitrotoluene	**36.2**		µg/l	4.95	49.5		73	40-140		
Di-n-octyl phthalate	**31.2**		µg/l	4.95	49.5		63	40-140		
Fluoranthene	**28.0**		µg/l	4.95	49.5		57	40-140		
Fluorene	**27.2**		µg/l	4.95	49.5		55	40-140		
Hexachlorobenzene	**30.9**		µg/l	4.95	49.5		62	40-140		
Hexachlorobutadiene	**28.5**		µg/l	4.95	49.5		58	40-140		
Hexachlorocyclopentadiene	**33.4**		µg/l	4.95	49.5		68	40-140		
Hexachloroethane	**28.9**		µg/l	4.95	49.5		58	40-140		
Indeno (1,2,3-cd) pyrene	**33.4**		µg/l	4.95	49.5		67	40-140		
Isophorone	**23.9**		µg/l	4.95	49.5		48	40-140		
2-Methylnaphthalene	**30.8**		µg/l	4.95	49.5		62	40-140		
2-Methylphenol	**22.9**		µg/l	4.95	49.5		46	30-130		
3 & 4-Methylphenol	**21.6**		µg/l	9.90	49.5		44	30-130		
Naphthalene	**25.9**		µg/l	4.95	49.5		52	40-140		
2-Nitroaniline	**27.9**		µg/l	4.95	49.5		56	40-140		
3-Nitroaniline	**23.9**		µg/l	4.95	49.5		48	40-140		
4-Nitroaniline	**30.3**		µg/l	4.95	49.5		61	40-140		
Nitrobenzene	**29.9**		µg/l	4.95	49.5		60	40-140		
2-Nitrophenol	**27.8**		µg/l	4.95	49.5		56	30-130		
4-Nitrophenol	**19.4**		µg/l	19.8	49.5		39	30-130		
N-Nitrosodimethylamine	**17.9**	QC6	µg/l	4.95	49.5		36	40-140		
N-Nitrosodi-n-propylamine	**26.0**		µg/l	4.95	49.5		53	40-140		
N-Nitrosodiphenylamine	**28.0**		µg/l	4.95	49.5		57	40-140		
Pentachlorophenol	**27.3**		µg/l	19.8	49.5		55	30-130		
Phenanthrene	**26.1**		µg/l	4.95	49.5		53	40-140		
Phenol	**13.6**	QC6	µg/l	4.95	49.5		27	30-130		
Pyrene	**27.9**		µg/l	4.95	49.5		56	40-140		
Pyridine	**9.66**	QC6	µg/l	4.95	49.5		20	40-140		
1,2,4-Trichlorobenzene	**31.1**		µg/l	4.95	49.5		63	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 1813846 - SW846 3510C										
LCS (1813846-BS1)					Prepared: 18-Oct-18 Analyzed: 23-Oct-18					
1-Methylnaphthalene	**25.7**		µg/l	4.95	49.5		52	40-140		
2,4,5-Trichlorophenol	**27.7**		µg/l	4.95	49.5		56	30-130		
2,4,6-Trichlorophenol	**26.0**		µg/l	4.95	49.5		52	30-130		
Pentachloronitrobenzene	**29.0**		µg/l	4.95	49.5		59	40-140		
1,2,4,5-Tetrachlorobenzene	**26.8**		µg/l	4.95	49.5		54	40-140		
Surrogate: 2-Fluorobiphenyl	*27.9*		µg/l		*49.5*		*56*	*30-130*		
Surrogate: 2-Fluorophenol	*20.3*		µg/l		*49.5*		*41*	*15-110*		
Surrogate: Nitrobenzene-d5	*27.3*		µg/l		*49.5*		*55*	*30-130*		
Surrogate: Phenol-d5	*14.4*		µg/l		*49.5*		*29*	*15-110*		
Surrogate: Terphenyl-dl4	*30.8*		µg/l		*49.5*		*62*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*31.6*		µg/l		*49.5*		*64*	*15-110*		
LCS Dup (1813846-BSD1)					Prepared: 18-Oct-18 Analyzed: 23-Oct-18					
Acenaphthene	**25.9**		µg/l	5.00	50.0		52	40-140	3	20
Acenaphthylene	**24.9**		µg/l	5.00	50.0		50	40-140	4	20
Aniline	**13.4**	QC6	µg/l	5.00	50.0		27	40-140	0.6	20
Anthracene	**26.4**		µg/l	5.00	50.0		53	40-140	2	20
Azobenzene/Diphenyldiazene	**23.7**		µg/l	5.00	50.0		47	40-140	0.06	20
Benzidine	**6.73**	QC6	µg/l	10.0	50.0		13	40-140	3	20
Benzo (a) anthracene	**27.5**		µg/l	5.00	50.0		55	40-140	1	20
Benzo (a) pyrene	**30.8**		µg/l	5.00	50.0		62	40-140	2	20
Benzo (b) fluoranthene	**31.0**		µg/l	5.00	50.0		62	40-140	4	20
Benzo (g,h,i) perylene	**30.4**		µg/l	5.00	50.0		61	40-140	5	20
Benzo (k) fluoranthene	**30.1**		µg/l	5.00	50.0		60	40-140	3	20
Benzoic acid	**17.0**		µg/l	5.00	50.0		34	30-130	6	20
Benzyl alcohol	**23.9**		µg/l	5.00	50.0		48	40-140	0.4	20
Bis(2-chloroethoxy)methane	**21.7**		µg/l	5.00	50.0		43	40-140	3	20
Bis(2-chloroethyl)ether	**22.7**		µg/l	5.00	50.0		45	40-140	3	20
Bis(2-chloroisopropyl)ether	**19.0**	QC6	µg/l	5.00	50.0		38	40-140	5	20
Bis(2-ethylhexyl)phthalate	**27.5**		µg/l	5.00	50.0		55	40-140	0.4	20
4-Bromophenyl phenyl ether	**26.8**		µg/l	5.00	50.0		54	40-140	1	20
Butyl benzyl phthalate	**28.0**		µg/l	5.00	50.0		56	40-140	0.1	20
Carbazole	**26.8**		µg/l	5.00	50.0		54	40-140	2	20
4-Chloro-3-methylphenol	**25.7**		µg/l	5.00	50.0		51	30-130	4	20
4-Chloroaniline	**18.8**	QC6	µg/l	5.00	50.0		38	40-140	3	20
2-Chloronaphthalene	**29.8**		µg/l	5.00	50.0		60	40-140	2	20
2-Chlorophenol	**24.0**		µg/l	5.00	50.0		48	30-130	3	20
4-Chlorophenyl phenyl ether	**26.6**		µg/l	5.00	50.0		53	40-140	2	20
Chrysene	**27.0**		µg/l	5.00	50.0		54	40-140	2	20
Dibenzo (a,h) anthracene	**31.1**		µg/l	5.00	50.0		62	40-140	5	20
Dibenzofuran	**29.8**		µg/l	5.00	50.0		60	40-140	2	20
1,2-Dichlorobenzene	**28.2**		µg/l	5.00	50.0		56	40-140	4	20
1,3-Dichlorobenzene	**27.5**		µg/l	5.00	50.0		55	40-140	5	20
1,4-Dichlorobenzene	**27.6**		µg/l	5.00	50.0		55	40-140	5	20
3,3´-Dichlorobenzidine	**28.8**		µg/l	5.00	50.0		58	40-140	0.4	20
2,4-Dichlorophenol	**26.6**		µg/l	5.00	50.0		53	30-130	3	20
Diethyl phthalate	**26.8**		µg/l	5.00	50.0		54	40-140	2	20
Dimethyl phthalate	**26.5**		µg/l	5.00	50.0		53	40-140	2	20
2,4-Dimethylphenol	**23.1**		µg/l	5.00	50.0		46	30-130	4	20
Di-n-butyl phthalate	**28.1**		µg/l	5.00	50.0		56	40-140	0.6	20
4,6-Dinitro-2-methylphenol	**30.0**		µg/l	5.00	50.0		60	30-130	4	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 1813846 - SW846 3510C										
LCS Dup (1813846-BSD1)					Prepared: 18-Oct-18 Analyzed: 23-Oct-18					
2,4-Dinitrophenol	**20.9**		µg/l	5.00	50.0		42	30-130	9	20
2,4-Dinitrotoluene	**34.7**		µg/l	5.00	50.0		69	40-140	3	20
2,6-Dinitrotoluene	**34.8**		µg/l	5.00	50.0		70	40-140	4	20
Di-n-octyl phthalate	**31.8**		µg/l	5.00	50.0		64	40-140	2	20
Fluoranthene	**27.6**		µg/l	5.00	50.0		55	40-140	1	20
Fluorene	**26.9**		µg/l	5.00	50.0		54	40-140	1	20
Hexachlorobenzene	**30.8**		µg/l	5.00	50.0		62	40-140	0.5	20
Hexachlorobutadiene	**27.8**		µg/l	5.00	50.0		56	40-140	3	20
Hexachlorocyclopentadiene	**31.9**		µg/l	5.00	50.0		64	40-140	5	20
Hexachloroethane	**27.5**		µg/l	5.00	50.0		55	40-140	5	20
Indeno (1,2,3-cd) pyrene	**32.4**		µg/l	5.00	50.0		65	40-140	3	20
Isophorone	**23.2**		µg/l	5.00	50.0		46	40-140	3	20
2-Methylnaphthalene	**30.1**		µg/l	5.00	50.0		60	40-140	2	20
2-Methylphenol	**21.8**		µg/l	5.00	50.0		44	30-130	5	20
3 & 4-Methylphenol	**20.6**		µg/l	10.0	50.0		41	30-130	4	20
Naphthalene	**25.2**		µg/l	5.00	50.0		50	40-140	3	20
2-Nitroaniline	**27.0**		µg/l	5.00	50.0		54	40-140	4	20
3-Nitroaniline	**23.8**		µg/l	5.00	50.0		48	40-140	0.09	20
4-Nitroaniline	**29.1**		µg/l	5.00	50.0		58	40-140	4	20
Nitrobenzene	**28.8**		µg/l	5.00	50.0		58	40-140	3	20
2-Nitrophenol	**26.9**		µg/l	5.00	50.0		54	30-130	3	20
4-Nitrophenol	**20.8**		µg/l	20.0	50.0		42	30-130	7	20
N-Nitrosodimethylamine	**16.8**	QC6	µg/l	5.00	50.0		34	40-140	6	20
N-Nitrosodi-n-propylamine	**24.8**		µg/l	5.00	50.0		50	40-140	5	20
N-Nitrosodiphenylamine	**27.7**		µg/l	5.00	50.0		55	40-140	0.9	20
Pentachlorophenol	**26.3**		µg/l	20.0	50.0		53	30-130	4	20
Phenanthrene	**26.1**		µg/l	5.00	50.0		52	40-140	0.004	20
Phenol	**13.1**	QC6	µg/l	5.00	50.0		26	30-130	4	20
Pyrene	**28.0**		µg/l	5.00	50.0		56	40-140	0.2	20
Pyridine	**9.22**	QC6	µg/l	5.00	50.0		18	40-140	5	20
1,2,4-Trichlorobenzene	**29.7**		µg/l	5.00	50.0		59	40-140	5	20
1-Methylnaphthalene	**25.2**		µg/l	5.00	50.0		50	40-140	2	20
2,4,5-Trichlorophenol	**26.7**		µg/l	5.00	50.0		53	30-130	4	20
2,4,6-Trichlorophenol	**25.2**		µg/l	5.00	50.0		50	30-130	3	20
Pentachloronitrobenzene	**28.9**		µg/l	5.00	50.0		58	40-140	0.5	20
1,2,4,5-Tetrachlorobenzene	**26.0**		µg/l	5.00	50.0		52	40-140	3	20
Surrogate: 2-Fluorobiphenyl	*26.9*		µg/l		*50.0*		*54*	*30-130*		
Surrogate: 2-Fluorophenol	*19.7*		µg/l		*50.0*		*39*	*15-110*		
Surrogate: Nitrobenzene-d5	*26.2*		µg/l		*50.0*		*52*	*30-130*		
Surrogate: Phenol-d5	*14.0*		µg/l		*50.0*		*28*	*15-110*		
Surrogate: Terphenyl-dl4	*31.2*		µg/l		*50.0*		*62*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*31.4*		µg/l		*50.0*		*63*	*15-110*		
Duplicate (1813846-DUP1)			**Source: SC51094-01**		Prepared: 18-Oct-18 Analyzed: 24-Oct-18					
Acenaphthene	< 5.43		µg/l	5.43		BRL				20
Acenaphthylene	< 5.43		µg/l	5.43		BRL				20
Aniline	< 5.43		µg/l	5.43		BRL				20
Anthracene	< 5.43		µg/l	5.43		BRL				20
Azobenzene/Diphenyldiazene	< 5.43		µg/l	5.43		BRL				20
Benzidine	< 10.9		µg/l	10.9		BRL				20
Benzo (a) anthracene	< 5.43		µg/l	5.43		BRL				20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 1813846 - SW846 3510C										
Duplicate (1813846-DUP1)			**Source: SC51094-01**		Prepared: 18-Oct-18 Analyzed: 24-Oct-18					
Benzo (a) pyrene	< 5.43		µg/l	5.43		BRL				20
Benzo (b) fluoranthene	< 5.43		µg/l	5.43		BRL				20
Benzo (g,h,i) perylene	< 5.43		µg/l	5.43		BRL				20
Benzo (k) fluoranthene	< 5.43		µg/l	5.43		BRL				20
Benzoic acid	< 5.43		µg/l	5.43		BRL				20
Benzyl alcohol	< 5.43		µg/l	5.43		BRL				20
Bis(2-chloroethoxy)methane	< 5.43		µg/l	5.43		BRL				20
Bis(2-chloroethyl)ether	< 5.43		µg/l	5.43		BRL				20
Bis(2-chloroisopropyl)ether	< 5.43		µg/l	5.43		BRL				20
Bis(2-ethylhexyl)phthalate	< 5.43		µg/l	5.43		BRL				20
4-Bromophenyl phenyl ether	< 5.43		µg/l	5.43		BRL				20
Butyl benzyl phthalate	< 5.43		µg/l	5.43		BRL				20
Carbazole	< 5.43		µg/l	5.43		BRL				20
4-Chloro-3-methylphenol	< 5.43		µg/l	5.43		BRL				20
4-Chloroaniline	< 5.43		µg/l	5.43		BRL				20
2-Chloronaphthalene	< 5.43		µg/l	5.43		BRL				20
2-Chlorophenol	< 5.43		µg/l	5.43		BRL				20
4-Chlorophenyl phenyl ether	< 5.43		µg/l	5.43		BRL				20
Chrysene	< 5.43		µg/l	5.43		BRL				20
Dibenzo (a,h) anthracene	< 5.43		µg/l	5.43		BRL				20
Dibenzofuran	< 5.43		µg/l	5.43		BRL				20
1,2-Dichlorobenzene	< 5.43		µg/l	5.43		BRL				20
1,3-Dichlorobenzene	< 5.43		µg/l	5.43		BRL				20
1,4-Dichlorobenzene	< 5.43		µg/l	5.43		BRL				20
3,3´-Dichlorobenzidine	< 5.43		µg/l	5.43		BRL				20
2,4-Dichlorophenol	< 5.43		µg/l	5.43		BRL				20
Diethyl phthalate	< 5.43		µg/l	5.43		BRL				20
Dimethyl phthalate	< 5.43		µg/l	5.43		BRL				20
2,4-Dimethylphenol	< 5.43		µg/l	5.43		BRL				20
Di-n-butyl phthalate	< 5.43		µg/l	5.43		BRL				20
4,6-Dinitro-2-methylphenol	< 5.43		µg/l	5.43		BRL				20
2,4-Dinitrophenol	< 5.43		µg/l	5.43		BRL				20
2,4-Dinitrotoluene	< 5.43		µg/l	5.43		BRL				20
2,6-Dinitrotoluene	< 5.43		µg/l	5.43		BRL				20
Di-n-octyl phthalate	< 5.43		µg/l	5.43		BRL				20
Fluoranthene	< 5.43		µg/l	5.43		BRL				20
Fluorene	< 5.43		µg/l	5.43		BRL				20
Hexachlorobenzene	< 5.43		µg/l	5.43		BRL				20
Hexachlorobutadiene	< 5.43		µg/l	5.43		BRL				20
Hexachlorocyclopentadiene	< 5.43		µg/l	5.43		BRL				20
Hexachloroethane	< 5.43		µg/l	5.43		BRL				20
Indeno (1,2,3-cd) pyrene	< 5.43		µg/l	5.43		BRL				20
Isophorone	< 5.43		µg/l	5.43		BRL				20
2-Methylnaphthalene	< 5.43		µg/l	5.43		BRL				20
2-Methylphenol	< 5.43		µg/l	5.43		BRL				20
3 & 4-Methylphenol	< 10.9		µg/l	10.9		BRL				20
Naphthalene	< 5.43		µg/l	5.43		BRL				20
2-Nitroaniline	< 5.43		µg/l	5.43		BRL				20
3-Nitroaniline	< 5.43		µg/l	5.43		BRL				20
4-Nitroaniline	< 5.43		µg/l	5.43		BRL				20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 8270D										
Batch 1813846 - SW846 3510C										
Duplicate (1813846-DUP1)			**Source: SC51094-01**		Prepared: 18-Oct-18 Analyzed: 24-Oct-18					
Nitrobenzene	< 5.43		µg/l	5.43		BRL				20
2-Nitrophenol	< 5.43		µg/l	5.43		BRL				20
4-Nitrophenol	< 21.7		µg/l	21.7		BRL				20
N-Nitrosodimethylamine	< 5.43		µg/l	5.43		BRL				20
N-Nitrosodi-n-propylamine	< 5.43		µg/l	5.43		BRL				20
N-Nitrosodiphenylamine	< 5.43		µg/l	5.43		BRL				20
Pentachlorophenol	< 21.7		µg/l	21.7		BRL				20
Phenanthrene	< 5.43		µg/l	5.43		BRL				20
Phenol	< 5.43		µg/l	5.43		BRL				20
Pyrene	< 5.43		µg/l	5.43		BRL				20
Pyridine	< 5.43		µg/l	5.43		BRL				20
1,2,4-Trichlorobenzene	< 5.43		µg/l	5.43		BRL				20
1-Methylnaphthalene	< 5.43		µg/l	5.43		BRL				20
2,4,5-Trichlorophenol	< 5.43		µg/l	5.43		BRL				20
2,4,6-Trichlorophenol	< 5.43		µg/l	5.43		BRL				20
Pentachloronitrobenzene	< 5.43		µg/l	5.43		BRL				20
1,2,4,5-Tetrachlorobenzene	< 5.43		µg/l	5.43		BRL				20
Surrogate: 2-Fluorobiphenyl	*25.6*		µg/l		*54.3*		*47*	*30-130*		
Surrogate: 2-Fluorophenol	*17.8*		µg/l		*54.3*		*33*	*15-110*		
Surrogate: Nitrobenzene-d5	*25.2*		µg/l		*54.3*		*46*	*30-130*		
Surrogate: Phenol-d5	*10.9*		µg/l		*54.3*		*20*	*15-110*		
Surrogate: Terphenyl-dl4	*25.3*		µg/l		*54.3*		*47*	*30-130*		
Surrogate: 2,4,6-Tribromophenol	*23.7*		µg/l		*54.3*		*44*	*15-110*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH 5/2004 R										
Batch 1813945 - SW846 3510C										
Blank (1813945-BLK1)					Prepared: 20-Oct-18 Analyzed: 23-Oct-18					
C9-C18 Aliphatic Hydrocarbons	< 102		µg/l	102						
C19-C36 Aliphatic Hydrocarbons	< 102		µg/l	102						
C11-C22 Aromatic Hydrocarbons	< 102		µg/l	102						
Unadjusted C11-C22 Aromatic Hydrocarbons	< 102		µg/l	102						
Total Petroleum Hydrocarbons	< 306		µg/l	306						
Unadjusted Total Petroleum Hydrocarbons	< 306		µg/l	306						
Naphthalene	< 5.10		µg/l	5.10						
2-Methylnaphthalene	< 5.10		µg/l	5.10						
Acenaphthylene	< 5.10		µg/l	5.10						
Acenaphthene	< 5.10		µg/l	5.10						
Fluorene	< 5.10		µg/l	5.10						
Phenanthrene	< 5.10		µg/l	5.10						
Anthracene	< 5.10		µg/l	5.10						
Fluoranthene	< 5.10		µg/l	5.10						
Pyrene	< 5.10		µg/l	5.10						
Benzo (a) anthracene	< 5.10		µg/l	5.10						
Chrysene	< 5.10		µg/l	5.10						
Benzo (b) fluoranthene	< 5.10		µg/l	5.10						
Benzo (k) fluoranthene	< 5.10		µg/l	5.10						
Benzo (a) pyrene	< 5.10		µg/l	5.10						
Indeno (1,2,3-cd) pyrene	< 5.10		µg/l	5.10						
Dibenzo (a,h) anthracene	< 5.10		µg/l	5.10						
Benzo (g,h,i) perylene	< 5.10		µg/l	5.10						
n-Nonane (C9)	< 5.10		µg/l	5.10						
n-Decane	< 5.10		µg/l	5.10						
n-Dodecane	< 5.10		µg/l	5.10						
n-Tetradecane	< 5.10		µg/l	5.10						
n-Hexadecane	< 5.10		µg/l	5.10						
n-Octadecane	< 5.10		µg/l	5.10						
n-Nonadecane	< 5.10		µg/l	5.10						
n-Eicosane	< 5.10		µg/l	5.10						
n-Docosane	< 5.10		µg/l	5.10						
n-Tetracosane	< 5.10		µg/l	5.10						
n-Hexacosane	< 5.10		µg/l	5.10						
n-Octacosane	< 5.10		µg/l	5.10						
n-Triacontane	< 5.10		µg/l	5.10						
n-Hexatriacontane	< 5.10		µg/l	5.10						
Naphthalene (aliphatic fraction)	**0.00**		µg/l							
2-Methylnaphthalene (aliphatic fraction)	**0.00**		µg/l							
Surrogate: 1-Chlorooctadecane	*29.3*		µg/l		*51.0*		*58*	*40-140*		
Surrogate: Ortho-Terphenyl	*34.2*		µg/l		*51.0*		*67*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*45.6*		µg/l		*40.8*		*112*	*40-140*		
LCS (1813945-BS1)					Prepared: 20-Oct-18 Analyzed: 23-Oct-18					
C9-C18 Aliphatic Hydrocarbons	**189**		µg/l	102	612		31	40-140		
C19-C36 Aliphatic Hydrocarbons	**393**		µg/l	102	816		48	40-140		
Unadjusted C11-C22 Aromatic Hydrocarbons	**452**		µg/l	102	694		65	40-140		
Naphthalene	**11.3**		µg/l	5.10	40.8		28	40-140		
2-Methylnaphthalene	**11.1**		µg/l	5.10	40.8		27	40-140		
Acenaphthylene	**14.2**	QM9	µg/l	5.10	40.8		35	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH 5/2004 R										
Batch 1813945 - SW846 3510C										
LCS (1813945-BS1)						Prepared: 20-Oct-18 Analyzed: 23-Oct-18				
Acenaphthene	**15.0**	QM9	µg/l	5.10	40.8		37	40-140		
Fluorene	**15.0**	QM9	µg/l	5.10	40.8		37	40-140		
Phenanthrene	**17.7**		µg/l	5.10	40.8		43	40-140		
Anthracene	**21.0**		µg/l	5.10	40.8		51	40-140		
Fluoranthene	**21.9**		µg/l	5.10	40.8		54	40-140		
Pyrene	**23.0**		µg/l	5.10	40.8		56	40-140		
Benzo (a) anthracene	**21.8**		µg/l	5.10	40.8		53	40-140		
Chrysene	**25.9**		µg/l	5.10	40.8		63	40-140		
Benzo (b) fluoranthene	**21.7**		µg/l	5.10	40.8		53	40-140		
Benzo (k) fluoranthene	**28.0**		µg/l	5.10	40.8		69	40-140		
Benzo (a) pyrene	**23.6**		µg/l	5.10	40.8		58	40-140		
Indeno (1,2,3-cd) pyrene	**21.4**		µg/l	5.10	40.8		52	40-140		
Dibenzo (a,h) anthracene	**24.2**		µg/l	5.10	40.8		59	40-140		
Benzo (g,h,i) perylene	**24.1**		µg/l	5.10	40.8		59	40-140		
n-Nonane (C9)	**4.46**		µg/l	5.10	102		4	30-140		
n-Decane	**7.56**		µg/l	5.10	102		7	40-140		
n-Dodecane	**16.8**		µg/l	5.10	102		16	40-140		
n-Tetradecane	**28.1**		µg/l	5.10	102		28	40-140		
n-Hexadecane	**41.0**		µg/l	5.10	102		40	40-140		
n-Octadecane	**54.5**		µg/l	5.10	102		53	40-140		
n-Nonadecane	**58.7**		µg/l	5.10	102		58	40-140		
n-Eicosane	**61.5**		µg/l	5.10	102		60	40-140		
n-Docosane	**62.0**		µg/l	5.10	102		61	40-140		
n-Tetracosane	**62.5**		µg/l	5.10	102		61	40-140		
n-Hexacosane	**64.6**		µg/l	5.10	102		63	40-140		
n-Octacosane	**66.2**		µg/l	5.10	102		65	40-140		
n-Triacontane	**65.4**		µg/l	5.10	102		64	40-140		
n-Hexatriacontane	**65.5**		µg/l	5.10	102		64	40-140		
Naphthalene (aliphatic fraction)	**0.00**		µg/l		40.8			0-200		
2-Methylnaphthalene (aliphatic fraction)	**0.00**		µg/l		40.8			0-200		
Surrogate: 1-Chlorooctadecane	*28.2*		µg/l		*51.0*		*55*	*40-140*		
Surrogate: Ortho-Terphenyl	*29.6*		µg/l		*51.0*		*58*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*38.4*		µg/l		*40.8*		*94*	*40-140*		
Fractionation Check Standard (1813945-BS3)						Prepared: 20-Oct-18 Analyzed: 24-Oct-18				
C9-C18 Aliphatic Hydrocarbons	**373**		µg/l	100	600		62	40-140		
C19-C36 Aliphatic Hydrocarbons	**612**		µg/l	100	800		77	40-140		
Unadjusted C11-C22 Aromatic Hydrocarbons	**488**		µg/l	100	680		72	40-140		
Naphthalene	**19.3**		µg/l	5.00	40.0		48	40-140		
2-Methylnaphthalene	**18.7**		µg/l	5.00	40.0		47	40-140		
Acenaphthylene	**21.7**		µg/l	5.00	40.0		54	40-140		
Acenaphthene	**22.5**		µg/l	5.00	40.0		56	40-140		
Fluorene	**21.6**		µg/l	5.00	40.0		54	40-140		
Phenanthrene	**24.9**		µg/l	5.00	40.0		62	40-140		
Anthracene	**29.2**		µg/l	5.00	40.0		73	40-140		
Fluoranthene	**30.2**		µg/l	5.00	40.0		76	40-140		
Pyrene	**31.5**		µg/l	5.00	40.0		79	40-140		
Benzo (a) anthracene	**27.8**		µg/l	5.00	40.0		69	40-140		
Chrysene	**33.2**		µg/l	5.00	40.0		83	40-140		
Benzo (b) fluoranthene	**28.7**		µg/l	5.00	40.0		72	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH 5/2004 R										
Batch 1813945 - SW846 3510C										
Fractionation Check Standard (1813945-BS3)						Prepared: 20-Oct-18 Analyzed: 24-Oct-18				
Benzo (k) fluoranthene	**32.7**		µg/l	5.00	40.0		82	40-140		
Benzo (a) pyrene	**29.6**		µg/l	5.00	40.0		74	40-140		
Indeno (1,2,3-cd) pyrene	**26.2**		µg/l	5.00	40.0		65	40-140		
Dibenzo (a,h) anthracene	**30.1**		µg/l	5.00	40.0		75	40-140		
Benzo (g,h,i) perylene	**29.7**		µg/l	5.00	40.0		74	40-140		
n-Nonane (C9)	**47.3**		µg/l	5.00	100		47	30-140		
n-Decane	**55.2**		µg/l	5.00	100		55	40-140		
n-Dodecane	**60.0**		µg/l	5.00	100		60	40-140		
n-Tetradecane	**65.6**		µg/l	5.00	100		66	40-140		
n-Hexadecane	**76.5**		µg/l	5.00	100		77	40-140		
n-Octadecane	**84.3**		µg/l	5.00	100		84	40-140		
n-Nonadecane	**87.8**		µg/l	5.00	100		88	40-140		
n-Eicosane	**90.0**		µg/l	5.00	100		90	40-140		
n-Docosane	**88.6**		µg/l	5.00	100		89	40-140		
n-Tetracosane	**89.8**		µg/l	5.00	100		90	40-140		
n-Hexacosane	**94.2**		µg/l	5.00	100		94	40-140		
n-Octacosane	**98.2**		µg/l	5.00	100		98	40-140		
n-Triacontane	**99.9**		µg/l	5.00	100		100	40-140		
n-Hexatriacontane	**130**		µg/l	5.00	100		130	40-140		
Naphthalene (aliphatic fraction)	**0.00**		µg/l		40.0			0-200		
2-Methylnaphthalene (aliphatic fraction)	**0.00**		µg/l		40.0			0-200		
Surrogate: 1-Chlorooctadecane	*33.5*		µg/l		*50.0*		*67*	*40-140*		
Surrogate: Ortho-Terphenyl	*38.1*		µg/l		*50.0*		*76*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*34.6*		µg/l		*40.0*		*86*	*40-140*		
LCS Dup (1813945-BSD1)						Prepared: 20-Oct-18 Analyzed: 23-Oct-18				
C9-C18 Aliphatic Hydrocarbons	**190**		µg/l	102	612		31	40-140	0.2	25
C19-C36 Aliphatic Hydrocarbons	**374**		µg/l	102	816		46	40-140	5	25
Unadjusted C11-C22 Aromatic Hydrocarbons	**429**		µg/l	102	694		62	40-140	5	25
Naphthalene	**13.8**		µg/l	5.10	40.8		34	40-140	20	25
2-Methylnaphthalene	**13.4**		µg/l	5.10	40.8		33	40-140	19	25
Acenaphthylene	**16.7**		µg/l	5.10	40.8		41	40-140	16	25
Acenaphthene	**16.9**		µg/l	5.10	40.8		41	40-140	11	25
Fluorene	**17.5**		µg/l	5.10	40.8		43	40-140	15	25
Phenanthrene	**18.7**		µg/l	5.10	40.8		46	40-140	6	25
Anthracene	**22.5**		µg/l	5.10	40.8		55	40-140	7	25
Fluoranthene	**22.7**		µg/l	5.10	40.8		56	40-140	4	25
Pyrene	**23.2**		µg/l	5.10	40.8		57	40-140	0.6	25
Benzo (a) anthracene	**20.2**		µg/l	5.10	40.8		49	40-140	7	25
Chrysene	**25.3**		µg/l	5.10	40.8		62	40-140	2	25
Benzo (b) fluoranthene	**22.5**		µg/l	5.10	40.8		55	40-140	4	25
Benzo (k) fluoranthene	**27.7**		µg/l	5.10	40.8		68	40-140	1	25
Benzo (a) pyrene	**23.5**		µg/l	5.10	40.8		58	40-140	0.4	25
Indeno (1,2,3-cd) pyrene	**21.9**		µg/l	5.10	40.8		54	40-140	2	25
Dibenzo (a,h) anthracene	**24.8**		µg/l	5.10	40.8		61	40-140	2	25
Benzo (g,h,i) perylene	**24.3**		µg/l	5.10	40.8		60	40-140	0.6	25
n-Nonane (C9)	**4.39**		µg/l	5.10	102		4	30-140	2	25
n-Decane	**7.59**		µg/l	5.10	102		7	40-140	0.4	25
n-Dodecane	**16.8**		µg/l	5.10	102		16	40-140	0.08	25
n-Tetradecane	**26.0**		µg/l	5.10	102		25	40-140	8	25

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH 5/2004 R										
Batch 1813945 - SW846 3510C										
LCS Dup (1813945-BSD1)					Prepared: 20-Oct-18 Analyzed: 23-Oct-18					
n-Hexadecane	**42.0**		µg/l	5.10	102		41	40-140	2	25
n-Octadecane	**53.7**		µg/l	5.10	102		53	40-140	1	25
n-Nonadecane	**57.6**		µg/l	5.10	102		56	40-140	2	25
n-Eicosane	**59.8**		µg/l	5.10	102		59	40-140	3	25
n-Docosane	**59.2**		µg/l	5.10	102		58	40-140	5	25
n-Tetracosane	**59.3**		µg/l	5.10	102		58	40-140	5	25
n-Hexacosane	**61.4**		µg/l	5.10	102		60	40-140	5	25
n-Octacosane	**63.4**		µg/l	5.10	102		62	40-140	4	25
n-Triacontane	**62.7**		µg/l	5.10	102		61	40-140	4	25
n-Hexatriacontane	**62.9**		µg/l	5.10	102		62	40-140	4	25
Naphthalene (aliphatic fraction)	**0.00**		µg/l		40.8			0-200		200
2-Methylnaphthalene (aliphatic fraction)	**0.00**		µg/l		40.8			0-200		200
Surrogate: 1-Chlorooctadecane	*23.5*		µg/l		*51.0*		*46*	*40-140*		
Surrogate: Ortho-Terphenyl	*29.7*		µg/l		*51.0*		*58*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*34.5*		µg/l		*40.8*		*85*	*40-140*		
Duplicate (1813945-DUP1)			**Source: SC51094-02**		Prepared: 20-Oct-18 Analyzed: 24-Oct-18					
C9-C18 Aliphatic Hydrocarbons	< 99.0		µg/l	99.0		BRL				50
C19-C36 Aliphatic Hydrocarbons	< 99.0		µg/l	99.0		BRL				50
C11-C22 Aromatic Hydrocarbons	< 99.0		µg/l	99.0		BRL				50
Unadjusted C11-C22 Aromatic Hydrocarbons	< 99.0		µg/l	99.0		BRL				50
Total Petroleum Hydrocarbons	< 297		µg/l	297		BRL				50
Naphthalene	< 4.95		µg/l	4.95		BRL				50
2-Methylnaphthalene	< 4.95		µg/l	4.95		BRL				50
Acenaphthylene	< 4.95		µg/l	4.95		BRL				50
Acenaphthene	< 4.95		µg/l	4.95		BRL				50
Fluorene	< 4.95		µg/l	4.95		BRL				50
Phenanthrene	< 4.95		µg/l	4.95		BRL				50
Anthracene	< 4.95		µg/l	4.95		BRL				50
Fluoranthene	< 4.95		µg/l	4.95		BRL				50
Pyrene	< 4.95		µg/l	4.95		BRL				50
Benzo (a) anthracene	< 4.95		µg/l	4.95		BRL				50
Chrysene	< 4.95		µg/l	4.95		BRL				50
Benzo (b) fluoranthene	< 4.95		µg/l	4.95		BRL				50
Benzo (k) fluoranthene	< 4.95		µg/l	4.95		BRL				50
Benzo (a) pyrene	< 4.95		µg/l	4.95		BRL				50
Indeno (1,2,3-cd) pyrene	< 4.95		µg/l	4.95		BRL				50
Dibenzo (a,h) anthracene	< 4.95		µg/l	4.95		BRL				50
Benzo (g,h,i) perylene	< 4.95		µg/l	4.95		BRL				50
Surrogate: 1-Chlorooctadecane	*7.62*	Z-2	µg/l		*49.5*		*15*	*40-140*		
Surrogate: Ortho-Terphenyl	*28.9*		µg/l		*49.5*		*58*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*40.0*		µg/l		*39.6*		*101*	*40-140*		
Batch 1814119 - SW846 3510C										
Blank (1814119-BLK1)					Prepared: 25-Oct-18 Analyzed: 29-Oct-18					
C9-C18 Aliphatic Hydrocarbons	< 102		µg/l	102						
C19-C36 Aliphatic Hydrocarbons	< 102		µg/l	102						
C11-C22 Aromatic Hydrocarbons	< 102		µg/l	102						
Unadjusted C11-C22 Aromatic Hydrocarbons	< 102		µg/l	102						
Total Petroleum Hydrocarbons	< 306		µg/l	306						

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH 5/2004 R										
Batch 1814119 - SW846 3510C										
Blank (1814119-BLK1)					Prepared: 25-Oct-18 Analyzed: 29-Oct-18					
Unadjusted Total Petroleum Hydrocarbons	< 306		µg/l	306						
Naphthalene	< 5.10		µg/l	5.10						
2-Methylnaphthalene	< 5.10		µg/l	5.10						
Acenaphthylene	< 5.10		µg/l	5.10						
Acenaphthene	< 5.10		µg/l	5.10						
Fluorene	< 5.10		µg/l	5.10						
Phenanthrene	< 5.10		µg/l	5.10						
Anthracene	< 5.10		µg/l	5.10						
Fluoranthene	< 5.10		µg/l	5.10						
Pyrene	< 5.10		µg/l	5.10						
Benzo (a) anthracene	< 5.10		µg/l	5.10						
Chrysene	< 5.10		µg/l	5.10						
Benzo (b) fluoranthene	< 5.10		µg/l	5.10						
Benzo (k) fluoranthene	< 5.10		µg/l	5.10						
Benzo (a) pyrene	< 5.10		µg/l	5.10						
Indeno (1,2,3-cd) pyrene	< 5.10		µg/l	5.10						
Dibenzo (a,h) anthracene	< 5.10		µg/l	5.10						
Benzo (g,h,i) perylene	< 5.10		µg/l	5.10						
n-Nonane (C9)	< 5.10		µg/l	5.10						
n-Decane	< 5.10		µg/l	5.10						
n-Dodecane	< 5.10		µg/l	5.10						
n-Tetradecane	< 5.10		µg/l	5.10						
n-Hexadecane	< 5.10		µg/l	5.10						
n-Octadecane	< 5.10		µg/l	5.10						
n-Nonadecane	< 5.10		µg/l	5.10						
n-Eicosane	< 5.10		µg/l	5.10						
n-Docosane	< 5.10		µg/l	5.10						
n-Tetracosane	< 5.10		µg/l	5.10						
n-Hexacosane	< 5.10		µg/l	5.10						
n-Octacosane	< 5.10		µg/l	5.10						
n-Triacontane	< 5.10		µg/l	5.10						
n-Hexatriacontane	< 5.10		µg/l	5.10						
Naphthalene (aliphatic fraction)	**0.00**		µg/l							
2-Methylnaphthalene (aliphatic fraction)	**0.00**		µg/l							
Surrogate: 1-Chlorooctadecane	*9.79*	Z-2	µg/l		*51.0*		*19*	*40-140*		
Surrogate: Ortho-Terphenyl	*37.1*		µg/l		*51.0*		*73*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*28.9*		µg/l		*40.8*		*71*	*40-140*		
LCS (1814119-BS1)					Prepared: 25-Oct-18 Analyzed: 29-Oct-18					
C9-C18 Aliphatic Hydrocarbons	**239**		µg/l	102	612		39	40-140		
C19-C36 Aliphatic Hydrocarbons	**636**		µg/l	102	816		78	40-140		
Unadjusted C11-C22 Aromatic Hydrocarbons	**378**		µg/l	102	694		54	40-140		
Naphthalene	**16.5**		µg/l	5.10	40.8		40	40-140		
2-Methylnaphthalene	**17.0**		µg/l	5.10	40.8		42	40-140		
Acenaphthylene	**18.7**		µg/l	5.10	40.8		46	40-140		
Acenaphthene	**19.9**		µg/l	5.10	40.8		49	40-140		
Fluorene	**21.4**		µg/l	5.10	40.8		52	40-140		
Phenanthrene	**25.4**		µg/l	5.10	40.8		62	40-140		
Anthracene	**28.5**		µg/l	5.10	40.8		70	40-140		
Fluoranthene	**29.5**		µg/l	5.10	40.8		72	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH 5/2004 R										
Batch 1814119 - SW846 3510C										
LCS (1814119-BS1)							Prepared: 25-Oct-18 Analyzed: 29-Oct-18			
Pyrene	**29.9**		µg/l	5.10	40.8		73	40-140		
Benzo (a) anthracene	**16.5**		µg/l	5.10	40.8		40	40-140		
Chrysene	**17.5**		µg/l	5.10	40.8		43	40-140		
Benzo (b) fluoranthene	**13.3**	QM9	µg/l	5.10	40.8		33	40-140		
Benzo (k) fluoranthene	**16.5**		µg/l	5.10	40.8		40	40-140		
Benzo (a) pyrene	**12.7**	QM9	µg/l	5.10	40.8		31	40-140		
Indeno (1,2,3-cd) pyrene	**10.6**	QM9	µg/l	5.10	40.8		26	40-140		
Dibenzo (a,h) anthracene	**12.5**	QM9	µg/l	5.10	40.8		31	40-140		
Benzo (g,h,i) perylene	**12.4**	QM9	µg/l	5.10	40.8		30	40-140		
n-Nonane (C9)	< 5.10		µg/l	5.10	102			30-140		
n-Decane	**2.99**		µg/l	5.10	102		3	40-140		
n-Dodecane	**9.12**		µg/l	5.10	102		9	40-140		
n-Tetradecane	**31.8**		µg/l	5.10	102		31	40-140		
n-Hexadecane	**60.0**		µg/l	5.10	102		59	40-140		
n-Octadecane	**75.5**		µg/l	5.10	102		74	40-140		
n-Nonadecane	**79.9**		µg/l	5.10	102		78	40-140		
n-Eicosane	**80.5**		µg/l	5.10	102		79	40-140		
n-Docosane	**78.5**		µg/l	5.10	102		77	40-140		
n-Tetracosane	**78.6**		µg/l	5.10	102		77	40-140		
n-Hexacosane	**82.1**		µg/l	5.10	102		81	40-140		
n-Octacosane	**85.8**		µg/l	5.10	102		84	40-140		
n-Triacontane	**86.5**		µg/l	5.10	102		85	40-140		
n-Hexatriacontane	**112**		µg/l	5.10	102		109	40-140		
Naphthalene (aliphatic fraction)	**0.00**		µg/l		40.8			0-200		
2-Methylnaphthalene (aliphatic fraction)	**0.00**		µg/l		40.8			0-200		
Surrogate: 1-Chlorooctadecane	*4.75*	Z-2	µg/l		*51.0*		*9*	*40-140*		
Surrogate: Ortho-Terphenyl	*37.9*		µg/l		*51.0*		*74*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*30.0*		µg/l		*40.8*		*73*	*40-140*		
Fractionation Check Standard (1814119-BS3)							Prepared: 25-Oct-18 Analyzed: 29-Oct-18			
C9-C18 Aliphatic Hydrocarbons	**361**		µg/l	100	600		60	40-140		
C19-C36 Aliphatic Hydrocarbons	**522**		µg/l	100	800		65	40-140		
Unadjusted C11-C22 Aromatic Hydrocarbons	**479**		µg/l	100	680		70	40-140		
Naphthalene	**20.3**		µg/l	5.00	40.0		51	40-140		
2-Methylnaphthalene	**19.2**		µg/l	5.00	40.0		48	40-140		
Acenaphthylene	**21.9**		µg/l	5.00	40.0		55	40-140		
Acenaphthene	**23.3**		µg/l	5.00	40.0		58	40-140		
Fluorene	**20.4**		µg/l	5.00	40.0		51	40-140		
Phenanthrene	**24.7**		µg/l	5.00	40.0		62	40-140		
Anthracene	**28.1**		µg/l	5.00	40.0		70	40-140		
Fluoranthene	**28.3**		µg/l	5.00	40.0		71	40-140		
Pyrene	**30.0**		µg/l	5.00	40.0		75	40-140		
Benzo (a) anthracene	**24.8**		µg/l	5.00	40.0		62	40-140		
Chrysene	**32.6**		µg/l	5.00	40.0		81	40-140		
Benzo (b) fluoranthene	**26.7**		µg/l	5.00	40.0		67	40-140		
Benzo (k) fluoranthene	**31.7**		µg/l	5.00	40.0		79	40-140		
Benzo (a) pyrene	**30.0**		µg/l	5.00	40.0		75	40-140		
Indeno (1,2,3-cd) pyrene	**27.5**		µg/l	5.00	40.0		69	40-140		
Dibenzo (a,h) anthracene	**32.0**		µg/l	5.00	40.0		80	40-140		
Benzo (g,h,i) perylene	**32.3**		µg/l	5.00	40.0		81	40-140		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH 5/2004 R										
Batch 1814119 - SW846 3510C										
Fractionation Check Standard (1814119-BS3)						Prepared: 25-Oct-18 Analyzed: 29-Oct-18				
n-Nonane (C9)	**38.1**		µg/l	5.00	100		38	30-140		
n-Decane	**45.1**		µg/l	5.00	100		45	40-140		
n-Dodecane	**50.8**		µg/l	5.00	100		51	40-140		
n-Tetradecane	**56.5**		µg/l	5.00	100		56	40-140		
n-Hexadecane	**67.0**		µg/l	5.00	100		67	40-140		
n-Octadecane	**74.3**		µg/l	5.00	100		74	40-140		
n-Nonadecane	**76.6**		µg/l	5.00	100		77	40-140		
n-Eicosane	**76.9**		µg/l	5.00	100		77	40-140		
n-Docosane	**74.5**		µg/l	5.00	100		75	40-140		
n-Tetracosane	**75.4**		µg/l	5.00	100		75	40-140		
n-Hexacosane	**79.6**		µg/l	5.00	100		80	40-140		
n-Octacosane	**83.3**		µg/l	5.00	100		83	40-140		
n-Triacontane	**84.6**		µg/l	5.00	100		85	40-140		
n-Hexatriacontane	**113**		µg/l	5.00	100		113	40-140		
Naphthalene (aliphatic fraction)	**0.00**		µg/l		40.0			0-200		
2-Methylnaphthalene (aliphatic fraction)	**0.00**		µg/l		40.0			0-200		
Surrogate: 1-Chlorooctadecane	*28.1*		µg/l		*50.0*		*56*	*40-140*		
Surrogate: Ortho-Terphenyl	*34.1*		µg/l		*50.0*		*68*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*32.1*		µg/l		*40.0*		*80*	*40-140*		
LCS Dup (1814119-BSD1)						Prepared: 25-Oct-18 Analyzed: 29-Oct-18				
C9-C18 Aliphatic Hydrocarbons	**234**		µg/l	102	612		38	40-140	2	25
C19-C36 Aliphatic Hydrocarbons	**604**		µg/l	102	816		74	40-140	5	25
Unadjusted C11-C22 Aromatic Hydrocarbons	**366**		µg/l	102	694		53	40-140	3	25
Naphthalene	**13.9**	QM9	µg/l	5.10	40.8		34	40-140	17	25
2-Methylnaphthalene	**12.0**	QM9	µg/l	5.10	40.8		29	40-140	35	25
Acenaphthylene	**14.0**	QM9	µg/l	5.10	40.8		34	40-140	29	25
Acenaphthene	**15.2**	QM9	µg/l	5.10	40.8		37	40-140	27	25
Fluorene	**15.6**	QM9	µg/l	5.10	40.8		38	40-140	31	25
Phenanthrene	**18.3**	QM9	µg/l	5.10	40.8		45	40-140	33	25
Anthracene	**23.0**		µg/l	5.10	40.8		56	40-140	21	25
Fluoranthene	**23.6**		µg/l	5.10	40.8		58	40-140	22	25
Pyrene	**24.3**		µg/l	5.10	40.8		59	40-140	21	25
Benzo (a) anthracene	**17.1**		µg/l	5.10	40.8		42	40-140	4	25
Chrysene	**25.1**	QR9	µg/l	5.10	40.8		62	40-140	36	25
Benzo (b) fluoranthene	**18.6**	QR9	µg/l	5.10	40.8		46	40-140	33	25
Benzo (k) fluoranthene	**23.2**	QR9	µg/l	5.10	40.8		57	40-140	34	25
Benzo (a) pyrene	**18.4**	QR9	µg/l	5.10	40.8		45	40-140	37	25
Indeno (1,2,3-cd) pyrene	**16.5**	QR9	µg/l	5.10	40.8		41	40-140	44	25
Dibenzo (a,h) anthracene	**19.9**	QR9	µg/l	5.10	40.8		49	40-140	46	25
Benzo (g,h,i) perylene	**19.8**	QR9	µg/l	5.10	40.8		49	40-140	46	25
n-Nonane (C9)	< 5.10		µg/l	5.10	102			30-140		25
n-Decane	**3.30**		µg/l	5.10	102		3	40-140	10	25
n-Dodecane	**6.22**		µg/l	5.10	102		6	40-140	38	25
n-Tetradecane	**12.3**		µg/l	5.10	102		12	40-140	88	25
n-Hexadecane	**41.8**	QR2	µg/l	5.10	102		41	40-140	36	25
n-Octadecane	**62.4**		µg/l	5.10	102		61	40-140	19	25
n-Nonadecane	**67.3**		µg/l	5.10	102		66	40-140	17	25
n-Eicosane	**68.6**		µg/l	5.10	102		67	40-140	16	25
n-Docosane	**67.0**		µg/l	5.10	102		66	40-140	16	25

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MADEP EPH 5/2004 R										
Batch 1814119 - SW846 3510C										
LCS Dup (1814119-BSD1)					Prepared: 25-Oct-18 Analyzed: 29-Oct-18					
n-Tetracosane	**67.3**		µg/l	5.10	102		66	40-140	16	25
n-Hexacosane	**71.2**		µg/l	5.10	102		70	40-140	14	25
n-Octacosane	**74.9**		µg/l	5.10	102		73	40-140	14	25
n-Triacontane	**75.5**		µg/l	5.10	102		74	40-140	14	25
n-Hexatriacontane	**96.1**		µg/l	5.10	102		94	40-140	15	25
Naphthalene (aliphatic fraction)	**0.00**		µg/l		40.8			0-200		200
2-Methylnaphthalene (aliphatic fraction)	**0.00**		µg/l		40.8			0-200		200
Surrogate: 1-Chlorooctadecane	*13.8*	Z-2	µg/l		*51.0*		*27*	*40-140*		
Surrogate: Ortho-Terphenyl	*32.9*		µg/l		*51.0*		*64*	*40-140*		
Surrogate: 2-Fluorobiphenyl	*28.4*		µg/l		*40.8*		*70*	*40-140*		
SW846 8100Mod.										
Batch 1813848 - SW846 3510C										
Blank (1813848-BLK1)					Prepared: 18-Oct-18 Analyzed: 22-Oct-18					
Gasoline	< 0.2		mg/l	0.2						
Fuel Oil #2	< 0.2		mg/l	0.2						
Fuel Oil #4	< 0.2		mg/l	0.2						
Fuel Oil #6	< 0.2		mg/l	0.2						
Motor Oil	< 0.2		mg/l	0.2						
Ligroin	< 0.2		mg/l	0.2						
Aviation Fuel	< 0.2		mg/l	0.2						
Hydraulic Oil	< 0.2		mg/l	0.2						
Dielectric Fluid	< 0.2		mg/l	0.2						
Unidentified	< 0.2		mg/l	0.2						
Other Oil	< 0.2		mg/l	0.2						
Total Petroleum Hydrocarbons	< 0.2		mg/l	0.2						
Surrogate: 1-Chlorooctadecane	*0.0522*		mg/l		*0.0510*		*102*	*40-140*		
LCS (1813848-BS2)					Prepared: 18-Oct-18 Analyzed: 22-Oct-18					
Fuel Oil #2	**1.3**		mg/l	0.2	2.00		66	40-140		
Surrogate: 1-Chlorooctadecane	*0.0319*		mg/l		*0.0500*		*64*	*40-140*		
LCS Dup (1813848-BSD2)					Prepared: 18-Oct-18 Analyzed: 22-Oct-18					
Fuel Oil #2	**1.3**		mg/l	0.2	2.00		66	40-140	0.3	30
Surrogate: 1-Chlorooctadecane	*0.0319*		mg/l		*0.0500*		*64*	*40-140*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 6010C										
Batch 1813852 - SW846 3005A										
Blank (1813852-BLK1)					Prepared & Analyzed: 22-Oct-18					
Cadmium	< 0.0025		mg/l	0.0025						
Barium	< 0.0050		mg/l	0.0050						
Arsenic	< 0.00400		mg/l	0.00400						
Silver	< 0.0050		mg/l	0.0050						
Chromium	< 0.0050		mg/l	0.0050						
Lead	< 0.0075		mg/l	0.0075						
Selenium	< 0.0150		mg/l	0.0150						
LCS (1813852-BS1)					Prepared & Analyzed: 22-Oct-18					
Lead	**1.33**		mg/l	0.0075	1.25		106	85-115		
Arsenic	**1.336**		mg/l	0.00400	1.25		107	85-115		
Silver	**1.31**		mg/l	0.0050	1.25		104	85-115		
Cadmium	**1.45**	QM9	mg/l	0.0025	1.25		116	85-115		
Barium	**1.45**	QM9	mg/l	0.0050	1.25		116	85-115		
Chromium	**1.42**		mg/l	0.0050	1.25		113	85-115		
Selenium	**1.50**	QC2	mg/l	0.0150	1.25		120	85-115		
LCS Dup (1813852-BSD1)					Prepared & Analyzed: 22-Oct-18					
Cadmium	**1.40**		mg/l	0.0025	1.25		112	85-115	3	20
Chromium	**1.39**		mg/l	0.0050	1.25		111	85-115	2	20
Lead	**1.29**		mg/l	0.0075	1.25		104	85-115	3	20
Selenium	**1.43**		mg/l	0.0150	1.25		114	85-115	5	20
Barium	**1.39**		mg/l	0.0050	1.25		111	85-115	5	20
Silver	**1.28**		mg/l	0.0050	1.25		103	85-115	2	20
Arsenic	**1.300**		mg/l	0.00400	1.25		104	85-115	3	20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 245.1/7470A										
Batch 1813853 - EPA200/SW7000 Series										
Blank (1813853-BLK1)						Prepared: 22-Oct-18 Analyzed: 23-Oct-18				
Mercury	< 0.00020		mg/l	0.00020						
LCS (1813853-BS1)						Prepared: 22-Oct-18 Analyzed: 23-Oct-18				
Mercury	**0.00506**		mg/l	0.00020	0.00500		101	85-115		
Duplicate (1813853-DUP1)			**Source: SC51094-03**			Prepared: 22-Oct-18 Analyzed: 23-Oct-18				
Mercury	< 0.00020		mg/l	0.00020		BRL				20
Matrix Spike (1813853-MS1)			**Source: SC51094-03**			Prepared: 22-Oct-18 Analyzed: 23-Oct-18				
Mercury	**0.00470**		mg/l	0.00020	0.00500	BRL	94	80-120		
Matrix Spike Dup (1813853-MSD1)			**Source: SC51094-03**			Prepared: 22-Oct-18 Analyzed: 23-Oct-18				
Mercury	**0.00485**		mg/l	0.00020	0.00500	BRL	97	80-120	3	20
Post Spike (1813853-PS1)			**Source: SC51094-03**			Prepared: 22-Oct-18 Analyzed: 23-Oct-18				
Mercury	**0.00472**		mg/l	0.00020	0.00500	BRL	94	85-115		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 6010C										
Batch 1813854 - SW846 3005A										
Blank (1813854-BLK1)					Prepared: 22-Oct-18 Analyzed: 23-Oct-18					
Silver	< 0.0050		mg/l	0.0050						
Selenium	< 0.0150		mg/l	0.0150						
Lead	< 0.0075		mg/l	0.0075						
Chromium	< 0.0050		mg/l	0.0050						
Cadmium	< 0.0025		mg/l	0.0025						
Arsenic	< 0.0040		mg/l	0.0040						
Barium	< 0.0050		mg/l	0.0050						
LCS (1813854-BS1)					Prepared: 22-Oct-18 Analyzed: 23-Oct-18					
Cadmium	**1.20**		mg/l	0.0025	1.25		96	85-115		
Silver	**1.24**		mg/l	0.0050	1.25		99	85-115		
Arsenic	**1.29**		mg/l	0.0040	1.25		104	85-115		
Chromium	**1.26**		mg/l	0.0050	1.25		100	85-115		
Barium	**1.28**		mg/l	0.0050	1.25		103	85-115		
Selenium	**1.34**		mg/l	0.0150	1.25		107	85-115		
Lead	**1.26**		mg/l	0.0075	1.25		101	85-115		
LCS Dup (1813854-BSD1)					Prepared: 22-Oct-18 Analyzed: 23-Oct-18					
Lead	**1.27**		mg/l	0.0075	1.25		102	85-115	0.6	20
Selenium	**1.34**		mg/l	0.0150	1.25		107	85-115	0.2	20
Chromium	**1.28**		mg/l	0.0050	1.25		102	85-115	2	20
Cadmium	**1.21**		mg/l	0.0025	1.25		97	85-115	0.4	20
Barium	**1.33**		mg/l	0.0050	1.25		106	85-115	3	20
Arsenic	**1.31**		mg/l	0.0040	1.25		105	85-115	1	20
Silver	**1.25**		mg/l	0.0050	1.25		100	85-115	0.7	20
Duplicate (1813854-DUP1)			**Source: SC51094-01**		Prepared: 22-Oct-18 Analyzed: 23-Oct-18					
Lead	< 0.0075		mg/l	0.0075		BRL				20
Chromium	< 0.0050		mg/l	0.0050		BRL				20
Cadmium	< 0.0025		mg/l	0.0025		BRL				20
Barium	**0.0452**		mg/l	0.0050		0.0456			0.9	20
Arsenic	< 0.0040		mg/l	0.0040		BRL				20
Silver	< 0.0050		mg/l	0.0050		BRL				20
Selenium	< 0.0150		mg/l	0.0150		BRL				20
Matrix Spike (1813854-MS1)			**Source: SC51094-01**		Prepared: 22-Oct-18 Analyzed: 23-Oct-18					
Selenium	**1.34**		mg/l	0.0150	1.25	BRL	107	75-125		
Lead	**1.25**		mg/l	0.0075	1.25	BRL	100	75-125		
Chromium	**1.28**		mg/l	0.0050	1.25	BRL	103	75-125		
Cadmium	**1.19**		mg/l	0.0025	1.25	BRL	95	75-125		
Silver	**1.24**		mg/l	0.0050	1.25	BRL	99	75-125		
Arsenic	**1.31**		mg/l	0.0040	1.25	BRL	105	75-125		
Barium	**1.39**		mg/l	0.0050	1.25	0.0456	107	75-125		
Matrix Spike Dup (1813854-MSD1)			**Source: SC51094-01**		Prepared: 22-Oct-18 Analyzed: 23-Oct-18					
Lead	**1.25**		mg/l	0.0075	1.25	BRL	100	75-125	0.6	20
Chromium	**1.24**		mg/l	0.0050	1.25	BRL	99	75-125	3	20
Silver	**1.23**		mg/l	0.0050	1.25	BRL	98	75-125	1	20
Cadmium	**1.18**		mg/l	0.0025	1.25	BRL	94	75-125	1	20
Selenium	**1.34**		mg/l	0.0150	1.25	BRL	107	75-125	0.2	20
Barium	**1.36**		mg/l	0.0050	1.25	0.0456	106	75-125	2	20
Arsenic	**1.30**		mg/l	0.0040	1.25	BRL	104	75-125	0.5	20
Post Spike (1813854-PS1)			**Source: SC51094-01**		Prepared: 22-Oct-18 Analyzed: 23-Oct-18					
Arsenic	**1.31**		mg/l	0.0040	1.25	BRL	105	80-120		
Silver	**1.24**		mg/l	0.0050	1.25	BRL	99	80-120		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW846 6010C										
Batch 1813854 - SW846 3005A										
Post Spike (1813854-PS1)			**Source: SC51094-01**			Prepared: 22-Oct-18 Analyzed: 23-Oct-18				
Cadmium	**1.19**		mg/l	0.0025	1.25	BRL	96	80-120		
Chromium	**1.25**		mg/l	0.0050	1.25	BRL	100	80-120		
Barium	**1.35**		mg/l	0.0050	1.25	0.0456	104	80-120		
Selenium	**1.35**		mg/l	0.0150	1.25	BRL	108	80-120		
Lead	**1.26**		mg/l	0.0075	1.25	BRL	101	80-120		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
EPA 245.1/7470A										
Batch 1813855 - EPA200/SW7000 Series										
Blank (1813855-BLK1)						Prepared: 22-Oct-18 Analyzed: 23-Oct-18				
Mercury	< 0.00020		mg/l	0.00020						
LCS (1813855-BS1)						Prepared: 22-Oct-18 Analyzed: 23-Oct-18				
Mercury	**0.00479**		mg/l	0.00020	0.00500		96	85-115		
Duplicate (1813855-DUP1)			**Source: SC51094-03**			Prepared: 22-Oct-18 Analyzed: 23-Oct-18				
Mercury	< 0.00020		mg/l	0.00020		BRL				20
Matrix Spike (1813855-MS1)			**Source: SC51094-03**			Prepared: 22-Oct-18 Analyzed: 23-Oct-18				
Mercury	**0.00483**		mg/l	0.00020	0.00500	BRL	97	80-120		
Matrix Spike Dup (1813855-MSD1)			**Source: SC51094-03**			Prepared: 22-Oct-18 Analyzed: 23-Oct-18				
Mercury	**0.00479**		mg/l	0.00020	0.00500	BRL	96	80-120	0.9	20
Post Spike (1813855-PS1)			**Source: SC51094-03**			Prepared: 22-Oct-18 Analyzed: 23-Oct-18				
Mercury	**0.00459**		mg/l	0.00020	0.00500	BRL	92	85-115		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
ASTM D 1293-99B										
Batch 1813783 - General Preparation										
Reference (1813783-SRM1)						Prepared & Analyzed: 16-Oct-18				
pH	**5.96**		pH Units		6.00		99	97.5-102.5		
Reference (1813783-SRM4)						Prepared & Analyzed: 16-Oct-18				
pH	**5.99**		pH Units		6.00		100	97.5-102.5		
SM18-22 2540C										
Batch 1813863 - General Preparation										
Blank (1813863-BLK1)						Prepared: 18-Oct-18 Analyzed: 19-Oct-18				
Total Dissolved Solids	< 5		mg/l	5						
LCS (1813863-BS1)						Prepared: 18-Oct-18 Analyzed: 19-Oct-18				
Total Dissolved Solids	**1090**		mg/l	10	1000		109	90-110		
Duplicate (1813863-DUP1)			**Source: SC51094-01**			Prepared: 18-Oct-18 Analyzed: 19-Oct-18				
Total Dissolved Solids	**88**		mg/l	5		87			1	5
SM2540D (11)										
Batch 1813764 - General Preparation										
Blank (1813764-BLK1)						Prepared: 16-Oct-18 Analyzed: 17-Oct-18				
Total Suspended Solids	< 0.5		mg/l	0.5						
LCS (1813764-BS1)						Prepared: 16-Oct-18 Analyzed: 17-Oct-18				
Total Suspended Solids	**100**		mg/l	10.0	100		100	90-110		
SW846 1010A										
Batch 1814147 - General Preparation										
Duplicate (1814147-DUP1)			**Source: SC51094-01**			Prepared: 24-Oct-18 Analyzed: 26-Oct-18				
Flashpoint	**>150**		°F			>150				20
Reference (1814147-SRM1)						Prepared: 24-Oct-18 Analyzed: 26-Oct-18				
Flashpoint	**80**		°F		81.0		99	95-105		
SW846 Ch. 7.3										
Batch 1813774 - General Preparation										
Blank (1813774-BLK1)						Prepared & Analyzed: 16-Oct-18				
Reactivity	**See Narrative**		mg/l							
Reactive Cyanide	< 25.0		mg/l	25.0						
Reactive Sulfide	< 50.0		mg/l	50.0						
Duplicate (1813774-DUP1)			**Source: SC51094-01**			Prepared & Analyzed: 16-Oct-18				
Reactivity	**See Narrative**		mg/l			ee Narrativ				200
Reactive Cyanide	< 25.0		mg/l	25.0		BRL				20
Reactive Sulfide	< 50.0		mg/l	50.0		BRL				20
Reference (1813774-SRM1)						Prepared & Analyzed: 16-Oct-18				
Reactive Cyanide	< 25.0		mg/l	25.0	100		0	0-200		
Reference (1813774-SRM2)						Prepared & Analyzed: 16-Oct-18				
Reactive Sulfide	< 50.0		mg/l	50.0	6700		0	0-200		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MA VPH 5/2004										
Batch 452755A - MA VPH 5/2004										
BLK (CB71743-BLK)						Prepared: Analyzed: 21-Oct-18				
Toluene	**ND**		ug/L	1.0			ND	-		
Ethyl Benzene	**ND**		ug/L	1.0			ND	-		
m,p-Xylenes	**ND**		ug/L	2.0			ND	-		
MTBE	**ND**		ug/L	1.0			ND	-		
C5-C8 Aliphatic Hydrocarbons *1,2	**ND**		ug/L	100			ND	-		
C9-C10 Aromatic Hydrocarbons *1	**ND**		ug/L	100			ND	-		
o-Xylene	**ND**		ug/L	1.0			ND	-		
Unadjusted C5-C8 Aliphatics (*1)	**ND**		ug/L	100			ND	-		
Unadjusted C9-C12 Aliphatics (*1)	**ND**		ug/L	100			ND	-		
Benzene	**ND**		ug/L	1.0			ND	-		
C9-C12 Aliphatic Hydrocarbons *1,3	**ND**		ug/L	100			ND	-		
Naphthalene	**ND**		ug/L	5.0			ND	-		
Surrogate: % 2,5-Dibromotoluene (FID)	*101*		ug/L		*100*		*101*	*70-130*		
Surrogate: % 2,5-Dibromotoluene (PID)	*92*		ug/L		*100*		*92*	*70-130*		
LCS (CB71743-LCS)						Prepared: Analyzed: 21-Oct-18				
Naphthalene	**44.50**		ug/L	5.0	50		89	70-130		20
Unadjusted C9-C12 Aliphatics (*1)	**153.7**		ug/L	100	150		102	70-130		20
Unadjusted C5-C8 Aliphatics (*1)	**162.5**		ug/L	100	150		108	70-130		20
o-Xylene	**47.10**		ug/L	1.0	50		94	70-130		20
MTBE	**45.82**		ug/L	1.0	50		92	70-130		20
m,p-Xylenes	**94.35**		ug/L	2.0	100		94	70-130		20
Ethyl Benzene	**45.72**		ug/L	1.0	50		91	70-130		20
C9-C12 Aliphatic Hydrocarbons *1,3	**153.7**		ug/L	100	150		102	70-130		20
C9-C10 Aromatic Hydrocarbons *1	**50.24**		ug/L	100	50		100	70-130		20
C5-C8 Aliphatic Hydrocarbons *1,2	**162.5**		ug/L	100	150		108	70-130		20
Benzene	**45.81**		ug/L	1.0	50		92	70-130		20
Toluene	**46.04**		ug/L	1.0	50		92	70-130		20
Surrogate: % 2,5-Dibromotoluene (PID)	*88.22*		ug/L		*100*		*88*	*70-130*		
Surrogate: % 2,5-Dibromotoluene (FID)	*95.67*		ug/L		*100*		*96*	*70-130*		
LCSD (CB71743-LCSD)						Prepared: Analyzed: 21-Oct-18				
Naphthalene	**45.79**		ug/L	5.0	50		92	70-130	3.3	20
Unadjusted C9-C12 Aliphatics (*1)	**162.5**		ug/L	100	150		108	70-130	5.7	20
Benzene	**46.74**		ug/L	1.0	50		93	70-130	1.1	20
C5-C8 Aliphatic Hydrocarbons *1,2	**162.8**		ug/L	100	150		109	70-130	0.9	20
C9-C10 Aromatic Hydrocarbons *1	**52.03**		ug/L	100	50		104	70-130	3.9	20
C9-C12 Aliphatic Hydrocarbons *1,3	**162.5**		ug/L	100	150		108	70-130	5.7	20
Ethyl Benzene	**47.04**		ug/L	1.0	50		94	70-130	3.2	20
m,p-Xylenes	**96.99**		ug/L	2.0	100		97	70-130	3.1	20
MTBE	**46.36**		ug/L	1.0	50		93	70-130	1.1	20
o-Xylene	**48.50**		ug/L	1.0	50		97	70-130	3.1	20
Toluene	**47.43**		ug/L	1.0	50		95	70-130	3.2	20
Unadjusted C5-C8 Aliphatics (*1)	**162.8**		ug/L	100	150		109	70-130	0.9	20
Surrogate: % 2,5-Dibromotoluene (FID)	*98.77*		ug/L		*100*		*99*	*70-130*		
Surrogate: % 2,5-Dibromotoluene (PID)	*90.76*		ug/L		*100*		*91*	*70-130*		
MS (CB71743-MS)			**Source: CB71743**			Prepared: Analyzed: 21-Oct-18				
Toluene	**49.46**		ug/L	1.0	50		99	70-130		20
C9-C12 Aliphatic Hydrocarbons *1,3	**176.4**		ug/L	100	150		116	70-130		20
Ethyl Benzene	**49.83**		ug/L	1.0	50		100	70-130		20
m,p-Xylenes	**105.1**		ug/L	2.0	100		105	70-130		20

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
MA VPH 5/2004										
Batch 452755A - MA VPH 5/2004										
MS (CB71743-MS)			**Source: CB71743**			Prepared: Analyzed: 21-Oct-18				
MTBE	**49.28**		ug/L	1.0	50		99	70-130		20
o-Xylene	**52.53**		ug/L	1.0	50		105	70-130		20
Benzene	**48.73**		ug/L	1.0	50		97	70-130		20
Unadjusted C5-C8 Aliphatics (*1)	**0.1667**		ug/L	100	150		111	70-130		20
Unadjusted C9-C12 Aliphatics (*1)	**0.1764**		ug/L	100	150		118	70-130		20
C5-C8 Aliphatic Hydrocarbons *1,2	**166.7**		ug/L	100	150		111	70-130		20
C9-C10 Aromatic Hydrocarbons *1	**60.86**		ug/L	100	50		122	70-130		20
Naphthalene	**50.61**		ug/L	5.0	50		101	70-130		20
Surrogate: % 2,5-Dibromotoluene (FID)	*107.3*		ug/L		*100*		*107*	*70-130*		
Surrogate: % 2,5-Dibromotoluene (PID)	*99.27*		ug/L		*100*		*99*	*70-130*		
MSD (CB71743-MSD)			**Source: CB71743**			Prepared: Analyzed: 21-Oct-18				
Benzene	**49.73**		ug/L	1.0	50		99	70-130	2.0	20
C9-C12 Aliphatic Hydrocarbons *1,3	**175.2**		ug/L	100	150		115	70-130	0.9	20
Unadjusted C9-C12 Aliphatics (*1)	**0.1752**		ug/L	100	150		117	70-130	0.9	20
C9-C10 Aromatic Hydrocarbons *1	**58.33**		ug/L	100	50		117	70-130	4.2	20
C5-C8 Aliphatic Hydrocarbons *1,2	**168.8**		ug/L	100	150		113	70-130	1.8	20
Ethyl Benzene	**50.40**		ug/L	1.0	50		101	70-130	1.0	20
m,p-Xylenes	**104.3**		ug/L	2.0	100		104	70-130	1.0	20
MTBE	**49.23**		ug/L	1.0	50		98	70-130	1.0	20
Naphthalene	**50.24**		ug/L	5.0	50		100	70-130	1.0	20
o-Xylene	**52.18**		ug/L	1.0	50		104	70-130	1.0	20
Toluene	**50.51**		ug/L	1.0	50		101	70-130	2.0	20
Unadjusted C5-C8 Aliphatics (*1)	**0.1688**		ug/L	100	150		113	70-130	1.8	20
Surrogate: % 2,5-Dibromotoluene (FID)	*104.4*		ug/L		*100*		*104*	*70-130*		
Surrogate: % 2,5-Dibromotoluene (PID)	*96.39*		ug/L		*100*		*96*	*70-130*		
SW8260C										
Batch 452159A - SW8260C										
BLK (CB73203-BLK)						Prepared: Analyzed: 16-Oct-18				
2-Isopropyltoluene	**ND**		ug/L	1.0			ND	-		
Methylene chloride	**ND**		ug/L	1.0			ND	-		
n-Propylbenzene	**ND**		ug/L	1.0			ND	-		
n-Butylbenzene	**ND**		ug/L	1.0			ND	-		
Naphthalene	**ND**		ug/L	1.0			ND	-		
o-Xylene	**ND**		ug/L	1.0			ND	-		
Methyl t-butyl ether (MTBE)	**ND**		ug/L	1.0			ND	-		
Methyl ethyl ketone	**ND**		ug/L	5.0			ND	-		
m&p-Xylene	**ND**		ug/L	1.0			ND	-		
p-Isopropyltoluene	**ND**		ug/L	1.0			ND	-		
Hexachlorobutadiene	**ND**		ug/L	0.40			ND	-		
trans-1,2-Dichloroethene	**ND**		ug/L	1.0			ND	-		
Ethylbenzene	**ND**		ug/L	1.0			ND	-		
Dichlorodifluoromethane	**ND**		ug/L	1.0			ND	-		
Isopropylbenzene	**ND**		ug/L	1.0			ND	-		
sec-Butylbenzene	**ND**		ug/L	1.0			ND	-		
Styrene	**ND**		ug/L	1.0			ND	-		
tert-Butylbenzene	**ND**		ug/L	1.0			ND	-		
Tetrachloroethene	**ND**		ug/L	1.0			ND	-		
Toluene	**ND**		ug/L	1.0			ND	-		
trans-1,3-Dichloropropene	**ND**		ug/L	0.40			ND	-		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW8260C										
Batch 452159A - SW8260C										
BLK (CB73203-BLK)						Prepared:	Analyzed: 16-Oct-18			
trans-1,4-dichloro-2-butene	**ND**		ug/L	5.0			ND	-		
Trichloroethene	**ND**		ug/L	1.0			ND	-		
Trichlorofluoromethane	**ND**		ug/L	1.0			ND	-		
Trichlorotrifluoroethane	**ND**		ug/L	1.0			ND	-		
Vinyl chloride	**ND**		ug/L	1.0			ND	-		
Chloromethane	**ND**		ug/L	1.0			ND	-		
Dibromomethane	**ND**		ug/L	1.0			ND	-		
Tetrahydrofuran (THF)	**ND**		ug/L	2.5			ND	-		
1,2,3-Trichloropropane	**ND**		ug/L	1.0			ND	-		
1,3-Dichloropropane	**ND**		ug/L	1.0			ND	-		
1,3-Dichlorobenzene	**ND**		ug/L	1.0			ND	-		
1,3,5-Trimethylbenzene	**ND**		ug/L	1.0			ND	-		
1,2-Dichloropropane	**ND**		ug/L	1.0			ND	-		
1,2-Dichloroethane	**ND**		ug/L	1.0			ND	-		
1,2-Dichlorobenzene	**ND**		ug/L	1.0			ND	-		
1,2-Dibromoethane	**ND**		ug/L	1.0			ND	-		
1,2-Dibromo-3-chloropropane	**ND**		ug/L	1.0			ND	-		
1,4-Dichlorobenzene	**ND**		ug/L	1.0			ND	-		
1,2,4-Trichlorobenzene	**ND**		ug/L	1.0			ND	-		
1,1-Dichloroethane	**ND**		ug/L	1.0			ND	-		
1,2,3-Trichlorobenzene	**ND**		ug/L	1.0			ND	-		
1,1-Dichloropropene	**ND**		ug/L	1.0			ND	-		
1,1-Dichloroethene	**ND**		ug/L	1.0			ND	-		
1,1,2-Trichloroethane	**ND**		ug/L	1.0			ND	-		
1,1,1-Trichloroethane	**ND**		ug/L	1.0			ND	-		
1,1,1,2-Tetrachloroethane	**ND**		ug/L	1.0			ND	-		
Dibromochloromethane	**ND**		ug/L	0.50			ND	-		
cis-1,3-Dichloropropene	**ND**		ug/L	0.40			ND	-		
1,2,4-Trimethylbenzene	**ND**		ug/L	1.0			ND	-		
Bromodichloromethane	**ND**		ug/L	0.50			ND	-		
2,2-Dichloropropane	**ND**		ug/L	1.0			ND	-		
1,1,2,2-Tetrachloroethane	**ND**		ug/L	0.50			ND	-		
Chloroethane	**ND**		ug/L	1.0			ND	-		
cis-1,2-Dichloroethene	**ND**		ug/L	1.0			ND	-		
Chlorobenzene	**ND**		ug/L	1.0			ND	-		
Carbon tetrachloride	**ND**		ug/L	1.0			ND	-		
Carbon Disulfide	**ND**		ug/L	1.0			ND	-		
Bromoform	**ND**		ug/L	1.0			ND	-		
Chloroform	**ND**		ug/L	1.0			ND	-		
Bromochloromethane	**ND**		ug/L	1.0			ND	-		
Bromobenzene	**ND**		ug/L	1.0			ND	-		
Benzene	**ND**		ug/L	0.70			ND	-		
Acrylonitrile	**ND**		ug/L	5.0			ND	-		
Acetone	**ND**		ug/L	5.0			ND	-		
4-Methyl-2-pentanone	**ND**		ug/L	5.0			ND	-		
4-Chlorotoluene	**ND**		ug/L	1.0			ND	-		
2-Hexanone	**ND**		ug/L	5.0			ND	-		
2-Chlorotoluene	**ND**		ug/L	1.0			ND	-		
Bromomethane	**ND**		ug/L	1.0			ND	-		
Surrogate: % Bromofluorobenzene	*100*		ug/L		*10*		*100*	*70-130*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW8260C										
Batch 452159A - SW8260C										
BLK (CB73203-BLK)						Prepared: Analyzed: 16-Oct-18				
Surrogate: % 1,2-dichlorobenzene-d4	*97*		ug/L		*10*		*97*	*70-130*		
Surrogate: % Toluene-d8	*98*		ug/L		*10*		*98*	*70-130*		
Surrogate: % Dibromofluoromethane	*103*		ug/L		*10*		*103*	*70-130*		
LCS (CB73203-LCS)						Prepared: Analyzed: 16-Oct-18				
2-Isopropyltoluene	**9.694**		ug/L	1.0	10		97	70-130		30
Benzene	**8.745**		ug/L	0.70	10		87	70-130		30
2-Chlorotoluene	**9.426**		ug/L	1.0	10		94	70-130		30
2-Hexanone	**9.371**		ug/L	5.0	10		94	40-160		30
4-Chlorotoluene	**9.216**		ug/L	1.0	10		92	70-130		30
4-Methyl-2-pentanone	**8.933**		ug/L	5.0	10		89	40-160		30
Carbon Disulfide	**9.412**		ug/L	1.0	10		94	70-130		30
Bromoform	**9.980**		ug/L	1.0	10		100	70-130		30
Acrylonitrile	**9.445**		ug/L	5.0	10		94	70-130		30
Bromomethane	**9.517**		ug/L	1.0	10		95	40-160		30
Bromobenzene	**9.428**		ug/L	1.0	10		94	70-130		30
1,2,4-Trichlorobenzene	**10.00**		ug/L	1.0	10		100	70-130		30
Bromochloromethane	**9.435**		ug/L	1.0	10		94	70-130		30
Bromodichloromethane	**9.366**		ug/L	0.50	10		94	70-130		30
2,2-Dichloropropane	**9.675**		ug/L	1.0	10		97	70-130		30
Acetone	**9.808**		ug/L	5.0	10		98	40-160		30
1,2-Dichlorobenzene	**9.263**		ug/L	1.0	10		93	70-130		30
Tetrahydrofuran (THF)	**21.19**		ug/L	2.5	25		85	70-130		30
Carbon tetrachloride	**8.871**		ug/L	1.0	10		89	70-130		30
1,1-Dichloropropene	**8.704**		ug/L	1.0	10		87	70-130		30
1,2,3-Trichlorobenzene	**9.797**		ug/L	1.0	10		98	70-130		30
1,2,3-Trichloropropane	**9.198**		ug/L	1.0	10		92	70-130		30
1,2-Dibromo-3-chloropropane	**11.16**		ug/L	1.0	10		112	70-130		30
1,2-Dibromoethane	**9.700**		ug/L	1.0	10		97	70-130		30
1,4-Dichlorobenzene	**8.979**		ug/L	1.0	10		90	70-130		30
1,2-Dichloroethane	**8.951**		ug/L	1.0	10		90	70-130		30
1,2-Dichloropropane	**9.002**		ug/L	1.0	10		90	70-130		30
1,1-Dichloroethene	**9.246**		ug/L	1.0	10		92	70-130		30
1,3,5-Trimethylbenzene	**9.159**		ug/L	1.0	10		92	70-130		30
1,3-Dichlorobenzene	**9.563**		ug/L	1.0	10		96	70-130		30
1,3-Dichloropropane	**9.417**		ug/L	1.0	10		94	70-130		30
1,2,4-Trimethylbenzene	**9.192**		ug/L	1.0	10		92	70-130		30
trans-1,4-dichloro-2-butene	**53.15**		ug/L	5.0	50		106	70-130		30
p-Isopropyltoluene	**9.037**		ug/L	1.0	10		90	70-130		30
sec-Butylbenzene	**9.096**		ug/L	1.0	10		91	70-130		30
Styrene	**9.318**		ug/L	1.0	10		93	70-130		30
Tetrachloroethene	**8.907**		ug/L	1.0	10		89	70-130		30
Toluene	**8.973**		ug/L	1.0	10		90	70-130		30
tert-Butylbenzene	**8.980**		ug/L	1.0	10		90	70-130		30
trans-1,3-Dichloropropene	**9.135**		ug/L	0.40	10		91	70-130		30
n-Butylbenzene	**9.063**		ug/L	1.0	10		91	70-130		30
Trichloroethene	**8.709**		ug/L	1.0	10		87	70-130		30
Trichlorofluoromethane	**8.450**		ug/L	1.0	10		85	70-130		30
Trichlorotrifluoroethane	**9.081**		ug/L	1.0	10		91	70-130		30
Vinyl chloride	**9.010**		ug/L	1.0	10		90	70-130		30
Dichlorodifluoromethane	**7.077**		ug/L	1.0	10		71	40-160		30

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW8260C										
Batch 452159A - SW8260C										
LCS (CB73203-LCS)					Prepared: Analyzed: 16-Oct-18					
1,1-Dichloroethane	**9.103**		ug/L	1.0	10		91	70-130		30
trans-1,2-Dichloroethene	**9.383**		ug/L	1.0	10		94	70-130		30
Isopropylbenzene	**9.326**		ug/L	1.0	10		93	70-130		30
Chloroethane	**8.942**		ug/L	1.0	10		89	70-130		30
Chloroform	**9.384**		ug/L	1.0	10		94	70-130		30
Chloromethane	**8.120**		ug/L	1.0	10		81	40-160		30
cis-1,2-Dichloroethene	**9.307**		ug/L	1.0	10		93	70-130		30
cis-1,3-Dichloropropene	**9.302**		ug/L	0.40	10		93	70-130		30
Dibromochloromethane	**10.30**		ug/L	0.50	10		103	70-130		30
o-Xylene	**9.416**		ug/L	1.0	10		94	70-130		30
Ethylbenzene	**8.905**		ug/L	1.0	10		89	70-130		30
n-Propylbenzene	**8.990**		ug/L	1.0	10		90	70-130		30
m&p-Xylene	**17.77**		ug/L	1.0	20		89	70-130		30
Methyl ethyl ketone	**9.362**		ug/L	5.0	10		94	40-160		30
Methyl t-butyl ether (MTBE)	**9.615**		ug/L	1.0	10		96	70-130		30
Methylene chloride	**8.085**		ug/L	1.0	10		81	70-130		30
Naphthalene	**10.67**		ug/L	1.0	10		107	70-130		30
Chlorobenzene	**9.082**		ug/L	1.0	10		91	70-130		30
Dibromomethane	**8.921**		ug/L	1.0	10		89	70-130		30
1,1,2,2-Tetrachloroethane	**9.689**		ug/L	0.50	10		97	70-130		30
1,1,1-Trichloroethane	**8.978**		ug/L	1.0	10		90	70-130		30
1,1,1,2-Tetrachloroethane	**9.278**		ug/L	1.0	10		93	70-130		30
1,1,2-Trichloroethane	**9.208**		ug/L	1.0	10		92	70-130		30
Hexachlorobutadiene	**9.306**		ug/L	0.40	10		93	70-130		30
Surrogate: % Toluene-d8	*10.05*		ug/L		*10*		*101*	*70-130*		
Surrogate: % Dibromofluoromethane	*9.198*		ug/L		*10*		*92*	*70-130*		
Surrogate: % Bromofluorobenzene	*10.01*		ug/L		*10*		*100*	*70-130*		
Surrogate: % 1,2-dichlorobenzene-d4	*10.03*		ug/L		*10*		*100*	*70-130*		
LCSD (CB73203-LCSD)					Prepared: Analyzed: 16-Oct-18					
2-Isopropyltoluene	**10.29**		ug/L	1.0	10		103	70-130	6.0	30
Methyl ethyl ketone	**7.632**		ug/L	5.0	10		76	40-160	21.2	30
Dibromochloromethane	**9.752**		ug/L	0.50	10		98	70-130	5.0	30
Dibromomethane	**8.460**		ug/L	1.0	10		85	70-130	4.6	30
Dichlorodifluoromethane	**8.262**		ug/L	1.0	10		83	40-160	15.6	30
Ethylbenzene	**9.532**		ug/L	1.0	10		95	70-130	6.5	30
Hexachlorobutadiene	**10.75**		ug/L	0.40	10		107	70-130	14.0	30
m&p-Xylene	**18.65**		ug/L	1.0	20		93	70-130	4.4	30
Isopropylbenzene	**9.952**		ug/L	1.0	10		100	70-130	7.3	30
cis-1,3-Dichloropropene	**9.325**		ug/L	0.40	10		93	70-130	0.0	30
cis-1,2-Dichloroethene	**9.561**		ug/L	1.0	10		96	70-130	3.2	30
Methyl t-butyl ether (MTBE)	**8.639**		ug/L	1.0	10		86	70-130	11.0	30
Chloroform	**9.470**		ug/L	1.0	10		95	70-130	1.1	30
p-Isopropyltoluene	**9.443**		ug/L	1.0	10		94	70-130	4.3	30
Chloroethane	**9.594**		ug/L	1.0	10		96	70-130	7.6	30
Chlorobenzene	**9.459**		ug/L	1.0	10		95	70-130	4.3	30
Carbon tetrachloride	**9.737**		ug/L	1.0	10		97	70-130	8.6	30
Carbon Disulfide	**10.21**		ug/L	1.0	10		102	70-130	8.2	30
Chloromethane	**8.438**		ug/L	1.0	10		84	40-160	3.6	30
tert-Butylbenzene	**9.463**		ug/L	1.0	10		95	70-130	5.4	30
Trichlorotrifluoroethane	**9.658**		ug/L	1.0	10		97	70-130	6.4	30

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW8260C										
Batch 452159A - SW8260C										
LCSD (CB73203-LCSD)					Prepared: Analyzed: 16-Oct-18					
Vinyl chloride	**9.866**		ug/L	1.0	10		99	70-130	9.5	30
Trichloroethene	**9.296**		ug/L	1.0	10		93	70-130	6.7	30
trans-1,4-dichloro-2-butene	**51.99**		ug/L	5.0	50		104	70-130	1.9	30
trans-1,3-Dichloropropene	**8.878**		ug/L	0.40	10		89	70-130	2.2	30
trans-1,2-Dichloroethene	**9.848**		ug/L	1.0	10		98	70-130	4.2	30
Toluene	**9.327**		ug/L	1.0	10		93	70-130	3.3	30
n-Propylbenzene	**9.588**		ug/L	1.0	10		96	70-130	6.5	30
Tetrachloroethene	**8.991**		ug/L	1.0	10		90	70-130	1.1	30
Methylene chloride	**8.132**		ug/L	1.0	10		81	70-130	0.0	30
Styrene	**9.520**		ug/L	1.0	10		95	70-130	2.1	30
sec-Butylbenzene	**9.390**		ug/L	1.0	10		94	70-130	3.2	30
Acrylonitrile	**8.832**		ug/L	5.0	10		88	70-130	6.6	30
o-Xylene	**9.839**		ug/L	1.0	10		98	70-130	4.2	30
Bromomethane	**10.17**		ug/L	1.0	10		102	40-160	7.1	30
n-Butylbenzene	**9.570**		ug/L	1.0	10		96	70-130	5.3	30
Naphthalene	**9.829**		ug/L	1.0	10		98	70-130	8.8	30
Tetrahydrofuran (THF)	**18.53**		ug/L	2.5	25		74	70-130	13.8	30
1,1-Dichloropropene	**9.321**		ug/L	1.0	10		93	70-130	6.7	30
Bromoform	**9.413**		ug/L	1.0	10		94	70-130	6.2	30
1,2-Dichlorobenzene	**9.315**		ug/L	1.0	10		93	70-130	0.0	30
Bromobenzene	**9.823**		ug/L	1.0	10		98	70-130	4.2	30
1,2-Dibromo-3-chloropropane	**9.419**		ug/L	1.0	10		94	70-130	17.5	30
1,2,4-Trimethylbenzene	**9.911**		ug/L	1.0	10		99	70-130	7.3	30
1,2,4-Trichlorobenzene	**9.499**		ug/L	1.0	10		95	70-130	5.1	30
1,2-Dichloropropane	**8.911**		ug/L	1.0	10		89	70-130	1.1	30
1,2,3-Trichlorobenzene	**8.800**		ug/L	1.0	10		88	70-130	10.8	30
1,2-Dichloroethane	**8.940**		ug/L	1.0	10		89	70-130	1.1	30
1,1-Dichloroethene	**10.09**		ug/L	1.0	10		101	70-130	9.3	30
1,1-Dichloroethane	**9.351**		ug/L	1.0	10		94	70-130	3.2	30
1,1,2-Trichloroethane	**8.602**		ug/L	1.0	10		86	70-130	6.7	30
1,1,2,2-Tetrachloroethane	**9.297**		ug/L	0.50	10		93	70-130	4.2	30
1,1,1-Trichloroethane	**9.514**		ug/L	1.0	10		95	70-130	5.4	30
1,1,1,2-Tetrachloroethane	**9.888**		ug/L	1.0	10		99	70-130	6.3	30
1,2,3-Trichloropropane	**9.131**		ug/L	1.0	10		91	70-130	1.1	30
4-Methyl-2-pentanone	**8.150**		ug/L	5.0	10		82	40-160	8.2	30
Bromodichloromethane	**9.216**		ug/L	0.50	10		92	70-130	2.2	30
Bromochloromethane	**8.861**		ug/L	1.0	10		89	70-130	5.5	30
Trichlorofluoromethane	**9.329**		ug/L	1.0	10		93	70-130	9.0	30
Benzene	**8.913**		ug/L	0.70	10		89	70-130	2.3	30
1,2-Dibromoethane	**9.260**		ug/L	1.0	10		93	70-130	4.2	30
Acetone	**7.391**		ug/L	5.0	10		74	40-160	27.9	30
1,3,5-Trimethylbenzene	**9.777**		ug/L	1.0	10		98	70-130	6.3	30
4-Chlorotoluene	**9.865**		ug/L	1.0	10		99	70-130	7.3	30
2-Hexanone	**8.528**		ug/L	5.0	10		85	40-160	10.1	30
2-Chlorotoluene	**10.17**		ug/L	1.0	10		102	70-130	8.2	30
2,2-Dichloropropane	**10.09**		ug/L	1.0	10		101	70-130	4.0	30
1,4-Dichlorobenzene	**9.501**		ug/L	1.0	10		95	70-130	5.4	30
1,3-Dichloropropane	**8.968**		ug/L	1.0	10		90	70-130	4.3	30
1,3-Dichlorobenzene	**9.926**		ug/L	1.0	10		99	70-130	3.1	30
Surrogate: % Bromofluorobenzene	*9.578*		ug/L		*10*		*96*	*70-130*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW8260C										
Batch 452159A - SW8260C										
LCSD (CB73203-LCSD)					Prepared: Analyzed: 16-Oct-18					
Surrogate: % Toluene-d8	*9.966*		ug/L		*10*		*100*	*70-130*		
Surrogate: % Dibromofluoromethane	*9.109*		ug/L		*10*		*91*	*70-130*		
Surrogate: % 1,2-dichlorobenzene-d4	*9.749*		ug/L		*10*		*97*	*70-130*		
MS (CB73203-MS)			**Source: CB73203**		Prepared: Analyzed: 17-Oct-18					
2-Isopropyltoluene	**11.43**		ug/L	1.0	10		114	70-130		30
Trichloroethene	**10.77**		ug/L	1.0	10		108	70-130		30
Acrylonitrile	**9.621**		ug/L	5.0	10		96	70-130		30
1,3-Dichloropropane	**9.833**		ug/L	1.0	10		98	70-130		30
1,4-Dichlorobenzene	**10.30**		ug/L	1.0	10		103	70-130		30
2,2-Dichloropropane	**10.89**		ug/L	1.0	10		109	70-130		30
2-Chlorotoluene	**11.00**		ug/L	1.0	10		110	70-130		30
2-Hexanone	**9.580**		ug/L	5.0	10		96	40-160		30
4-Chlorotoluene	**10.25**		ug/L	1.0	10		103	70-130		30
Bromomethane	**10.29**		ug/L	1.0	10		103	40-160		30
Acetone	**10.45**		ug/L	5.0	10		105	40-160		30
1,2-Dichloropropane	**10.16**		ug/L	1.0	10		102	70-130		30
Benzene	**10.65**		ug/L	0.70	10		107	70-130		30
Bromobenzene	**10.21**		ug/L	1.0	10		102	70-130		30
Bromochloromethane	**10.17**		ug/L	1.0	10		102	70-130		30
Trichlorotrifluoroethane	**10.97**		ug/L	1.0	10		110	70-130		30
Bromodichloromethane	**10.16**		ug/L	0.50	10		102	70-130		30
Vinyl chloride	**11.80**		ug/L	1.0	10		118	70-130		30
4-Methyl-2-pentanone	**9.456**		ug/L	5.0	10		95	40-160		30
1,2,3-Trichloropropane	**9.957**		ug/L	1.0	10		100	70-130		30
1,1,1,2-Tetrachloroethane	**10.20**		ug/L	1.0	10		102	70-130		30
1,1,1-Trichloroethane	**11.08**		ug/L	1.0	10		111	70-130		30
1,1,2,2-Tetrachloroethane	**9.938**		ug/L	0.50	10		99	70-130		30
1,1,2-Trichloroethane	**9.417**		ug/L	1.0	10		94	70-130		30
1,1-Dichloroethane	**11.04**		ug/L	1.0	10		110	70-130		30
1,1-Dichloroethene	**11.98**		ug/L	1.0	10		120	70-130		30
1,3-Dichlorobenzene	**10.45**		ug/L	1.0	10		104	70-130		30
1,2,3-Trichlorobenzene	**8.166**		ug/L	1.0	10		82	70-130		30
1,3,5-Trimethylbenzene	**10.65**		ug/L	1.0	10		106	70-130		30
1,2,4-Trichlorobenzene	**9.224**		ug/L	1.0	10		92	70-130		30
1,2,4-Trimethylbenzene	**10.58**		ug/L	1.0	10		106	70-130		30
1,2-Dibromo-3-chloropropane	**9.972**		ug/L	1.0	10		100	70-130		30
1,2-Dibromoethane	**9.842**		ug/L	1.0	10		98	70-130		30
1,2-Dichlorobenzene	**10.25**		ug/L	1.0	10		102	70-130		30
1,2-Dichloroethane	**10.60**		ug/L	1.0	10		106	70-130		30
Bromoform	**10.16**		ug/L	1.0	10		102	70-130		30
1,1-Dichloropropene	**11.30**		ug/L	1.0	10		113	70-130		30
Tetrachloroethene	**11.15**		ug/L	1.0	10		111	70-130		30
Carbon Disulfide	**12.23**		ug/L	1.0	10		122	70-130		30
Naphthalene	**9.027**		ug/L	1.0	10		90	70-130		30
n-Propylbenzene	**11.02**		ug/L	1.0	10		110	70-130		30
o-Xylene	**10.78**		ug/L	1.0	10		108	70-130		30
p-Isopropyltoluene	**11.05**		ug/L	1.0	10		110	70-130		30
sec-Butylbenzene	**11.36**		ug/L	1.0	10		114	70-130		30
Methyl t-butyl ether (MTBE)	**9.783**		ug/L	1.0	10		98	70-130		30
tert-Butylbenzene	**10.91**		ug/L	1.0	10		109	70-130		30

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW8260C										
Batch 452159A - SW8260C										
MS (CB73203-MS)			**Source: CB73203**			Prepared: Analyzed: 17-Oct-18				
Methylene chloride	**9.419**		ug/L	1.0	10		94	70-130		30
Tetrahydrofuran (THF)	**23.07**		ug/L	2.5	25		92	70-130		30
Toluene	**10.55**		ug/L	1.0	10		105	70-130		30
trans-1,2-Dichloroethene	**11.43**		ug/L	1.0	10		114	70-130		30
trans-1,3-Dichloropropene	**9.497**		ug/L	0.40	10		95	70-130		30
trans-1,4-dichloro-2-butene	**47.84**		ug/L	5.0	50		96	70-130		30
Trichlorofluoromethane	**10.98**		ug/L	1.0	10		110	70-130		30
Styrene	**10.45**		ug/L	1.0	10		104	70-130		30
cis-1,3-Dichloropropene	**9.991**		ug/L	0.40	10		100	70-130		30
Carbon tetrachloride	**11.48**		ug/L	1.0	10		115	70-130		30
Chlorobenzene	**10.51**		ug/L	1.0	10		105	70-130		30
Chloroethane	**11.96**		ug/L	1.0	10		120	70-130		30
Chloroform	**11.26**		ug/L	1.0	10		113	70-130		30
n-Butylbenzene	**11.13**		ug/L	1.0	10		111	70-130		30
cis-1,2-Dichloroethene	**10.88**		ug/L	1.0	10		109	70-130		30
Methyl ethyl ketone	**10.07**		ug/L	5.0	10		101	40-160		30
Dibromochloromethane	**10.45**		ug/L	0.50	10		104	70-130		30
Dibromomethane	**9.513**		ug/L	1.0	10		95	70-130		30
Dichlorodifluoromethane	**11.08**		ug/L	1.0	10		111	40-160		30
Ethylbenzene	**10.73**		ug/L	1.0	10		107	70-130		30
Hexachlorobutadiene	**10.43**		ug/L	0.40	10		104	70-130		30
Isopropylbenzene	**11.28**		ug/L	1.0	10		113	70-130		30
m&p-Xylene	**21.12**		ug/L	1.0	20		106	70-130		30
Chloromethane	**10.12**		ug/L	1.0	10		101	40-160		30
Surrogate: % Bromofluorobenzene	*9.593*		ug/L		*10*		*96*	*70-130*		
Surrogate: % Toluene-d8	*9.978*		ug/L		*10*		*100*	*70-130*		
Surrogate: % Dibromofluoromethane	*9.784*		ug/L		*10*		*98*	*70-130*		
Surrogate: % 1,2-dichlorobenzene-d4	*10.04*		ug/L		*10*		*100*	*70-130*		
MSD (CB73203-MSD)			**Source: CB73203**			Prepared: Analyzed: 17-Oct-18				
2-Isopropyltoluene	**11.44**		ug/L	1.0	10		114	70-130	0.0	30
1,1,2,2-Tetrachloroethane	**10.22**		ug/L	0.50	10		102	70-130	3.0	30
Dibromomethane	**9.676**		ug/L	1.0	10		97	70-130	2.1	30
Chlorobenzene	**10.34**		ug/L	1.0	10		103	70-130	1.9	30
Methyl t-butyl ether (MTBE)	**9.900**		ug/L	1.0	10		99	70-130	1.0	30
Methyl ethyl ketone	**9.576**		ug/L	5.0	10		96	40-160	5.1	30
m&p-Xylene	**20.74**		ug/L	1.0	20		104	70-130	1.9	30
Isopropylbenzene	**11.37**		ug/L	1.0	10		114	70-130	0.9	30
Hexachlorobutadiene	**11.31**		ug/L	0.40	10		113	70-130	8.3	30
n-Propylbenzene	**10.88**		ug/L	1.0	10		109	70-130	0.9	30
Dichlorodifluoromethane	**11.05**		ug/L	1.0	10		111	40-160	0.0	30
o-Xylene	**10.70**		ug/L	1.0	10		107	70-130	0.9	30
Dibromochloromethane	**10.58**		ug/L	0.50	10		106	70-130	1.9	30
cis-1,3-Dichloropropene	**9.930**		ug/L	0.40	10		99	70-130	1.0	30
cis-1,2-Dichloroethene	**10.58**		ug/L	1.0	10		106	70-130	2.8	30
Chloromethane	**10.22**		ug/L	1.0	10		102	40-160	1.0	30
Chloroform	**10.78**		ug/L	1.0	10		108	70-130	4.5	30
Chloroethane	**11.70**		ug/L	1.0	10		117	70-130	2.5	30
Ethylbenzene	**10.70**		ug/L	1.0	10		107	70-130	0.0	30
Tetrachloroethene	**11.14**		ug/L	1.0	10		111	70-130	0.0	30
Trichlorotrifluoroethane	**11.06**		ug/L	1.0	10		111	70-130	0.9	30

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW8260C										
Batch 452159A - SW8260C										
MSD (CB73203-MSD)			**Source: CB73203**			Prepared: Analyzed: 17-Oct-18				
Trichlorofluoromethane	**10.90**		ug/L	1.0	10		109	70-130	0.9	30
Trichloroethene	**10.69**		ug/L	1.0	10		107	70-130	0.9	30
trans-1,4-dichloro-2-butene	**46.15**		ug/L	5.0	50		92	70-130	4.3	30
trans-1,3-Dichloropropene	**9.670**		ug/L	0.40	10		97	70-130	2.1	30
trans-1,2-Dichloroethene	**11.42**		ug/L	1.0	10		114	70-130	0.0	30
Naphthalene	**9.678**		ug/L	1.0	10		97	70-130	7.5	30
Tetrahydrofuran (THF)	**22.26**		ug/L	2.5	25		89	70-130	3.3	30
Methylene chloride	**9.226**		ug/L	1.0	10		92	70-130	2.2	30
tert-Butylbenzene	**10.93**		ug/L	1.0	10		109	70-130	0.0	30
1,1,1,2-Tetrachloroethane	**10.20**		ug/L	1.0	10		102	70-130	0.0	30
Vinyl chloride	**11.75**		ug/L	1.0	10		118	70-130	0.0	30
Styrene	**10.25**		ug/L	1.0	10		102	70-130	1.9	30
sec-Butylbenzene	**11.60**		ug/L	1.0	10		116	70-130	1.7	30
p-Isopropyltoluene	**11.09**		ug/L	1.0	10		111	70-130	0.9	30
Toluene	**10.50**		ug/L	1.0	10		105	70-130	0.0	30
1,1-Dichloropropene	**11.03**		ug/L	1.0	10		110	70-130	2.7	30
1,4-Dichlorobenzene	**10.28**		ug/L	1.0	10		103	70-130	0.0	30
1,2-Dibromoethane	**9.763**		ug/L	1.0	10		98	70-130	0.0	30
1,1-Dichloroethene	**11.85**		ug/L	1.0	10		119	70-130	0.8	30
1,2-Dibromo-3-chloropropane	**10.08**		ug/L	1.0	10		101	70-130	1.0	30
1,3,5-Trimethylbenzene	**10.71**		ug/L	1.0	10		107	70-130	0.9	30
1,2-Dichloropropane	**10.10**		ug/L	1.0	10		101	70-130	1.0	30
2,2-Dichloropropane	**10.61**		ug/L	1.0	10		106	70-130	2.8	30
1,2-Dichlorobenzene	**10.24**		ug/L	1.0	10		102	70-130	0.0	30
1,3-Dichloropropane	**9.711**		ug/L	1.0	10		97	70-130	1.0	30
1,2,3-Trichlorobenzene	**8.325**		ug/L	1.0	10		83	70-130	1.2	30
1,2,3-Trichloropropane	**9.958**		ug/L	1.0	10		100	70-130	0.0	30
1,2,4-Trichlorobenzene	**9.618**		ug/L	1.0	10		96	70-130	4.3	30
1,2,4-Trimethylbenzene	**10.59**		ug/L	1.0	10		106	70-130	0.0	30
Carbon tetrachloride	**11.25**		ug/L	1.0	10		113	70-130	1.8	30
n-Butylbenzene	**11.28**		ug/L	1.0	10		113	70-130	1.8	30
1,2-Dichloroethane	**9.552**		ug/L	1.0	10		96	70-130	9.9	30
Bromochloromethane	**10.02**		ug/L	1.0	10		100	70-130	2.0	30
Carbon Disulfide	**12.21**		ug/L	1.0	10		122	70-130	0.0	30
Bromomethane	**11.80**		ug/L	1.0	10		118	40-160	13.6	30
Bromoform	**9.291**		ug/L	1.0	10		93	70-130	9.2	30
1,1,1-Trichloroethane	**10.89**		ug/L	1.0	10		109	70-130	1.8	30
Bromodichloromethane	**10.19**		ug/L	0.50	10		102	70-130	0.0	30
1,3-Dichlorobenzene	**10.54**		ug/L	1.0	10		105	70-130	1.0	30
1,1,2-Trichloroethane	**9.570**		ug/L	1.0	10		96	70-130	2.1	30
2-Chlorotoluene	**10.68**		ug/L	1.0	10		107	70-130	2.8	30
4-Methyl-2-pentanone	**9.803**		ug/L	5.0	10		98	40-160	3.1	30
2-Hexanone	**9.221**		ug/L	5.0	10		92	40-160	4.3	30
4-Chlorotoluene	**10.36**		ug/L	1.0	10		104	70-130	1.0	30
Bromobenzene	**10.39**		ug/L	1.0	10		104	70-130	1.9	30
Acetone	**10.37**		ug/L	5.0	10		104	40-160	1.0	30
Acrylonitrile	**9.320**		ug/L	5.0	10		93	70-130	3.2	30
Benzene	**10.39**		ug/L	0.70	10		104	70-130	2.8	30
1,1-Dichloroethane	**10.96**		ug/L	1.0	10		110	70-130	0.0	30
Surrogate: % Toluene-d8	*10.15*		ug/L		*10*		*102*	*70-130*		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW8260C										
Batch 452159A - SW8260C										
MSD (CB73203-MSD)			**Source: CB73203**			Prepared: Analyzed: 17-Oct-18				
Surrogate: % 1,2-dichlorobenzene-d4	*9.793*		ug/L		*10*		*98*	*70-130*		
Surrogate: % Bromofluorobenzene	*9.540*		ug/L		*10*		*95*	*70-130*		
Surrogate: % Dibromofluoromethane	*8.905*		ug/L		*10*		*89*	*70-130*		
Batch 452380A - SW8260C										
BLK (CB72457-BLK)						Prepared: Analyzed: 17-Oct-18				
2-Isopropyltoluene	**ND**		ug/L	1.0			ND	-		
Methyl t-butyl ether (MTBE)	**ND**		ug/L	1.0			ND	-		
Methyl ethyl ketone	**ND**		ug/L	5.0			ND	-		
Methylene chloride	**ND**		ug/L	1.0			ND	-		
m&p-Xylene	**ND**		ug/L	1.0			ND	-		
Isopropylbenzene	**ND**		ug/L	1.0			ND	-		
Hexachlorobutadiene	**ND**		ug/L	0.40			ND	-		
Ethylbenzene	**ND**		ug/L	1.0			ND	-		
Dichlorodifluoromethane	**ND**		ug/L	1.0			ND	-		
Dibromomethane	**ND**		ug/L	1.0			ND	-		
Dibromochloromethane	**ND**		ug/L	0.50			ND	-		
cis-1,3-Dichloropropene	**ND**		ug/L	0.40			ND	-		
Chloromethane	**ND**		ug/L	1.0			ND	-		
Chloroform	**ND**		ug/L	1.0			ND	-		
Chloroethane	**ND**		ug/L	1.0			ND	-		
Chlorobenzene	**ND**		ug/L	1.0			ND	-		
Carbon tetrachloride	**ND**		ug/L	1.0			ND	-		
cis-1,2-Dichloroethene	**ND**		ug/L	1.0			ND	-		
Tetrahydrofuran (THF)	**ND**		ug/L	2.5			ND	-		
Vinyl chloride	**ND**		ug/L	1.0			ND	-		
Trichlorotrifluoroethane	**ND**		ug/L	1.0			ND	-		
Trichlorofluoromethane	**ND**		ug/L	1.0			ND	-		
Carbon Disulfide	**ND**		ug/L	1.0			ND	-		
Trichloroethene	**ND**		ug/L	1.0			ND	-		
trans-1,4-dichloro-2-butene	**ND**		ug/L	5.0			ND	-		
trans-1,3-Dichloropropene	**ND**		ug/L	0.40			ND	-		
sec-Butylbenzene	**ND**		ug/L	1.0			ND	-		
Toluene	**ND**		ug/L	1.0			ND	-		
Naphthalene	**ND**		ug/L	1.0			ND	-		
Tetrachloroethene	**ND**		ug/L	1.0			ND	-		
tert-Butylbenzene	**ND**		ug/L	1.0			ND	-		
Styrene	**ND**		ug/L	1.0			ND	-		
p-Isopropyltoluene	**ND**		ug/L	1.0			ND	-		
o-Xylene	**ND**		ug/L	1.0			ND	-		
n-Propylbenzene	**ND**		ug/L	1.0			ND	-		
n-Butylbenzene	**ND**		ug/L	1.0			ND	-		
trans-1,2-Dichloroethene	**ND**		ug/L	1.0			ND	-		
1,1-Dichloropropene	**ND**		ug/L	1.0			ND	-		
Bromomethane	**ND**		ug/L	1.0			ND	-		
1,2-Dichloroethane	**ND**		ug/L	1.0			ND	-		
1,2,4-Trichlorobenzene	**ND**		ug/L	1.0			ND	-		
1,2-Dibromoethane	**ND**		ug/L	1.0			ND	-		
1,2-Dibromo-3-chloropropane	**ND**		ug/L	1.0			ND	-		
1,2,4-Trimethylbenzene	**ND**		ug/L	1.0			ND	-		
1,3,5-Trimethylbenzene	**ND**		ug/L	1.0			ND	-		

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW8260C										
Batch 452380A - SW8260C										
BLK (CB72457-BLK)						Prepared:	Analyzed: 17-Oct-18			
1,2,3-Trichlorobenzene	**ND**		ug/L	1.0			ND	-		
1,2-Dichloropropane	**ND**		ug/L	1.0			ND	-		
1,1-Dichloroethene	**ND**		ug/L	1.0			ND	-		
1,1-Dichloroethane	**ND**		ug/L	1.0			ND	-		
1,1,2-Trichloroethane	**ND**		ug/L	1.0			ND	-		
1,1,2,2-Tetrachloroethane	**ND**		ug/L	0.50			ND	-		
1,1,1-Trichloroethane	**ND**		ug/L	1.0			ND	-		
1,1,1,2-Tetrachloroethane	**ND**		ug/L	1.0			ND	-		
1,2,3-Trichloropropane	**ND**		ug/L	1.0			ND	-		
Benzene	**ND**		ug/L	0.70			ND	-		
Bromoform	**ND**		ug/L	1.0			ND	-		
Bromodichloromethane	**ND**		ug/L	0.50			ND	-		
Bromochloromethane	**ND**		ug/L	1.0			ND	-		
1,2-Dichlorobenzene	**ND**		ug/L	1.0			ND	-		
Bromobenzene	**ND**		ug/L	1.0			ND	-		
1,3-Dichlorobenzene	**ND**		ug/L	1.0			ND	-		
Acrylonitrile	**ND**		ug/L	5.0			ND	-		
Acetone	**ND**		ug/L	5.0			ND	-		
4-Methyl-2-pentanone	**ND**		ug/L	5.0			ND	-		
4-Chlorotoluene	**ND**		ug/L	1.0			ND	-		
2-Hexanone	**ND**		ug/L	5.0			ND	-		
2-Chlorotoluene	**ND**		ug/L	1.0			ND	-		
2,2-Dichloropropane	**ND**		ug/L	1.0			ND	-		
1,4-Dichlorobenzene	**ND**		ug/L	1.0			ND	-		
1,3-Dichloropropane	**ND**		ug/L	1.0			ND	-		
Surrogate: % Toluene-d8	*97*		ug/L		*10*		*97*	*70-130*		
Surrogate: % Dibromofluoromethane	*125*		ug/L		*10*		*125*	*70-130*		
Surrogate: % Bromofluorobenzene	*100*		ug/L		*10*		*100*	*70-130*		
Surrogate: % 1,2-dichlorobenzene-d4	*98*		ug/L		*10*		*98*	*70-130*		
LCS (CB72457-LCS)						Prepared:	Analyzed: 17-Oct-18			
2-Isopropyltoluene	**10.52**		ug/L	1.0	10		105	70-130		30
Acetone	**9.140**		ug/L	5.0	10		91	40-160		30
Dichlorodifluoromethane	**10.89**		ug/L	1.0	10		109	40-160		30
Chloroethane	**12.16**		ug/L	1.0	10		122	70-130		30
Methylene chloride	**10.63**		ug/L	1.0	10		106	70-130		30
Methyl t-butyl ether (MTBE)	**11.70**		ug/L	1.0	10		117	70-130		30
Methyl ethyl ketone	**12.49**		ug/L	5.0	10		125	40-160		30
m&p-Xylene	**19.59**		ug/L	1.0	20		98	70-130		30
Isopropylbenzene	**10.10**		ug/L	1.0	10		101	70-130		30
n-Butylbenzene	**10.04**		ug/L	1.0	10		100	70-130		30
Ethylbenzene	**9.935**		ug/L	1.0	10		99	70-130		30
n-Propylbenzene	**9.849**		ug/L	1.0	10		98	70-130		30
Dibromomethane	**9.825**		ug/L	1.0	10		98	70-130		30
Dibromochloromethane	**10.59**		ug/L	0.50	10		106	70-130		30
cis-1,3-Dichloropropene	**10.29**		ug/L	0.40	10		103	70-130		30
cis-1,2-Dichloroethene	**12.08**		ug/L	1.0	10		121	70-130		30
Chloromethane	**11.20**		ug/L	1.0	10		112	40-160		30
Vinyl chloride	**12.36**		ug/L	1.0	10		124	70-130		30
Hexachlorobutadiene	**10.44**		ug/L	0.40	10		104	70-130		30
Tetrahydrofuran (THF)	**26.26**		ug/L	2.5	25		105	70-130		30

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW8260C										
Batch 452380A - SW8260C										
LCS (CB72457-LCS)					Prepared: Analyzed: 17-Oct-18					
Benzene	**9.799**		ug/L	0.70	10		98	70-130		30
Trichlorotrifluoroethane	**11.63**		ug/L	1.0	10		116	70-130		30
Trichlorofluoromethane	**11.07**		ug/L	1.0	10		111	70-130		30
Trichloroethene	**10.01**		ug/L	1.0	10		100	70-130		30
trans-1,4-dichloro-2-butene	**56.30**		ug/L	5.0	50		113	70-130		30
trans-1,3-Dichloropropene	**10.25**		ug/L	0.40	10		102	70-130		30
Naphthalene	**10.78**		ug/L	1.0	10		108	70-130		30
Toluene	**9.970**		ug/L	1.0	10		100	70-130		30
Chlorobenzene	**10.10**		ug/L	1.0	10		101	70-130		30
Tetrachloroethene	**9.788**		ug/L	1.0	10		98	70-130		30
tert-Butylbenzene	**9.725**		ug/L	1.0	10		97	70-130		30
Styrene	**10.19**		ug/L	1.0	10		102	70-130		30
sec-Butylbenzene	**9.865**		ug/L	1.0	10		99	70-130		30
p-Isopropyltoluene	**9.876**		ug/L	1.0	10		99	70-130		30
o-Xylene	**10.26**		ug/L	1.0	10		103	70-130		30
trans-1,2-Dichloroethene	**12.36**		ug/L	1.0	10		124	70-130		30
1,1-Dichloropropene	**9.887**		ug/L	1.0	10		99	70-130		30
Chloroform	**12.25**		ug/L	1.0	10		123	70-130		30
1,2-Dichlorobenzene	**10.03**		ug/L	1.0	10		100	70-130		30
1,2-Dibromoethane	**10.02**		ug/L	1.0	10		100	70-130		30
1,2-Dibromo-3-chloropropane	**10.30**		ug/L	1.0	10		103	70-130		30
1,2,4-Trimethylbenzene	**10.07**		ug/L	1.0	10		101	70-130		30
1,2,4-Trichlorobenzene	**10.64**		ug/L	1.0	10		106	70-130		30
1,2-Dichloropropane	**9.867**		ug/L	1.0	10		99	70-130		30
1,2,3-Trichlorobenzene	**10.17**		ug/L	1.0	10		102	70-130		30
1,3,5-Trimethylbenzene	**9.898**		ug/L	1.0	10		99	70-130		30
1,1-Dichloroethene	**12.27**		ug/L	1.0	10		123	70-130		30
1,1-Dichloroethane	**11.93**		ug/L	1.0	10		119	70-130		30
1,1,2-Trichloroethane	**10.03**		ug/L	1.0	10		100	70-130		30
1,1,2,2-Tetrachloroethane	**10.56**		ug/L	0.50	10		106	70-130		30
1,1,1-Trichloroethane	**11.47**		ug/L	1.0	10		115	70-130		30
1,1,1,2-Tetrachloroethane	**10.45**		ug/L	1.0	10		104	70-130		30
1,2,3-Trichloropropane	**9.805**		ug/L	1.0	10		98	70-130		30
Acrylonitrile	**11.53**		ug/L	5.0	10		115	70-130		30
Carbon tetrachloride	**11.67**		ug/L	1.0	10		117	70-130		30
Carbon Disulfide	**12.80**		ug/L	1.0	10		128	70-130		30
Bromomethane	**13.18**		ug/L	1.0	10		132	40-160		30
Bromoform	**10.41**		ug/L	1.0	10		104	70-130		30
Bromodichloromethane	**10.20**		ug/L	0.50	10		102	70-130		30
1,2-Dichloroethane	**9.201**		ug/L	1.0	10		92	70-130		30
Bromobenzene	**10.20**		ug/L	1.0	10		102	70-130		30
4-Methyl-2-pentanone	**9.800**		ug/L	5.0	10		98	40-160		30
4-Chlorotoluene	**9.936**		ug/L	1.0	10		99	70-130		30
2-Hexanone	**9.836**		ug/L	5.0	10		98	40-160		30
2-Chlorotoluene	**10.21**		ug/L	1.0	10		102	70-130		30
2,2-Dichloropropane	**12.87**		ug/L	1.0	10		129	70-130		30
1,4-Dichlorobenzene	**10.13**		ug/L	1.0	10		101	70-130		30
1,3-Dichloropropane	**9.917**		ug/L	1.0	10		99	70-130		30
1,3-Dichlorobenzene	**10.35**		ug/L	1.0	10		103	70-130		30
Bromochloromethane	**11.99**		ug/L	1.0	10		120	70-130		30

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW8260C										
Batch 452380A - SW8260C										
LCS (CB72457-LCS)						Prepared: Analyzed: 17-Oct-18				
Surrogate: % 1,2-dichlorobenzene-d4	*9.950*		ug/L		*10*		*100*	*70-130*		
Surrogate: % Dibromofluoromethane	*11.02*		ug/L		*10*		*110*	*70-130*		
Surrogate: % Toluene-d8	*10.08*		ug/L		*10*		*101*	*70-130*		
Surrogate: % Bromofluorobenzene	*9.866*		ug/L		*10*		*99*	*70-130*		
LCSD (CB72457-LCSD)						Prepared: Analyzed: 17-Oct-18				
2-Isopropyltoluene	**10.38**		ug/L	1.0	10		104	70-130	1.0	30
Dibromomethane	**9.733**		ug/L	1.0	10		97	70-130	1.0	30
Chlorobenzene	**10.23**		ug/L	1.0	10		102	70-130	1.0	30
Methyl ethyl ketone	**12.31**		ug/L	5.0	10		123	40-160	1.6	30
m&p-Xylene	**19.83**		ug/L	1.0	20		99	70-130	1.0	30
Isopropylbenzene	**10.18**		ug/L	1.0	10		102	70-130	1.0	30
Hexachlorobutadiene	**10.04**		ug/L	0.40	10		100	70-130	3.9	30
Methylene chloride	**10.45**		ug/L	1.0	10		104	70-130	1.9	30
Dichlorodifluoromethane	**10.12**		ug/L	1.0	10		101	40-160	7.6	30
Naphthalene	**10.69**		ug/L	1.0	10		107	70-130	0.9	30
Dibromochloromethane	**11.10**		ug/L	0.50	10		111	70-130	4.6	30
cis-1,3-Dichloropropene	**10.46**		ug/L	0.40	10		105	70-130	1.9	30
cis-1,2-Dichloroethene	**12.02**		ug/L	1.0	10		120	70-130	0.8	30
Chloromethane	**10.74**		ug/L	1.0	10		107	40-160	4.6	30
Chloroform	**11.99**		ug/L	1.0	10		120	70-130	2.5	30
Chloroethane	**12.01**		ug/L	1.0	10		120	70-130	1.7	30
Ethylbenzene	**9.927**		ug/L	1.0	10		99	70-130	0.0	30
Tetrachloroethene	**9.830**		ug/L	1.0	10		98	70-130	0.0	30
Trichlorotrifluoroethane	**11.31**		ug/L	1.0	10		113	70-130	2.6	30
Trichlorofluoromethane	**10.55**		ug/L	1.0	10		106	70-130	4.6	30
Trichloroethene	**9.896**		ug/L	1.0	10		99	70-130	1.0	30
trans-1,4-dichloro-2-butene	**56.83**		ug/L	5.0	50		114	70-130	0.9	30
trans-1,3-Dichloropropene	**10.28**		ug/L	0.40	10		103	70-130	1.0	30
trans-1,2-Dichloroethene	**11.98**		ug/L	1.0	10		120	70-130	3.3	30
Methyl t-butyl ether (MTBE)	**12.15**		ug/L	1.0	10		121	70-130	3.4	30
Tetrahydrofuran (THF)	**26.50**		ug/L	2.5	25		106	70-130	0.9	30
Bromomethane	**12.12**		ug/L	1.0	10		121	40-160	8.7	30
tert-Butylbenzene	**9.803**		ug/L	1.0	10		98	70-130	1.0	30
Styrene	**10.50**		ug/L	1.0	10		105	70-130	2.9	30
sec-Butylbenzene	**10.17**		ug/L	1.0	10		102	70-130	3.0	30
p-Isopropyltoluene	**9.989**		ug/L	1.0	10		100	70-130	1.0	30
o-Xylene	**10.39**		ug/L	1.0	10		104	70-130	1.0	30
n-Propylbenzene	**9.915**		ug/L	1.0	10		99	70-130	1.0	30
n-Butylbenzene	**10.06**		ug/L	1.0	10		101	70-130	1.0	30
Toluene	**10.17**		ug/L	1.0	10		102	70-130	2.0	30
1,1-Dichloropropene	**9.941**		ug/L	1.0	10		99	70-130	0.0	30
1,2-Dichloroethane	**9.341**		ug/L	1.0	10		93	70-130	1.1	30
1,2-Dichlorobenzene	**10.08**		ug/L	1.0	10		101	70-130	1.0	30
1,2-Dibromoethane	**10.28**		ug/L	1.0	10		103	70-130	3.0	30
1,2-Dibromo-3-chloropropane	**10.18**		ug/L	1.0	10		102	70-130	1.0	30
1,2,4-Trimethylbenzene	**9.910**		ug/L	1.0	10		99	70-130	2.0	30
1,2,4-Trichlorobenzene	**10.58**		ug/L	1.0	10		106	70-130	0.0	30
Carbon tetrachloride	**11.30**		ug/L	1.0	10		113	70-130	3.5	30
1,2,3-Trichlorobenzene	**10.06**		ug/L	1.0	10		101	70-130	1.0	30
1,3-Dichlorobenzene	**10.06**		ug/L	1.0	10		101	70-130	2.0	30

Analyte(s)	Result	Flag	Units	*RDL	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
SW8260C										
Batch 452380A - SW8260C										
LCSD (CB72457-LCSD)					Prepared: Analyzed: 17-Oct-18					
1,1-Dichloroethene	**11.72**		ug/L	1.0	10		117	70-130	5.0	30
1,1-Dichloroethane	**11.74**		ug/L	1.0	10		117	70-130	1.7	30
1,1,2-Trichloroethane	**9.744**		ug/L	1.0	10		97	70-130	3.0	30
1,1,2,2-Tetrachloroethane	**10.79**		ug/L	0.50	10		108	70-130	1.9	30
1,1,1-Trichloroethane	**11.31**		ug/L	1.0	10		113	70-130	1.8	30
1,1,1,2-Tetrachloroethane	**10.42**		ug/L	1.0	10		104	70-130	0.0	30
1,2,3-Trichloropropane	**10.12**		ug/L	1.0	10		101	70-130	3.0	30
4-Methyl-2-pentanone	**10.25**		ug/L	5.0	10		102	40-160	4.0	30
Carbon Disulfide	**12.32**		ug/L	1.0	10		123	70-130	4.0	30
Bromoform	**10.77**		ug/L	1.0	10		108	70-130	3.8	30
Bromodichloromethane	**10.35**		ug/L	0.50	10		104	70-130	1.9	30
Bromochloromethane	**11.63**		ug/L	1.0	10		116	70-130	3.4	30
Bromobenzene	**10.21**		ug/L	1.0	10		102	70-130	0.0	30
Benzene	**10.09**		ug/L	0.70	10		101	70-130	3.0	30
1,2-Dichloropropane	**9.964**		ug/L	1.0	10		100	70-130	1.0	30
Acetone	**11.28**		ug/L	5.0	10		113	40-160	21.6	30
1,3,5-Trimethylbenzene	**9.876**		ug/L	1.0	10		99	70-130	0.0	30
4-Chlorotoluene	**9.997**		ug/L	1.0	10		100	70-130	1.0	30
2-Hexanone	**9.889**		ug/L	5.0	10		99	40-160	1.0	30
2-Chlorotoluene	**10.17**		ug/L	1.0	10		102	70-130	0.0	30
2,2-Dichloropropane	**12.14**		ug/L	1.0	10		121	70-130	6.4	30
1,4-Dichlorobenzene	**9.904**		ug/L	1.0	10		99	70-130	2.0	30
1,3-Dichloropropane	**10.12**		ug/L	1.0	10		101	70-130	2.0	30
Vinyl chloride	**11.78**		ug/L	1.0	10		118	70-130	5.0	30
Acrylonitrile	**11.88**		ug/L	5.0	10		119	70-130	3.4	30
Surrogate: % Bromofluorobenzene	*10.03*		ug/L		*10*		*100*	*70-130*		
Surrogate: % Dibromofluoromethane	*11.67*		ug/L		*10*		*117*	*70-130*		
Surrogate: % Toluene-d8	*10.01*		ug/L		*10*		*100*	*70-130*		
Surrogate: % 1,2-dichlorobenzene-d4	*9.905*		ug/L		*10*		*99*	*70-130*		

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Analyte(s)	Average RF	CCRF	% D	Limit
Batch S822821				
Calibration Check (S822821-CCV1)				
C9-C18 Aliphatic Hydrocarbons	562022.7	320505.5	-1.3	25
C19-C36 Aliphatic Hydrocarbons	305826	219989.7	-0.2	25
Unadjusted C11-C22 Aromatic Hydrocarbons	306527	253383.4	1.5	25
Naphthalene	254431.6	250658.8	-1.5	25
2-Methylnaphthalene	249163.2	246436.2	-1.1	25
Acenaphthylene	259655.2	258157.6	-0.6	25
Acenaphthene	272811.1	272475	-0.1	25
Fluorene	258846.8	259683.8	0.3	25
Phenanthrene	255197.1	250671	-1.8	25
Anthracene	255583.7	264218.2	3.4	25
Fluoranthene	243139.2	250554.8	3.0	25
Pyrene	243103.4	258179	6.2	25
Benzo (a) anthracene	216766.1	215670.4	-0.5	25
Chrysene	226152.1	236832.4	4.7	25
Benzo (b) fluoranthene	210929.6	206301.2	-2.2	25
Benzo (k) fluoranthene	209908	213916.8	1.9	25
Benzo (a) pyrene	199853.2	194542	-2.7	25
Indeno (1,2,3-cd) pyrene	197796.9	174152.6	-12.0	25
Dibenzo (a,h) anthracene	202401.5	193632.1	-4.3	25
Benzo (g,h,i) perylene	192580.9	176074.6	-8.6	25
n-Nonane (C9)	226773.2	271696.4	19.8	30
n-Decane	226361.7	282704.8	24.9	25
n-Dodecane	229044.3	285498.2	24.6	25
n-Tetradecane	230280.1	284283	23.5	25
n-Hexadecane	230690.5	285286.6	23.7	25
n-Octadecane	231718.1	288358.6	24.4	25
n-Nonadecane	227157	283474	24.8	25
n-Eicosane	223860.6	276338	23.4	25
n-Docosane	215585	261577	21.3	25
n-Tetracosane	204977.2	250110.6	22.0	25
n-Hexacosane	192281.4	239355	24.5	25
n-Octacosane	182069.2	226798.2	24.6	25
n-Triacontane	174205.7	212689.8	22.1	25
n-Hexatriacontane	110486.4	116623.9	5.6	25
Naphthalene (aliphatic fraction)	253594.2			
2-Methylnaphthalene (aliphatic fraction)	249210			
Calibration Check (S822821-CCV2)				
C9-C18 Aliphatic Hydrocarbons	562022.7	320035.2	-1.5	25
C19-C36 Aliphatic Hydrocarbons	305826	216620.4	-1.9	25
Unadjusted C11-C22 Aromatic Hydrocarbons	306527	251464.2	0.7	25
Naphthalene	254431.6	252742.6	-0.7	25
2-Methylnaphthalene	249163.2	248919	-0.1	25
Acenaphthylene	259655.2	260629.4	0.4	25
Acenaphthene	272811.1	276545.4	1.4	25
Fluorene	258846.8	261228	0.9	25
Phenanthrene	255197.1	246267.4	-3.5	25
Anthracene	255583.7	263424.6	3.1	25
Fluoranthene	243139.2	252274.2	3.8	25
Pyrene	243103.4	247540.8	1.8	25
Benzo (a) anthracene	216766.1	211082	-2.6	25
Chrysene	226152.1	241888.6	7.0	25

Analyte(s)	Average RF	CCRF	% D	Limit
Batch S822821				
Calibration Check (S822821-CCV2)				
Benzo (b) fluoranthene	210929.6	193464.5	-8.3	25
Benzo (k) fluoranthene	209908	212576.2	1.3	25
Benzo (a) pyrene	199853.2	191111	-4.4	25
Indeno (1,2,3-cd) pyrene	197796.9	168125.9	-15.0	25
Dibenzo (a,h) anthracene	202401.5	189025.2	-6.6	25
Benzo (g,h,i) perylene	192580.9	172689.7	-10.3	25
n-Nonane (C9)	226773.2	274262.2	20.9	30
n-Decane	226361.7	264679.4	16.9	25
n-Dodecane	229044.3	285292.8	24.6	25
n-Tetradecane	230280.1	280454.4	21.8	25
n-Hexadecane	230690.5	286145.8	24.0	25
n-Octadecane	231718.1	287853	24.2	25
n-Nonadecane	227157	279618	23.1	25
n-Eicosane	223860.6	271496.2	21.3	25
n-Docosane	215585	255566.8	18.5	25
n-Tetracosane	204977.2	244858.2	19.5	25
n-Hexacosane	192281.4	236876.6	23.2	25
n-Octacosane	182069.2	226771.4	24.6	25
n-Triacontane	174205.7	215697.2	23.8	25
n-Hexatriacontane	110486.4	117528.8	6.4	25
Naphthalene (aliphatic fraction)	253594.2			
2-Methylnaphthalene (aliphatic fraction)	249210			
Calibration Check (S822821-CCV3)				
C9-C18 Aliphatic Hydrocarbons	562022.7	293518.9	-11.0	25
C19-C36 Aliphatic Hydrocarbons	305826	198548.5	-11.1	25
Unadjusted C11-C22 Aromatic Hydrocarbons	306527	251181.6	0.6	25
Naphthalene	254431.6	253661.8	-0.3	25
2-Methylnaphthalene	249163.2	246522.4	-1.1	25
Acenaphthylene	259655.2	258909.2	-0.3	25
Acenaphthene	272811.1	273346.8	0.2	25
Fluorene	258846.8	260469.8	0.6	25
Phenanthrene	255197.1	247582.6	-3.0	25
Anthracene	255583.7	264220.2	3.4	25
Fluoranthene	243139.2	251296.8	3.4	25
Pyrene	243103.4	262426.6	7.9	25
Benzo (a) anthracene	216766.1	215508.2	-0.6	25
Chrysene	226152.1	241049.4	6.6	25
Benzo (b) fluoranthene	210929.6	206258.6	-2.2	25
Benzo (k) fluoranthene	209908	219514	4.6	25
Benzo (a) pyrene	199853.2	196837	-1.5	25
Indeno (1,2,3-cd) pyrene	197796.9	173155.3	-12.5	25
Dibenzo (a,h) anthracene	202401.5	194163.7	-4.1	25
Benzo (g,h,i) perylene	192580.9	176514.9	-8.3	25
n-Nonane (C9)	226773.2	245907.2	8.4	30
n-Decane	226361.7	256476.4	13.3	25
n-Dodecane	229044.3	261802.8	14.3	25
n-Tetradecane	230280.1	263305.2	14.3	25
n-Hexadecane	230690.5	264897.8	14.8	25
n-Octadecane	231718.1	263715.2	13.8	25
n-Nonadecane	227157	256520.2	12.9	25
n-Eicosane	223860.6	249064.8	11.3	25

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Analyte(s)	Average RF	CCRF	% D	Limit
Batch S822821				
Calibration Check (S822821-CCV3)				
n-Docosane	215585	235341	9.2	25
n-Tetracosane	204977.2	226610.2	10.6	25
n-Hexacosane	192281.4	219327.6	14.1	25
n-Octacosane	182069.2	212175.8	16.5	25
n-Triacontane	174205.7	205897.6	18.2	25
n-Hexatriacontane	110486.4	106513.8	-3.6	25
Naphthalene (aliphatic fraction)	253594.2			
2-Methylnaphthalene (aliphatic fraction)	249210			
Batch S822914				
Calibration Check (S822914-CCV1)				
C9-C18 Aliphatic Hydrocarbons	562022.7	313369.4	-3.9	25
C19-C36 Aliphatic Hydrocarbons	305826	214387.9	-3.1	25
Unadjusted C11-C22 Aromatic Hydrocarbons	306527	282486.1	14.1	25
Naphthalene	254431.6	278692.8	9.5	25
2-Methylnaphthalene	249163.2	278760.2	11.9	25
Acenaphthylene	259655.2	293065.2	12.9	25
Acenaphthene	272811.1	309580.6	13.5	25
Fluorene	258846.8	294511.6	13.8	25
Phenanthrene	255197.1	273312.4	7.1	25
Anthracene	255583.7	291187.2	13.9	25
Fluoranthene	243139.2	279833.2	15.1	25
Pyrene	243103.4	278858.2	14.7	25
Benzo (a) anthracene	216766.1	242457.2	11.9	25
Chrysene	226152.1	274677.2	21.5	25
Benzo (b) fluoranthene	210929.6	226266.8	7.3	25
Benzo (k) fluoranthene	209908	239859.6	14.3	25
Benzo (a) pyrene	199853.2	222778.4	11.5	25
Indeno (1,2,3-cd) pyrene	197796.9	194224.6	-1.8	25
Dibenzo (a,h) anthracene	202401.5	217828	7.6	25
Benzo (g,h,i) perylene	192580.9	202660.4	5.2	25
n-Nonane (C9)	226773.2	260308	14.8	30
n-Decane	226361.7	272210.6	20.3	25
n-Dodecane	229044.3	277140	21.0	25
n-Tetradecane	230280.1	278730.6	21.0	25
n-Hexadecane	230690.5	280660.6	21.7	25
n-Octadecane	231718.1	278093.2	20.0	25
n-Nonadecane	227157	267114	17.6	25
n-Eicosane	223860.6	258335.2	15.4	25
n-Docosane	215585	244772.4	13.5	25
n-Tetracosane	204977.2	234324	14.3	25
n-Hexacosane	192281.4	227651.8	18.4	25
n-Octacosane	182069.2	220045.8	20.9	25
n-Triacontane	174205.7	211426.8	21.4	25
n-Hexatriacontane	110486.4	108360.7	-1.9	25
Naphthalene (aliphatic fraction)	253594.2			
2-Methylnaphthalene (aliphatic fraction)	249210			
Batch S822945				
Calibration Check (S822945-CCV1)				
C9-C18 Aliphatic Hydrocarbons	562022.7	308427.3	-5.7	25
C19-C36 Aliphatic Hydrocarbons	305826	206499.9	-7.1	25
Unadjusted C11-C22 Aromatic Hydrocarbons	306527	284343.2	14.9	25

Extractable Petroleum Hydrocarbons - CCV Evaluation Report

Analyte(s)	Average RF	CCRF	% D	Limit
Batch S822945				
Calibration Check (S822945-CCV1)				
Naphthalene	254431.6	281563	10.7	25
2-Methylnaphthalene	249163.2	273369.4	9.7	25
Acenaphthylene	259655.2	288462.8	11.1	25
Acenaphthene	272811.1	304487.2	11.6	25
Fluorene	258846.8	288521.2	11.5	25
Phenanthrene	255197.1	270757.8	6.1	25
Anthracene	255583.7	292028	14.3	25
Fluoranthene	243139.2	279372.4	14.9	25
Pyrene	243103.4	279324.8	14.9	25
Benzo (a) anthracene	216766.1	243231.2	12.2	25
Chrysene	226152.1	280843.4	24.2	25
Benzo (b) fluoranthene	210929.6	223766.8	6.1	25
Benzo (k) fluoranthene	209908	248436.6	18.4	25
Benzo (a) pyrene	199853.2	232867.2	16.5	25
Indeno (1,2,3-cd) pyrene	197796.9	198898	0.6	25
Dibenzo (a,h) anthracene	202401.5	225582.2	11.5	25
Benzo (g,h,i) perylene	192580.9	198194	2.9	25
n-Nonane (C9)	226773.2	251861.4	11.1	30
n-Decane	226361.7	263456.6	16.4	25
n-Dodecane	229044.3	267967.2	17.0	25
n-Tetradecane	230280.1	269907.6	17.2	25
n-Hexadecane	230690.5	271750.4	17.8	25
n-Octadecane	231718.1	271035.4	17.0	25
n-Nonadecane	227157	262324	15.5	25
n-Eicosane	223860.6	254124	13.5	25
n-Docosane	215585	240610.2	11.6	25
n-Tetracosane	204977.2	231939.8	13.2	25
n-Hexacosane	192281.4	224902.8	17.0	25
n-Octacosane	182069.2	216049.8	18.7	25
n-Triacontane	174205.7	207471.6	19.1	25
n-Hexatriacontane	110486.4	104865.8	-5.1	25
Naphthalene (aliphatic fraction)	253594.2			
2-Methylnaphthalene (aliphatic fraction)	249210			

Notes and Definitions

QC2	Analyte out of acceptance range in QC spike but no reportable concentration present in sample.
QC6	Analyte is out of acceptance range in the QC spike but the total number of out of range analytes is within overall method criteria.
QM9	The spike recovery for this QC sample is outside the established control limits. The sample results for the QC batch were accepted based on LCS/LCSD or SRM recoveries within the control limits.
QR2	The RPD result exceeded the QC control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
QR9	RPD out of acceptance range. The batch is accepted based upon LCS and/or LCSD recovery.
SGCRE	Surrogate recovery outside of control limits. The data was accepted based on valid recovery of the re-extract.
Z-2	Low surrogate recovery from the preparation process. All sample volume has been re-extracted.
dry	Sample results reported on a dry weight basis
NR	Not Reported
RPD	Relative Percent Difference
pH	The method for pH does not stipulate a specific holding time other than to state that the samples should be analyzed as soon as possible. For aqueous samples the 40 CFR 136 specifies a holding time of 15 minutes from sampling to analysis. Therefore all aqueous pH samples not analyzed in the field are considered out of hold time at the time of sample receipt. All soil samples are analyzed as soon as possible after sample receipt.

Interpretation of Total Petroleum Hydrocarbon Report

Petroleum identification is determined by comparing the GC fingerprint obtained from the sample with a library of GC fingerprints obtained from analyses of various petroleum products. Possible match categories are as follows:

Gasoline - includes regular, unleaded, premium, etc.
Fuel Oil #2 - includes home heating oil, #2 fuel oil, and diesel
Fuel Oil #4 - includes #4 fuel oil
Fuel Oil #6 - includes #6 fuel oil and bunker "C" oil
Motor Oil - includes virgin and waste automobile oil
Ligroin - includes mineral spirits, petroleum naphtha, vm&p naphtha
Aviation Fuel - includes kerosene, Jet A and JP-4
Other Oil - includes lubricating and cutting oil, and silicon oil

At times, the unidentified petroleum product is quantified using a calibration that most closely approximates the distribution of compounds in the sample. When this occurs, the result is qualified as Calculated as.

Laboratory Control Sample (LCS): A known matrix spiked with compound(s) representative of the target analytes, which is used to document laboratory performance.

Matrix Duplicate: An intra-laboratory split sample which is used to document the precision of a method in a given sample matrix.

Matrix Spike: An aliquot of a sample spiked with a known concentration of target analyte(s). The spiking occurs prior to sample preparation and analysis. A matrix spike is used to document the bias of a method in a given sample matrix.

Method Blank: An analyte-free matrix to which all reagents are added in the same volumes or proportions as used in sample processing. The method blank should be carried through the complete sample preparation and analytical procedure. The method blank is used to document contamination resulting from the analytical process.

Method Detection Limit (MDL): The minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero and is determined from analysis of a sample in a given matrix type containing the analyte.

Reportable Detection Limit (RDL): The lowest concentration that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operating conditions. For many analytes the RDL analyte concentration is selected as the lowest non-zero standard in the calibration curve. While the RDL is approximately 5 to 10 times the MDL, the RDL for each sample takes into account the sample volume/weight, extract/digestate volume, cleanup procedures and, if applicable, dry weight correction. Sample RDLs are highly matrix-dependent.

Surrogate: An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. These compounds are spiked into all blanks, standards, and samples prior to analysis. Percent recoveries are calculated for each surrogate.

Continuing Calibration Verification: The calibration relationship established during the initial calibration must be verified at periodic intervals. Concentrations, intervals, and criteria are method specific.

SC51094 Bm

eurofins | Spectrum Analytical

CHAIN OF CUSTODY RECORD

Page ____ of ____

Special Handling:

☑ Standard TAT - 7 to 10 business days

☐ Rush TAT - Date Needed: _____

All TATs subject to laboratory approval
Min. 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed.

Report To: Kleinfelder
4 Technology Drive, Suite 110
Westborough, MA 01581

Telephone #: 508-370-8256 Fax: 508-68-1401
Project Mgr: Emily Straley

Invoice To: Cumberland Farms
Mr. Matt Young
165 Flanders Road
Westbough, MA 01581

P.O No.: _____ Quote #: _____

Project No: MA8691 Norton, MA
Site Name: 60 W. Main St
Location: Norton State: MA
Sampler(s): Jeremy Foote

F=Field Filtered 1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11= None 12= _____

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1= _____ X2= _____ X3= _____

G= Grab C=Compsite

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	Containers: # of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Analysis: MA VPH, VOCs via 8260	MA EPH	TPH via 8100, SVOCs via 8270	RCRA 8 Metals Total	RCRA 8 Metals Dissolved	Total Dissolved Solids	Flashpoint, pH Reactivity	Total Suspended Solids	Check if chlorinated
						List Preservative Code below:	2	2	11	4	4	11	11	11				
SC51094-01	MW-1	10/11/2018	1510	G	GW	4	6 (BD)		2	x	x	x	x	x	x	x	x	☐
-02	MW-4	10/11/2018	1230	G	GW	4	2		X	x	x							☐
-03	MW-6	10/11/2018	1200	G	GW	4	4 (BD)		2	x	x		x	x				☐
-04	MW-7	10/11/2018	1130	G	GW	4	2		2	x	x		x	x				☐
																		☐
																		☐
																		☐
																		☐
																		☐
																		☐
																		☐

QA/QC Reporting Notes:
* additional charges may appply

MA DEP MCP CAM Report? ☑ Yes ☐ No
CT DPH RCP Report? ☐ Yes ☐ No
☐ Standard ☐ No QC
☐ DQA*
☐ ASP A* ☐ ASP B*
☐ NJ Reduced* ☐ NJ Full*
☐ Tier II* ☐ Tier IV*
☐ Other: _____
State-specific reporting standards:

Relinquished by:	Received by:	Date:	Time:
Barbara Dec	HLF Fridge	10/11/18	1351
Dec	Dec	10/15/18	13:12
Dec		10/15/18	1550

Temp °C: Observed 1.9 | Correction Factor 0 | Corrected 1.9 | IR ID # 01

☐ EDD format: _____
☑ E-mail to: Estraley@kleinfelder.com

Condition upon receipt: Custody Seals: ☐ Present ☐ Intact ☐ Broken
☐ Ambient ☐ Iced ☒ Refrigerated ☐ DI VOA Frozen ☐ Soil Jar Frozen

Batch Summary

1813742

Total Metals by EPA 200/6000 Series Methods

SC51094-01 (MW-1)
SC51094-03 (MW-6)
SC51094-04 (MW-7)

1813743

Soluble Metals by EPA 200/6000 Series Methods

SC51094-01 (MW-1)
SC51094-03 (MW-6)
SC51094-04 (MW-7)

1813764

General Chemistry Parameters

1813764-BLK1
1813764-BS1
SC51094-01 (MW-1)

1813774

General Chemistry Parameters

1813774-BLK1
1813774-DUP1
1813774-SRM1
1813774-SRM2
SC51094-01 (MW-1)

1813783

General Chemistry Parameters

1813783-SRM1
1813783-SRM4
SC51094-01 (MW-1)

1813846

Semivolatile Organic Compounds by GCMS

1813846-BLK1
1813846-BS1
1813846-BSD1
1813846-DUP1
SC51094-01 (MW-1)

1813848

Extractable Petroleum Hydrocarbons

1813848-BLK1
1813848-BS2
1813848-BSD2
SC51094-01 (MW-1)

1813852

Total Metals by EPA 6000/7000 Series Methods

1813852-BLK1
1813852-BS1
1813852-BSD1
SC51094-01 (MW-1)
SC51094-03 (MW-6)
SC51094-04 (MW-7)

1813853

Total Metals by EPA 200 Series Methods

1813853-BLK1
1813853-BS1
1813853-DUP1
1813853-MS1
1813853-MSD1
1813853-PS1
SC51094-01 (MW-1)
SC51094-03 (MW-6)
SC51094-04 (MW-7)

1813854

Soluble Metals by EPA 6000/7000 Series Methods

1813854-BLK1
1813854-BS1
1813854-BSD1
1813854-DUP1
1813854-MS1
1813854-MSD1
1813854-PS1
SC51094-01 (MW-1)
SC51094-03 (MW-6)
SC51094-04 (MW-7)

1813855

Soluble Metals by EPA 200 Series Methods

1813855-BLK1
1813855-BS1
1813855-DUP1
1813855-MS1
1813855-MSD1
1813855-PS1
SC51094-01 (MW-1)
SC51094-03 (MW-6)
SC51094-04 (MW-7)

1813863

General Chemistry Parameters

1813863-BLK1
1813863-BS1
1813863-DUP1
SC51094-01 (MW-1)

1813945

Extractable Petroleum Hydrocarbons

1813945-BLK1
1813945-BS1
1813945-BS3
1813945-BSD1
1813945-DUP1
SC51094-01 (MW-1)
SC51094-02 (MW-4)
SC51094-03 (MW-6)
SC51094-04 (MW-7)

1814119

Extractable Petroleum Hydrocarbons

1814119-BLK1
1814119-BS1
1814119-BS3
1814119-BSD1
SC51094-01RE1 (MW-1)
SC51094-03RE1 (MW-6)
SC51094-04RE1 (MW-7)

1814147

General Chemistry Parameters

1814147-DUP1
1814147-SRM1
SC51094-01 (MW-1)

452159A

Subcontracted Analyses

CB73203-BLK
CB73203-LCS
CB73203-LCSD
CB73203-MS
CB73203-MSD
SC51094-01 (MW-1)

452380A

Subcontracted Analyses

CB72457-BLK
CB72457-LCS
CB72457-LCSD
SC51094-02 (MW-4)
SC51094-03 (MW-6)
SC51094-04 (MW-7)

452755A

Subcontracted Analyses

CB71743-BLK
CB71743-LCS
CB71743-LCSD
CB71743-MS
CB71743-MSD
SC51094-01 (MW-1)
SC51094-02 (MW-4)
SC51094-03 (MW-6)
SC51094-04 (MW-7)

S821215

Extractable Petroleum Hydrocarbons

S821215-CAL9
S821215-CALA
S821215-CALB
S821215-CALC
S821215-CALD
S821215-CALE
S821215-CALF
S821215-CALG
S821215-CALH
S821215-CALI
S821215-CALJ
S821215-CALK
S821215-CALL
S821215-CALM
S821215-ICV2

S821279

Extractable Petroleum Hydrocarbons

S821279-CAL1
S821279-CAL2
S821279-CAL3
S821279-CAL4
S821279-CAL5
S821279-CAL6
S821279-CAL7
S821279-CAL8
S821279-CAL9
S821279-CALA
S821279-CALB
S821279-CALC
S821279-ICV1
S821279-LCV1

S822781

Extractable Petroleum Hydrocarbons

S822781-CCV1
S822781-CCV3
S822781-CCV5

S822810

Semivolatile Organic Compounds by GCMS

S822810-CAL1
S822810-CAL2
S822810-CAL3
S822810-CAL4
S822810-CAL5
S822810-CAL6
S822810-CAL7
S822810-CAL8
S822810-CAL9
S822810-CALA
S822810-ICV1
S822810-ICV2
S822810-LCV1
S822810-LCV2
S822810-TUN1

S822821

Extractable Petroleum Hydrocarbons

S822821-CCV1
S822821-CCV2
S822821-CCV3

S822851

Semivolatile Organic Compounds by GCMS

S822851-CCV1
S822851-TUN1

S822852

Semivolatile Organic Compounds by GCMS

S822852-CCV1
S822852-TUN1

S822914

Extractable Petroleum Hydrocarbons

S822914-CCV1

S822930

Extractable Petroleum Hydrocarbons

S822930-CCV1
S822930-CCV2
S822930-CCV3

S822945

Extractable Petroleum Hydrocarbons

S822945-CCV1

ATTACHMENT D – Receiving Water Laboratory Analytical Data

eurofins | Environment Testing New England

ANALYTICAL REPORT

Eurofins New England
646 Camp Ave
North Kingstown, RI 02852
Tel: (413)789-9018

Laboratory Job ID: 620-2757-1
Client Project/Site: CFI - Norton RGP Sampling

For:
Kleinfelder Inc
4 Technology Drive
Suite 110
Westborough, Massachusetts 01851

Attn: Moira Johnson

Authorized for release by:
2/10/2022 7:03:09 PM

Agnes Huntley, Project Manager
(401)372-3482
agnes.huntley@eurofinset.com

Sample Summary

Client: Kleinfelder Inc
Project/Site: CFI - Norton RGP Sampling

Job ID: 620-2757-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
620-2757-1	SW-1	Water	01/26/22 10:30	01/26/22 15:32

Table of Contents

Definitions/Glossary

Client: Kleinfelder Inc
Job ID: 620-2757-1
Project/Site: CFI - Norton RGP Sampling

Qualifiers

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Subcontract

Qualifier	Qualifier Description
H	Estimated value. Sample hold times were exceeded (H).
U	Analyte included in the analysis, but not detected

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Case Narrative

Client: Kleinfelder Inc
Project/Site: CFI - Norton RGP Sampling

Job ID: 620-2757-1

Job ID: 620-2757-1

Laboratory: Eurofins New England

Narrative

Job Narrative
620-2757-1

Comments
No additional comments.

Receipt
The sample was received on 1/26/2022 3:32 PM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 4.6º C.

HPLC/IC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals
Method 200.7: The following samples for metals were received unpreserved and were preserved upon receipt to the laboratory: SW-1 (620-2757-1). Regulatory documents require a 24-hour waiting period from the time of the addition of the acid preservative to the time of digestion. Preserved 1/31/22 at 1050.

Method 200.8: The following samples for metals were received unpreserved and were preserved upon receipt to the laboratory: SW-1 (620-2757-1). Regulatory documents require a 24-hour waiting period from the time of the addition of the acid preservative to the time of digestion. Preserved 1/31/22 at 1050.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry
Method SM 4500 Cl G: The following sample(s) was received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: SW-1 (620-2757-1) and (620-2757-B-1 DU).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Subcontract Work
Method Hexavalent Chromium by SM3500: This method was subcontracted to ESS Laboratory. The subcontract laboratory certification is different from that of the facility issuing the final report.

Detection Summary

Client: Kleinfelder Inc
Project/Site: CFI - Norton RGP Sampling

Job ID: 620-2757-1

Client Sample ID: SW-1

Lab Sample ID: 620-2757-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Calcium	10.2		0.500		mg/L	1		200.7 Rev 4.4	Total/NA
Magnesium	2.43		0.200		mg/L	1		200.7 Rev 4.4	Total/NA
Antimony	0.0127		0.00100		mg/L	1		200.8	Total/NA
Copper	0.00201		0.00100		mg/L	1		200.8	Total/NA
Hardness (Ca and Mg)	35.6		0.500		mg/L	1		SM 2340B	Total/NA
Chloride	85.7		0.500		mg/L	1		300.0	Total/NA
Ammonia	0.0253		0.0200		mg/L	1		350.1	Total/NA
pH	6.55	HF			S.U.	1		D1293-99B	Total/NA
Chlorine, Total Residual	0.0300	HF	0.0200		mg/L	1		SM 4500 Cl G	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Kleinfelder Inc
Project/Site: CFI - Norton RGP Sampling

Job ID: 620-2757-1

Client Sample ID: SW-1

Date Collected: 01/26/22 10:30
Date Received: 01/26/22 15:32

Lab Sample ID: 620-2757-1

Matrix: Water

Method: 200.7 Rev 4.4 - Metals (ICP)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Calcium	**10.2**		0.500		mg/L		02/01/22 10:52	02/02/22 00:33	1
Magnesium	**2.43**		0.200		mg/L		02/01/22 10:52	02/02/22 00:33	1

Method: 200.8 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**0.0127**		0.00100		mg/L		02/01/22 10:55	02/07/22 15:39	1
Arsenic	ND		0.00100		mg/L		02/01/22 10:55	02/01/22 16:53	1
Beryllium	ND		0.000700		mg/L		02/01/22 10:55	02/01/22 16:53	1
Cadmium	ND		0.000500		mg/L		02/01/22 10:55	02/01/22 16:53	1
Chromium	ND		0.00150		mg/L		02/01/22 10:55	02/01/22 16:53	1
Copper	**0.00201**		0.00100		mg/L		02/01/22 10:55	02/01/22 16:53	1
Lead	ND		0.00100		mg/L		02/01/22 10:55	02/01/22 16:53	1
Nickel	ND		0.00100		mg/L		02/01/22 10:55	02/07/22 15:39	1
Selenium	ND		0.00100		mg/L		02/01/22 10:55	02/01/22 16:53	1
Silver	ND		0.000500		mg/L		02/01/22 10:55	02/01/22 16:53	1
Thallium	ND		0.000200		mg/L		02/01/22 10:55	02/01/22 16:53	1
Zinc	ND		0.0100		mg/L		02/01/22 10:55	02/01/22 16:53	1

Method: 245.1 - Mercury (CVAA)

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		02/01/22 11:20	02/01/22 14:16	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hardness (Ca and Mg)	**35.6**		0.500		mg/L			02/02/22 14:42	1

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**85.7**		0.500		mg/L			01/28/22 03:06	1
Cyanide, Total	ND		0.0100		mg/L		01/28/22 10:56	01/28/22 12:38	1
Ammonia	**0.0253**		0.0200		mg/L			01/28/22 10:38	1
pH	**6.55**	**HF**			S.U.			02/07/22 17:32	1
Total Suspended Solids	ND		1.67		mg/L			01/27/22 16:15	1
Chlorine, Total Residual	**0.0300**	**HF**	0.0200		mg/L			01/31/22 12:30	1

Method: Hexavalent Chromium by SM3500 - SM 3500 Cr B - Hexavalent Chromium

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexavalent Chromium	ND	H U	0.010		mg/L		02/03/22 18:03	02/03/22 18:03	1

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 480-613324/1-A
Matrix: Water
Analysis Batch: 613539

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 613324

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Calcium	ND		0.500		mg/L		02/01/22 10:52	02/01/22 23:56	1
Magnesium	ND		0.200		mg/L		02/01/22 10:52	02/01/22 23:56	1

Lab Sample ID: LCS 480-613324/2-A
Matrix: Water
Analysis Batch: 613539

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 613324

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Calcium			10.0	9.723		mg/L		97	85 - 115		
Magnesium			10.0	10.22		mg/L		102	85 - 115		

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 480-613323/1-A
Matrix: Water
Analysis Batch: 613553

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 613323

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.00100		mg/L		02/01/22 10:55	02/01/22 16:28	1
Beryllium	ND		0.000700		mg/L		02/01/22 10:55	02/01/22 16:28	1
Cadmium	ND		0.000500		mg/L		02/01/22 10:55	02/01/22 16:28	1
Chromium	ND		0.00150		mg/L		02/01/22 10:55	02/01/22 16:28	1
Copper	ND		0.00100		mg/L		02/01/22 10:55	02/01/22 16:28	1
Lead	ND		0.00100		mg/L		02/01/22 10:55	02/01/22 16:28	1
Selenium	ND		0.00100		mg/L		02/01/22 10:55	02/01/22 16:28	1
Silver	ND		0.000500		mg/L		02/01/22 10:55	02/01/22 16:28	1
Thallium	ND		0.000200		mg/L		02/01/22 10:55	02/01/22 16:28	1
Zinc	ND		0.0100		mg/L		02/01/22 10:55	02/01/22 16:28	1

Lab Sample ID: MB 480-613323/1-A
Matrix: Water
Analysis Batch: 614031

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 613323

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.00100		mg/L		02/01/22 10:55	02/07/22 15:21	1
Nickel	ND		0.00100		mg/L		02/01/22 10:55	02/07/22 15:21	1

Lab Sample ID: LCS 480-613323/2-A
Matrix: Water
Analysis Batch: 613553

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 613323

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Arsenic			0.0200	0.02058		mg/L		103	85 - 115		
Beryllium			0.0200	0.01908		mg/L		95	85 - 115		
Cadmium			0.0200	0.01992		mg/L		100	85 - 115		
Chromium			0.0200	0.01856		mg/L		93	85 - 115		
Copper			0.0200	0.02096		mg/L		105	85 - 115		
Lead			0.0200	0.02028		mg/L		101	85 - 115		
Selenium			0.0200	0.02039		mg/L		102	85 - 115		
Silver			0.0200	0.01980		mg/L		99	85 - 115		

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 480-613323/2-A
Matrix: Water
Analysis Batch: 613553

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 613323

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Thallium	0.0200	0.01977		mg/L		99	85 - 115
Zinc	0.0500	0.05083		mg/L		102	85 - 115

Lab Sample ID: LCS 480-613323/2-A
Matrix: Water
Analysis Batch: 614031

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 613323

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	0.0200	0.02267		mg/L		113	85 - 115
Nickel	0.0200	0.02001		mg/L		100	85 - 115

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 480-613392/1-A
Matrix: Water
Analysis Batch: 613443

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 613392

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.000200		mg/L		02/01/22 11:20	02/01/22 14:13	1

Lab Sample ID: LCS 480-613392/2-A
Matrix: Water
Analysis Batch: 613443

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 613392

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.00667	0.007383		mg/L		111	85 - 115

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 480-613027/28
Matrix: Water
Analysis Batch: 613027

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.500		mg/L			01/27/22 21:33	1

Lab Sample ID: MB 480-613027/4
Matrix: Water
Analysis Batch: 613027

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.500		mg/L			01/27/22 14:09	1

Lab Sample ID: LCS 480-613027/27
Matrix: Water
Analysis Batch: 613027

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	49.37		mg/L		99	90 - 110

Method: 335.4 - Cyanide, Total

Lab Sample ID: MB 480-613150/1-A
Matrix: Water
Analysis Batch: 613171

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 613150

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.0100		mg/L		01/28/22 10:56	01/28/22 12:12	1

Lab Sample ID: LCS 480-613150/2-A
Matrix: Water
Analysis Batch: 613171

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 613150

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			0.400	0.4240		mg/L		106	90 - 110		

Lab Sample ID: LCS 480-613150/3-A
Matrix: Water
Analysis Batch: 613171

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 613150

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Cyanide, Total			0.250	0.2660		mg/L		106	90 - 110		

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 480-613151/3
Matrix: Water
Analysis Batch: 613151

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	ND		0.0200		mg/L			01/28/22 10:15	1

Lab Sample ID: LCS 480-613151/4
Matrix: Water
Analysis Batch: 613151

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia			1.00	0.9450		mg/L		95	90 - 110		
Ammonia as NH3			1.22	1.149		mg/L		95	90 - 110		

Method: D1293-99B - pH

Lab Sample ID: 620-2757-1 DU
Matrix: Water
Analysis Batch: 7951

Client Sample ID: SW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	6.55	HF		6.310		S.U.				4	5

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 620-7628/1
Matrix: Water
Analysis Batch: 7628

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		5.00		mg/L			01/27/22 16:15	1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 620-7628/2
Matrix: Water
Analysis Batch: 7628

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			100	92.00		mg/L		92	90 - 110		

Method: SM 4500 Cl G - Chlorine, Residual

Lab Sample ID: MB 480-613302/3
Matrix: Water
Analysis Batch: 613302

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chlorine, Total Residual	ND		0.0200		mg/L			01/31/22 12:30	1

Lab Sample ID: LCS 480-613302/4
Matrix: Water
Analysis Batch: 613302

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chlorine, Total Residual			0.940	0.9300		mg/L		99	90 - 110		

Lab Sample ID: 620-2757-1 DU
Matrix: Water
Analysis Batch: 613302

Client Sample ID: SW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chlorine, Total Residual	0.0300	HF		0.03000		mg/L				0	20

Method: Hexavalent Chromium by SM3500 - SM 3500 Cr B - Hexavalent Chromium

Lab Sample ID: DB20333-BLK1
Matrix: Aqueous
Analysis Batch: DB20333

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: DB20333_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexavalent Chromium	ND	U	0.010		mg/L		02/03/22 18:03	02/03/22 18:03	1

Lab Sample ID: DB20333-BS1
Matrix: Aqueous
Analysis Batch: DB20333

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: DB20333_P

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Hexavalent Chromium			0.4998	0.503		mg/L		101	90 - 110		

Lab Sample ID: DB20333-BSD1
Matrix: Aqueous
Analysis Batch: DB20333

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: DB20333_P

Analyte			Spike Added	LCS Dup Result	LCS Dup Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Hexavalent Chromium			0.4998	0.506		mg/L		101	90 - 110	0.5	20

QC Association Summary

Client: Kleinfelder Inc
Project/Site: CFI - Norton RGP Sampling

Job ID: 620-2757-1

Metals

Prep Batch: 613323

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-2757-1	SW-1	Total/NA	Water	200.8	
MB 480-613323/1-A	Method Blank	Total/NA	Water	200.8	
LCS 480-613323/2-A	Lab Control Sample	Total/NA	Water	200.8	

Prep Batch: 613324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-2757-1	SW-1	Total/NA	Water	200.7	
MB 480-613324/1-A	Method Blank	Total/NA	Water	200.7	
LCS 480-613324/2-A	Lab Control Sample	Total/NA	Water	200.7	

Prep Batch: 613392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-2757-1	SW-1	Total/NA	Water	245.1	
MB 480-613392/1-A	Method Blank	Total/NA	Water	245.1	
LCS 480-613392/2-A	Lab Control Sample	Total/NA	Water	245.1	

Analysis Batch: 613443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-2757-1	SW-1	Total/NA	Water	245.1	613392
MB 480-613392/1-A	Method Blank	Total/NA	Water	245.1	613392
LCS 480-613392/2-A	Lab Control Sample	Total/NA	Water	245.1	613392

Analysis Batch: 613539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-2757-1	SW-1	Total/NA	Water	200.7 Rev 4.4	613324
MB 480-613324/1-A	Method Blank	Total/NA	Water	200.7 Rev 4.4	613324
LCS 480-613324/2-A	Lab Control Sample	Total/NA	Water	200.7 Rev 4.4	613324

Analysis Batch: 613553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-2757-1	SW-1	Total/NA	Water	200.8	613323
MB 480-613323/1-A	Method Blank	Total/NA	Water	200.8	613323
LCS 480-613323/2-A	Lab Control Sample	Total/NA	Water	200.8	613323

Analysis Batch: 613597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-2757-1	SW-1	Total/NA	Water	SM 2340B	

Analysis Batch: 614031

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-2757-1	SW-1	Total/NA	Water	200.8	613323
MB 480-613323/1-A	Method Blank	Total/NA	Water	200.8	613323
LCS 480-613323/2-A	Lab Control Sample	Total/NA	Water	200.8	613323

General Chemistry

Analysis Batch: 7628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-2757-1	SW-1	Total/NA	Water	SM 2540D	
MB 620-7628/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 620-7628/2	Lab Control Sample	Total/NA	Water	SM 2540D	

General Chemistry

Analysis Batch: 7951

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-2757-1	SW-1	Total/NA	Water	D1293-99B	
LCDSRM 620-7951/8	Lab Control Sample Dup	Total/NA	Water	D1293-99B	
LCSSRM 620-7951/1	Lab Control Sample	Total/NA	Water	D1293-99B	
620-2757-1 DU	SW-1	Total/NA	Water	D1293-99B	

Analysis Batch: 613027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-2757-1	SW-1	Total/NA	Water	300.0	
MB 480-613027/28	Method Blank	Total/NA	Water	300.0	
MB 480-613027/4	Method Blank	Total/NA	Water	300.0	
LCS 480-613027/27	Lab Control Sample	Total/NA	Water	300.0	

Prep Batch: 613150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-2757-1	SW-1	Total/NA	Water	Distill/CN	
MB 480-613150/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 480-613150/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
LCS 480-613150/3-A	Lab Control Sample	Total/NA	Water	Distill/CN	

Analysis Batch: 613151

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-2757-1	SW-1	Total/NA	Water	350.1	
MB 480-613151/3	Method Blank	Total/NA	Water	350.1	
LCS 480-613151/4	Lab Control Sample	Total/NA	Water	350.1	

Analysis Batch: 613171

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-2757-1	SW-1	Total/NA	Water	335.4	613150
MB 480-613150/1-A	Method Blank	Total/NA	Water	335.4	613150
LCS 480-613150/2-A	Lab Control Sample	Total/NA	Water	335.4	613150
LCS 480-613150/3-A	Lab Control Sample	Total/NA	Water	335.4	613150

Analysis Batch: 613302

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-2757-1	SW-1	Total/NA	Water	SM 4500 Cl G	
MB 480-613302/3	Method Blank	Total/NA	Water	SM 4500 Cl G	
LCS 480-613302/4	Lab Control Sample	Total/NA	Water	SM 4500 Cl G	
620-2757-1 DU	SW-1	Total/NA	Water	SM 4500 Cl G	

Subcontract

Analysis Batch: DB20333

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-2757-1	SW-1	Total/NA	Water	Hexavalent Chromium by SM3500	DB20333_P
DB20333-BLK1	Method Blank	Total/NA	Aqueous	Hexavalent Chromium by SM3500	DB20333_P
DB20333-BS1	Lab Control Sample	Total/NA	Aqueous	Hexavalent Chromium by SM3500	DB20333_P

Subcontract (Continued)

Analysis Batch: DB20333 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
DB20333-BSD1	Lab Control Sample Dup	Total/NA	Aqueous	Hexavalent Chromium by SM3500	DB20333_P

Prep Batch: DB20333_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
620-2757-1	SW-1	Total/NA	Water	General Preparation	
DB20333-BLK1	Method Blank	Total/NA	Aqueous	General Preparation	
DB20333-BS1	Lab Control Sample	Total/NA	Aqueous	General Preparation	
DB20333-BSD1	Lab Control Sample Dup	Total/NA	Aqueous	General Preparation	

Lab Chronicle

Client: Kleinfelder Inc
Job ID: 620-2757-1
Project/Site: CFI - Norton RGP Sampling

Client Sample ID: SW-1
Lab Sample ID: 620-2757-1
Date Collected: 01/26/22 10:30
Matrix: Water
Date Received: 01/26/22 15:32

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	200.7			613324	02/01/22 10:52	NBS	TAL BUF
Total/NA	Analysis	200.7 Rev 4.4		1	613539	02/02/22 00:33	LMH	TAL BUF
Total/NA	Prep	200.8			613323	02/01/22 10:55	NBS	TAL BUF
Total/NA	Analysis	200.8		1	613553	02/01/22 16:53	BMB	TAL BUF
Total/NA	Prep	200.8			613323	02/01/22 10:55	NBS	TAL BUF
Total/NA	Analysis	200.8		1	614031	02/07/22 15:39	BMB	TAL BUF
Total/NA	Prep	245.1			613392	02/01/22 11:20	NVK	TAL BUF
Total/NA	Analysis	245.1		1	613443	02/01/22 14:16	BMB	TAL BUF
Total/NA	Analysis	SM 2340B		1	613597	02/02/22 14:42	JJP	TAL BUF
Total/NA	Analysis	300.0		1	613027	01/28/22 03:06	IMZ	TAL BUF
Total/NA	Prep	Distill/CN			613150	01/28/22 10:56	JGO	TAL BUF
Total/NA	Analysis	335.4		1	613171	01/28/22 12:38	JGO	TAL BUF
Total/NA	Analysis	350.1		1	613151	01/28/22 10:38	CLT	TAL BUF
Total/NA	Analysis	D1293-99B		1	7951	02/07/22 17:32	PN	ENE
Total/NA	Analysis	SM 2540D		1	7628	01/27/22 16:15	KFS	ENE
Total/NA	Analysis	SM 4500 Cl G		1	613302	01/31/22 12:30	DLG	TAL BUF
Total/NA	Prep	General Preparation		1	DB20333_P	02/03/22 18:03		
Total/NA	Analysis	Hexavalent Chromium by SM3500		1	DB20333	02/03/22 18:03	JLK	

Laboratory References:

= Cranston, RI, 185 Frances Ave, Cranston, RI 02910, TEL (401)461-7181

ENE = Eurofins New England, 646 Camp Ave, North Kingstown, RI 02852, TEL (413)789-9018

TAL BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

Accreditation/Certification Summary

Client: Kleinfelder Inc
Job ID: 620-2757-1
Project/Site: CFI - Norton RGP Sampling

Laboratory: Eurofins New England

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Massachusetts	State	M-RI907	06-30-22

Laboratory: Eurofins Buffalo

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Massachusetts	State	M-NY044	06-30-22

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
SM 2340B		Water	Hardness (Ca and Mg)
SM 4500 Cl G		Water	Chlorine, Total Residual

Method Summary

Client: Kleinfelder Inc
Project/Site: CFI - Norton RGP Sampling

Job ID: 620-2757-1

Method	Method Description	Protocol	Laboratory
200.7 Rev 4.4	Metals (ICP)	EPA	TAL BUF
200.8	Metals (ICP/MS)	EPA	TAL BUF
245.1	Mercury (CVAA)	EPA	TAL BUF
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	TAL BUF
300.0	Anions, Ion Chromatography	MCAWW	TAL BUF
335.4	Cyanide, Total	MCAWW	TAL BUF
350.1	Nitrogen, Ammonia	MCAWW	TAL BUF
D1293-99B	pH	ASTM	ENE
SM 2540D	Solids, Total Suspended (TSS)	SM	ENE
SM 4500 Cl G	Chlorine, Residual	SM	TAL BUF
3500 Cr B	SM 3500 Cr B - Hexavalent Chromium	SM	
200.7	Preparation, Total Metals	EPA	TAL BUF
200.8	Preparation, Total Metals	EPA	TAL BUF
245.1	Preparation, Mercury	EPA	TAL BUF
Distill/CN	Distillation, Cyanide	None	TAL BUF

Protocol References:

ASTM = ASTM International
EPA = US Environmental Protection Agency
MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
None = None
SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

= Cranston, RI, 185 Frances Ave, Cranston, RI 02910, TEL (401)461-7181
ENE = Eurofins New England, 646 Camp Ave, North Kingstown, RI 02852, TEL (413)789-9018
TAL BUF = Eurofins Buffalo, 10 Hazelwood Drive, Amherst, NY 14228-2298, TEL (716)691-2600

620-2757 Chain of Custody

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2/10/2022

...nment Testing
New England

CHAIN OF CUSTODY RECORD

Page 1 of 1

Special Handling:

- [ ] Standard TAT - 7 to 10 business days
- [X] Rush TAT - Date Needed 1-31-2022

All TATs subject to laboratory approval
Min 24-hr notification needed for rushes
Samples disposed after 30 days unless otherwise instructed

Report To: Klein Felder, 4 Technology Dr, Suite 110, Westborough, MA 01581

Telephone # 508-370-8256

Project Mgr: Mark S Johnson

Invoice To: Cumberland Farms, 165 Flanders Road, Westborough, MA 01581, Mr. Matt Young

PO No. 1028311   Quote #

Project No. CFI Norton

Site Name. MA8691

Location 60 West Main St, Norton State M.A.

Sampler(s) P Monahan

F=Field-Filtered 1=Na_2S2O_3 2=HCl 3=H_2SO_4 4=HNO_3 5=NaOH 6=Ascorbic Acid
7=CH3OH 8=$NaHSO_4$ 9=Deionized Water 10=H_3PO_4 11= None 12=

DW=Drinking Water GW=Groundwater SW=Surface Water WW=Waste Water
O=Oil SO=Soil SL=Sludge A=Indoor/Ambient Air SG=Soil Gas
X1= X2= X3=

G= Grab C=Composite

List Preservative Code below: 3, 11, 11, 5, 4, 11

Lab ID:	Sample ID:	Date:	Time:	Type	Matrix	# of VOA Vials	# of Amber Glass	# of Clear Glass	# of Plastic	Ammonia	Chloride and Total Res. Chlorine	Total Suspended Solids	Cyanide	PP13 Metals and hardness	hex chromium and pH	Check if chlorinated
	SW-1	1/26/22	1030	G	SW				6	X	X	X	X	X	X	[ ]

QA/QC Reporting Notes:
* additional charges may appply

MA DEP MCP CAM Report? [ ] Yes [ ] No
CT DPH RCP Report? [ ] Yes [ ] No
[ ] Standard [ ] No QC
[ ] DQA*
[ ] ASP A* [ ] ASP B*
[ ] NJ Reduced* [ ] NJ Full*
[ ] Tier II* [ ] Tier IV*
[ ] Other:
State-specific reporting standards.

Relinquished by:	Received by:	Date:	Time:	Temp °C
[signature]	[signature]	1/26/22	1117	Observed: 3.6
[signature]	[signature]	1/26/22	15:32	Correction Factor: +1
				Corrected: 4.6
				IR ID #: 6

- [ ] EDD format
- [ ] E-mail to

Condition upon receipt: Custody Seals: [ ] Present [ ] Intact [ ] Broken
[ ] Ambient [X] Iced [ ] Refrigerated [ ] DI VOA Frozen [ ] Soil Jar Frozen

Eurofins New England
646 Camp Ave
North Kingstown, RI 02852
Phone: 413-789-9018

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Huntley, Agnes R	Carrier Tracking No(s):	COC No: 620-2534.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: agnes.huntley@eurofinset.com	State of Origin: Massachusetts	Page: Page 1 of 1
Company: Eurofins Environment Testing Northeast,		Accreditations Required (See note): State - Massachusetts		Job #: 620-2757-1
Address: 10 Hazelwood Drive, ,	Due Date Requested: 1/30/2022			
City: Amherst	TAT Requested (days):			
State, Zip: NY, 14228-2298				
Phone: 716-691-2600(Tel) 716-691-7991(Fax)	PO #:			
Email:	WO #:			
Project Name: CFI - Norton RGP Sampling	Project #: 62001056			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	4500_CL_G	350.1	300.0_28D/ (MOD) Local Method	200.8/200.8_P_TOT Priority Pollutants	200.7/200.7_P_TOT (MOD) Copy Analytes	SM2340B	245.1/245.1_Prep	335.4/Distill_CN					Total Number of containers	Special Instructions/Note:
Preservation Code:																					
SW-1 (620-2757-1)	1/26/22	10:30 Eastern		Water			X	X	X	X	X	X	X	X						3	

Note: Since laboratory accreditations are subject to change, Eurofins Environment Testing Northeast, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Environment Testing Northeast, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Environment Testing Northeast, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Environment Testing Northeast, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	1/26/22 17:48	ENE	[signature]	1-27-22 1000	TAB
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: ∆ Yes ∆ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.0 ICE

Login Sample Receipt Checklist

Client: Kleinfelder Inc

Job Number: 620-2757-1

Login Number: 2757
List Number: 1
Creator: Makhoul, Elie

List Source: Eurofins New England

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Kleinfelder Inc

Job Number: 620-2757-1

Login Number: 2757
List Number: 2
Creator: Yeager, Brian A

List Source: Eurofins Buffalo
List Creation: 01/27/22 12:10 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.0 ICE IR GUN #1
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time (Excluding tests with immediate HTs)..	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	True	

ATTACHMENT E – Fish and Wildlife Service Consistency Letter and Official List of Threatened and Endangered Species

MA8691 Endangered Special

Biological Assessment

Prepared using IPaC

Generated by Patrick Monahan (pmonahan@kleinfelder.com)

January 21, 2022

The purpose of this Biological Assessment (BA) is to assess the effects of the proposed project and determine whether the project may affect any Federally threatened, endangered, proposed or candidate species. This BA is prepared in accordance with legal requirements set forth under Section 7 of the Endangered Species Act (16 U.S.C. 1536 (c)).

In this document, any data provided by U.S. Fish and Wildlife Service is based on data as of January 20, 2022.

Prepared using IPaC version 5.69.0

MA8691 Endangered Special Biological Assessment

Table Of Contents

1 Description Of The Action

1.1 Project Name

MA8691 Endangered special

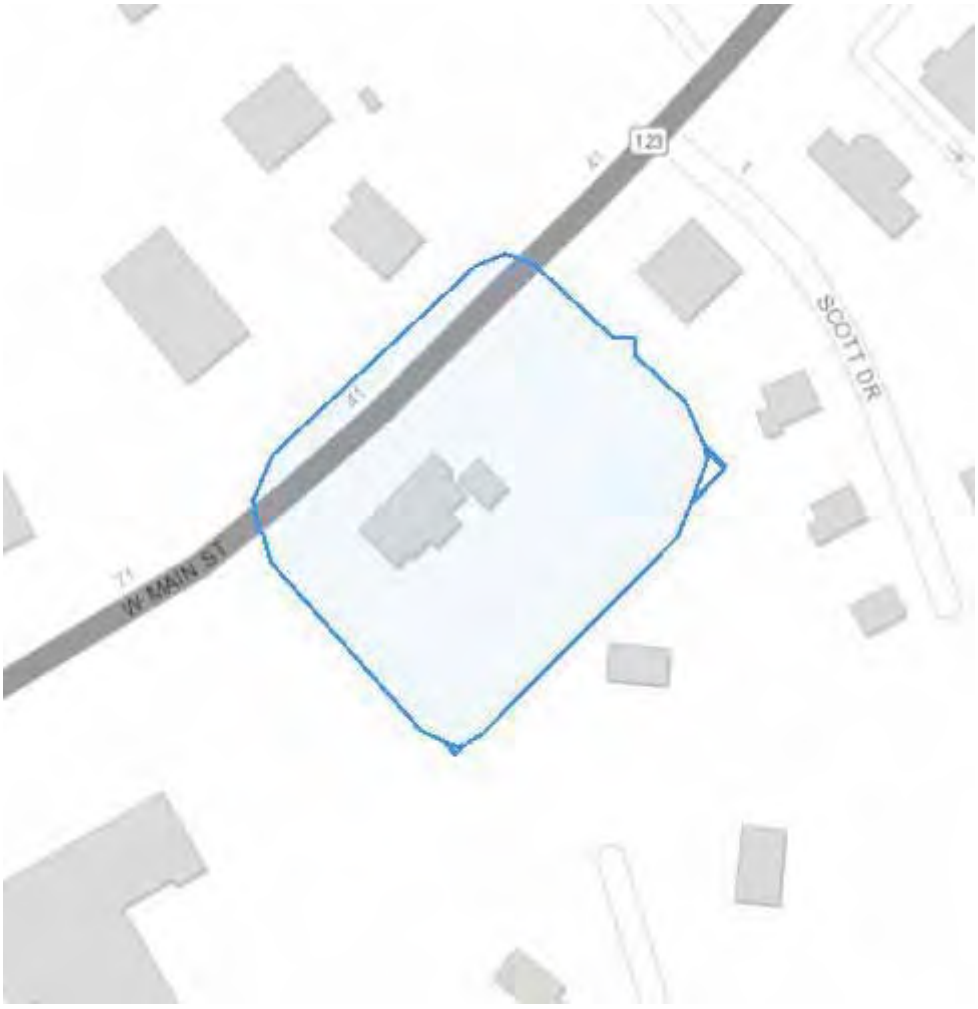
1.2 Executive Summary

the project being conducted is the construction of a retail gasoline station with convenience store. the site is located in an urban area along a main road, the site is currently vacant with paved areas and is slightly vegetated from overgrowth that will be removed during construction activities. the specific work I am overseeing is de-watering of an excavation to install the facilities UST system. water will be pumped into frac tank then pumped through a series of bag filters and discharged to a small pond down the street. samples of both groundwater and surface water have been obtained and no harm will be done to the water system in the area.

Effect determination summary

1.3 Project Description

1.3.1 Location



LOCATION
Bristol County, Massachusetts

1.3.2 Description of project habitat

site is currently a vacant lot

1.3.3 Project proponent information

Provide information regarding who is proposing to conduct the project, and their contact information. Please provide details on whether there is a Federal nexus.

Requesting Agency
Kleinfelder

FULL NAME
Patrick Monahan

STREET ADDRESS
18 Freddy Rd

CITY	STATE	ZIP
Billerica	**MA**	**01821**

PHONE NUMBER	E-MAIL ADDRESS
(978) 987-3057	**pmonahan@kleinfelder.com**

Lead agency
Lead agency is the same as requesting agency

1.3.4 Project purpose

scope of project is de-watering an excavation to install UST's at a newly constructed retail gas station. the water pumped out of excavation will be purged to a wetland

1.3.5 Project type and deconstruction

This project is a residential, commercial, industrial development project.

1.3.5.1 Project map

LEGEND

Project footprint

UST area: In-ground utilities construction

1.3.5.2 in-ground utilities construction

Activity start date
February 28, 2022

Activity end date
March 30, 2022

Stressors

PLANT FEATURES
- Change in vegetation structure
- Decrease in trees
- Decrease in vegetation
- Increase in fuel load

CHEMICALS / CONTAMINANTS
- Increase in contaminants

ENVIRONMENTAL QUALITY FEATURES
- Increase in soil moisture/saturation

LANDFORM (TOPOGRAPHIC) FEATURES
- Change in topography

SOIL AND SEDIMENT
- Increase in dust
- Increase in fill
- Increase in soil compaction

ENVIRONMENTAL PROCESSES
- Change in surface runoff
- Increase in erosion
- Increase in surface runoff

HUMAN ACTIVITIES
- Increase in ground vibrations
- Increase in human presence
- Increase in noise
- Increase in soil disturbance
- Increase in vehicle traffic

SPECIES INTERACTIONS / INTRODUCTIONS

- Increase in pathogens

Description

Vacant lot being transformed to a retail gas station with convenience store

1.3.6 Anticipated environmental stressors

Describe the anticipated effects of your proposed project on the aspects of the land, air and water that will occur due to the activities above. These should be based on the activity deconstructions done in the previous section and will be used to inform the action area.

1.3.6.1 Animal Features

Individuals from the Animalia kingdom, such as raptors, mollusks, and fish. This feature also includes byproducts and remains of animals (e.g., carrion, feathers, scat, etc.), and animal-related structures (e.g., dens, nests, hibernacula, etc.).

1.3.6.2 Plant Features

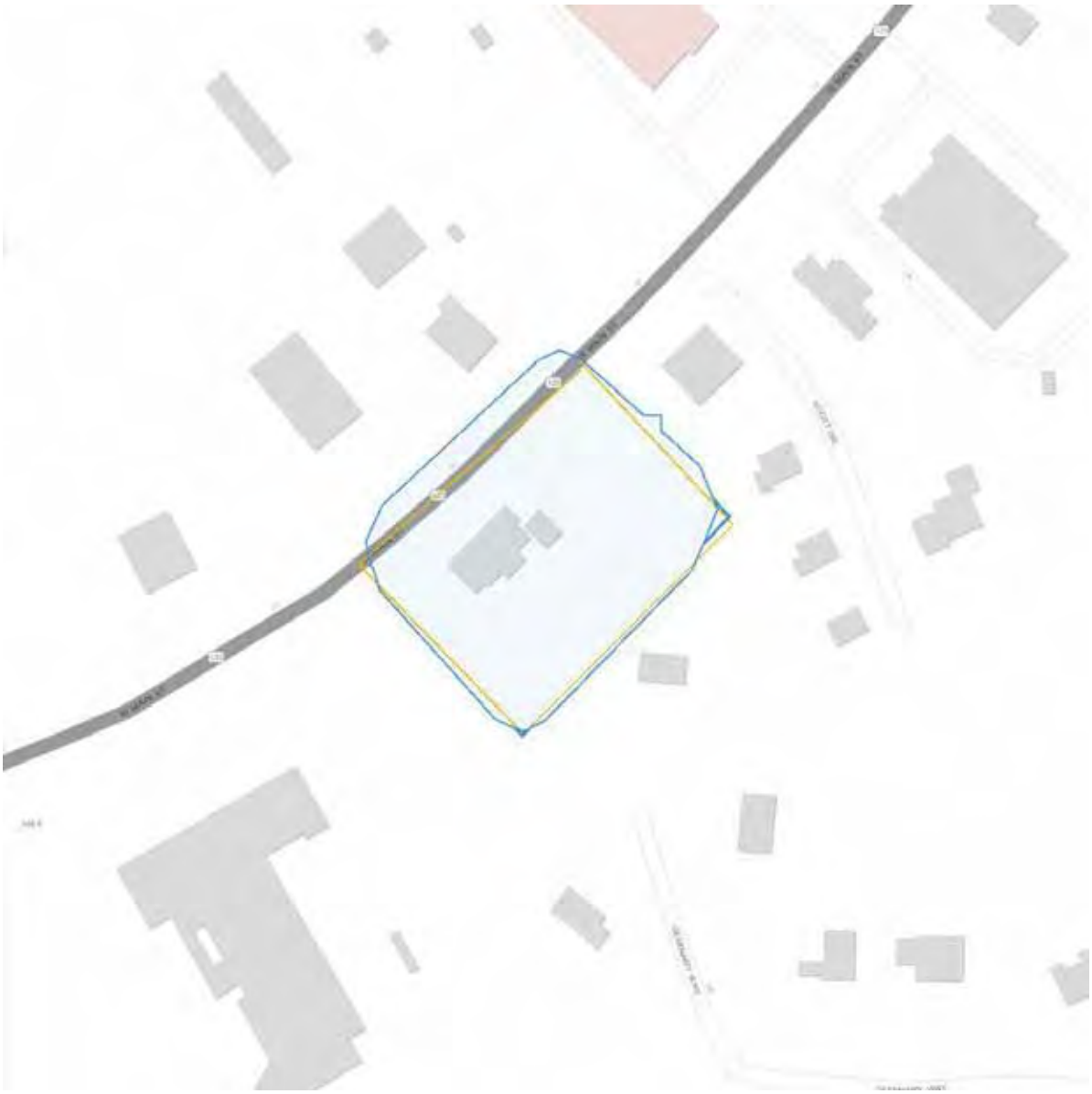
Individuals from the Plantae kingdom, such as trees, shrubs, herbs, grasses, ferns, and mosses. This feature also includes products of plants (e.g., nectar, flowers, seeds, etc.).

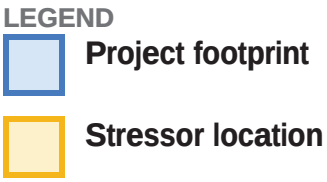
1.3.6.2.1 Change in vegetation structure

ANTICIPATED MAGNITUDE

overgrown vegetation on site will be removed due to construction

STRESSOR LOCATION




LEGEND
Project footprint
Stressor location

CONSERVATION MEASURES

No conservation measures for this stressor

STRUCTURES AND ACTIVITIES

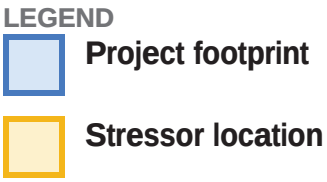
- In-ground utilities construction

1.3.6.2.2 Decrease in trees

ANTICIPATED MAGNITUDE

only trees within the footprint of the site will be removed (may not even be any removed)

STRESSOR LOCATION


LEGEND
Project footprint
Stressor location

CONSERVATION MEASURES

No conservation measures for this stressor

STRUCTURES AND ACTIVITIES

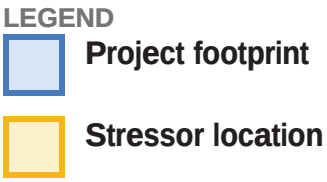
- In-ground utilities construction

1.3.6.2.3 Decrease in vegetation

ANTICIPATED MAGNITUDE

only vegetation on the footprint of the site will be removed

STRESSOR LOCATION


LEGEND
Project footprint
Stressor location

CONSERVATION MEASURES

No conservation measures for this stressor

STRUCTURES AND ACTIVITIES

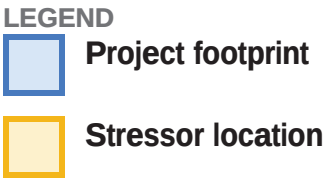
- In-ground utilities construction

1.3.6.2.4 Increase in fuel load

ANTICIPATED MAGNITUDE

multiple pieces of construction equipment and machinery will be on site and therefore more fuel consumption

STRESSOR LOCATION


LEGEND
Project footprint
Stressor location

CONSERVATION MEASURES

No conservation measures for this stressor

STRUCTURES AND ACTIVITIES

- In-ground utilities construction

1.3.6.3 Aquatic Features

Bodies of water on the landscape, such as streams, rivers, ponds, wetlands, etc., and their physical characteristics (e.g., depth, current, etc.). This feature includes the groundwater and its characteristics. Water quality attributes (e.g., turbidity, pH, temperature, DO, nutrients, etc.) should be placed in the Environmental Quality Features.

1.3.6.4 Chemicals / Contaminants

Substances that pollute, spoil, or poison the environment (e.g., herbicides, heavy metals, oil, etc.).

1.3.6.4.1 Increase in contaminants

ANTICIPATED MAGNITUDE

This stressor is not expected to occur; the following explanation has been provided:

bag filters will catch suspended solids within groundwater before being discharged on site

CONSERVATION MEASURES

- Frac tank with bag filters

STRUCTURES AND ACTIVITIES

- In-ground utilities construction

1.3.6.5 Environmental Quality Features

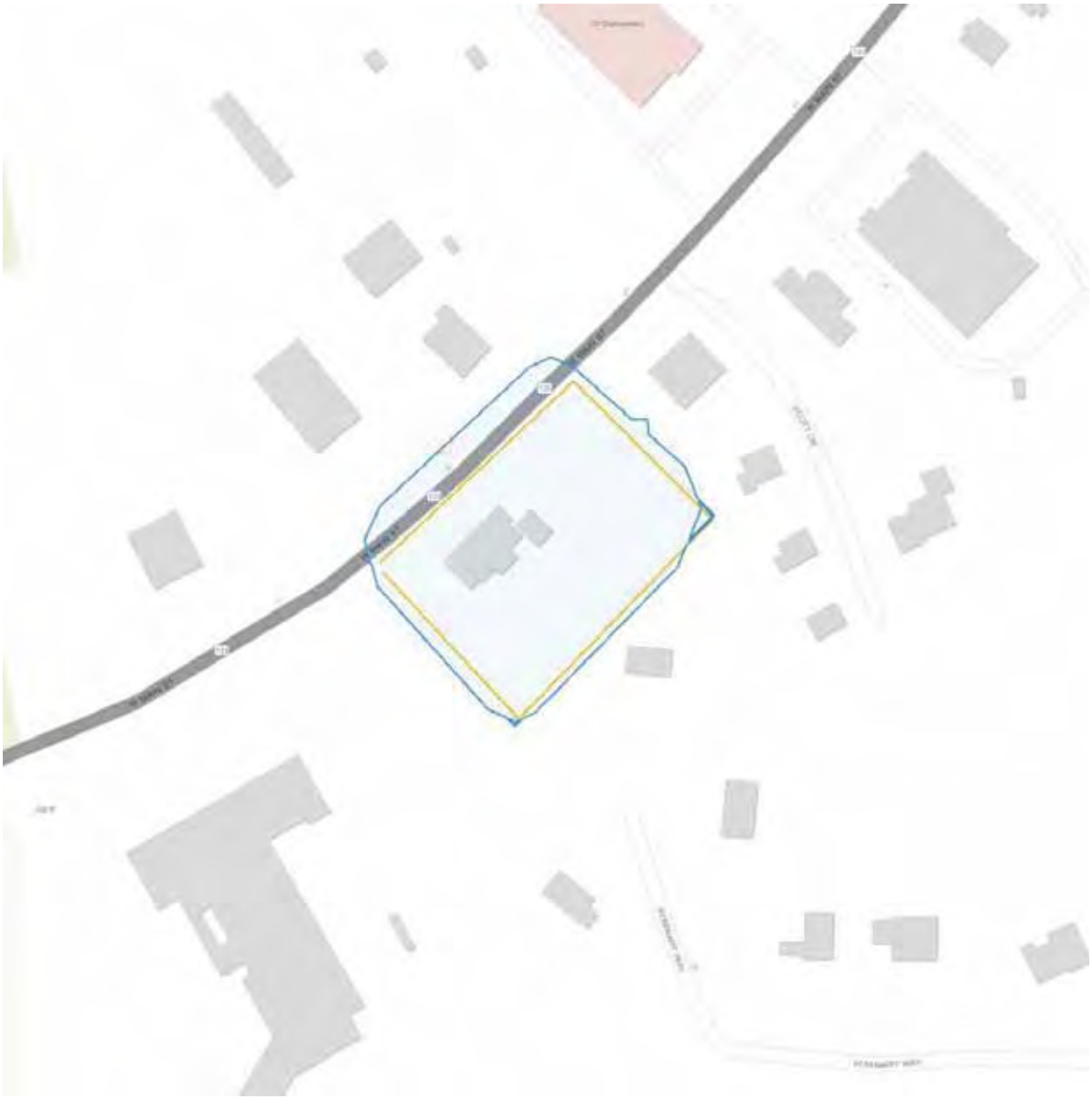
Abiotic attributes of the landscape (e.g., temperature, moisture, slope, aspect, etc.).

1.3.6.5.1 Increase in soil moisture/saturation

ANTICIPATED MAGNITUDE

the surface of the existing vacant lot will be stripped and where there was pavement will absorb more water from natural precipitation

STRESSOR LOCATION



LEGEND

Project footprint

Stressor location

CONSERVATION MEASURES

No conservation measures for this stressor

STRUCTURES AND ACTIVITIES

- In-ground utilities construction

1.3.6.6 Landform (topographic) Features

Topographic (landform) features that typically occur naturally on the landscape (e.g., cliffs, terraces, ridges, etc.). This feature does not include aquatic landscape features or man-made structures.

1.3.6.6.1 Change in topography

ANTICIPATED MAGNITUDE

surface topography will change due to construction

STRESSOR LOCATION

LEGEND

Project footprint

Stressor location

CONSERVATION MEASURES

No conservation measures for this stressor

STRUCTURES AND ACTIVITIES

- In-ground utilities construction

1.3.6.7 Soil and Sediment

The topmost layer of earth on the landscape and its components (e.g., rock, sand, gravel, silt, etc.). This feature includes the physical characteristics of soil, such as depth, compaction, etc. Soil quality attributes (e.g, temperature, pH, etc.) should be placed in the Environmental Quality Features.

1.3.6.7.1 Increase in dust

ANTICIPATED MAGNITUDE

This stressor is not expected to occur; the following explanation has been provided:

use water truck to control dust during construction

CONSERVATION MEASURES

- Wet down dusty areas with water truck if needed

STRUCTURES AND ACTIVITIES

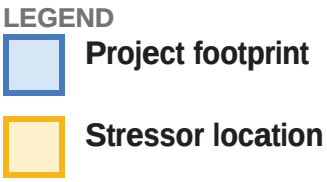
- In-ground utilities construction

1.3.6.7.2 Increase in fill

ANTICIPATED MAGNITUDE

depends on how much it takes to bring gas station to grade

STRESSOR LOCATION


LEGEND
Project footprint
Stressor location

CONSERVATION MEASURES

No conservation measures for this stressor

STRUCTURES AND ACTIVITIES

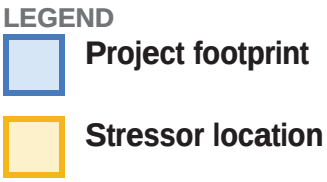
- In-ground utilities construction

1.3.6.7.3 Increase in soil compaction

ANTICIPATED MAGNITUDE

soil compaction will occur from heavy equipment moving throughout the site

STRESSOR LOCATION


LEGEND
Project footprint
Stressor location

CONSERVATION MEASURES

No conservation measures for this stressor

STRUCTURES AND ACTIVITIES

- In-ground utilities construction

1.3.6.8 Environmental Processes

Abiotic processes that occur in the natural environment (e.g., erosion, precipitation, flood frequency, photoperiod, etc.).

1.3.6.8.1 Change in surface runoff

ANTICIPATED MAGNITUDE

surface runoff will occur due to parking lot being paved

STRESSOR LOCATION

LEGEND

Project footprint

Stressor location

CONSERVATION MEASURES

No conservation measures for this stressor

STRUCTURES AND ACTIVITIES

- In-ground utilities construction

1.3.6.8.2 Increase in erosion

ANTICIPATED MAGNITUDE

This stressor is not expected to occur; the following explanation has been provided:

through erosion barriers placed around the site

CONSERVATION MEASURES

- Erosion controls

STRUCTURES AND ACTIVITIES

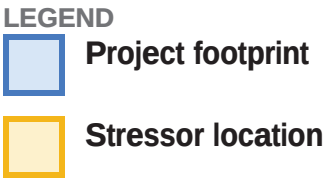
- In-ground utilities construction

1.3.6.8.3 Increase in surface runoff

ANTICIPATED MAGNITUDE

parking lot will be paved upon completion of construction

STRESSOR LOCATION


LEGEND
Project footprint
Stressor location

CONSERVATION MEASURES

No conservation measures for this stressor

STRUCTURES AND ACTIVITIES

- In-ground utilities construction

1.3.6.9 Human Activities

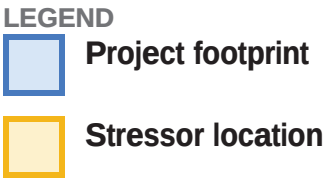
Human actions in the environment (e.g., fishing, hunting, farming, walking, etc.).

1.3.6.9.1 Increase in ground vibrations

ANTICIPATED MAGNITUDE

vibrations from moving heavy equipment

STRESSOR LOCATION


LEGEND
Project footprint
Stressor location

CONSERVATION MEASURES

No conservation measures for this stressor

STRUCTURES AND ACTIVITIES

- In-ground utilities construction

1.3.6.9.2 Increase in human presence

ANTICIPATED MAGNITUDE

currently humans at location are rare. human presence will increase during construction

STRESSOR LOCATION

LEGEND

Project footprint

Stressor location

CONSERVATION MEASURES

No conservation measures for this stressor

STRUCTURES AND ACTIVITIES

- In-ground utilities construction

1.3.6.9.3 Increase in noise

ANTICIPATED MAGNITUDE

noise will increase due to construction

STRESSOR LOCATION

LEGEND

Project footprint

Stressor location

CONSERVATION MEASURES

No conservation measures for this stressor

STRUCTURES AND ACTIVITIES

- In-ground utilities construction

1.3.6.9.4 Increase in soil disturbance

ANTICIPATED MAGNITUDE

soil will need to be disturbed due to underground utilities and structures

STRESSOR LOCATION

LEGEND

Project footprint

Stressor location

CONSERVATION MEASURES

No conservation measures for this stressor

STRUCTURES AND ACTIVITIES

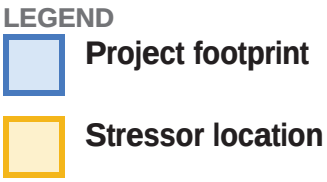
- In-ground utilities construction

1.3.6.9.5 Increase in vehicle traffic

ANTICIPATED MAGNITUDE

vehicle traffic will increase due to construction

STRESSOR LOCATION


LEGEND
Project footprint
Stressor location

CONSERVATION MEASURES

No conservation measures for this stressor

STRUCTURES AND ACTIVITIES

- In-ground utilities construction

1.3.6.10 Species Interactions / Introductions

Interactions that occur between two or more different species (e.g., competition, pollination, predation, symbiosis, etc.).

1.3.6.10.1 Increase in pathogens

ANTICIPATED MAGNITUDE

This stressor is not expected to occur; the following explanation has been provided:

due to COVID-19 we are social distancing and wearing masks

CONSERVATION MEASURES

- Masks/ social distance

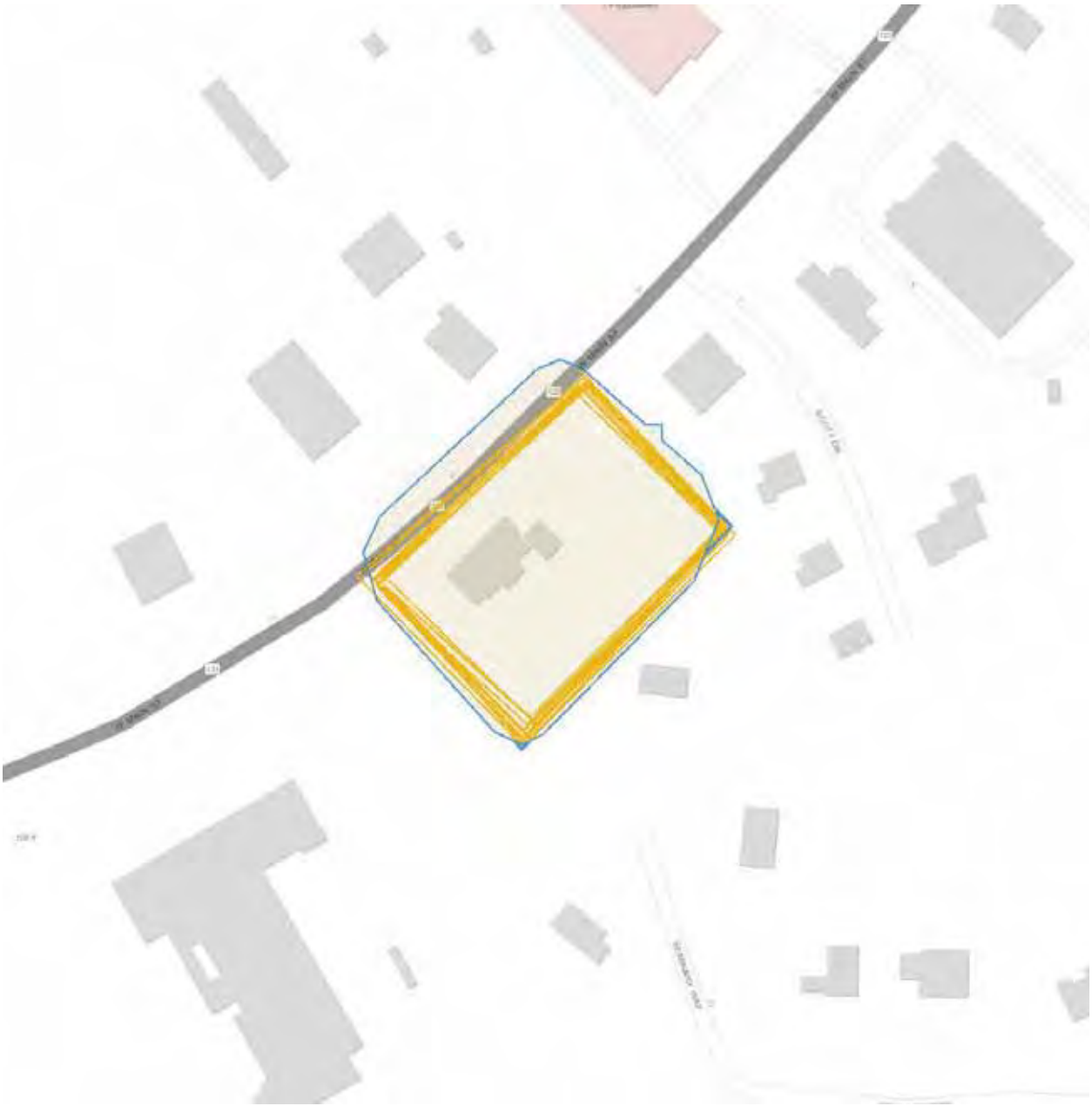
STRUCTURES AND ACTIVITIES

- In-ground utilities construction

1.3.6.11 Miscellaneous

Miscellaneous should only be used if the created feature does not fit into one of the other categories or if the creator is not sure in which category it should be placed.

1.4 Action Area



1.5 Conservation Measures

1.5.1 erosion controls

Description
erosion control measures, silt fence and hay socks

Stressors
- Increase in erosion

Resource needs
- open water (type: streams, rivers, ponds, wetlands, lakes and road ruts)

1.5.2 frac tank with bag filters

Description
frac tank will be on site with bag series attached in series to filter suspended solids

Stressors
- Increase in contaminants

Resource needs
- open water (type: streams, rivers, ponds, wetlands, lakes and road ruts)

1.5.3 masks/ social distance

Description
employees have ability to wear masks and social distance

Stressors
- Increase in pathogens

Direct interactions
- disease

1.5.4 wet down dusty areas with water truck if needed

Description
if area becomes dusty water truck will wet down area to minimize dust

Stressors

- Increase in dust

1.6 Prior Consultation History

this project has no prior contact to USFWS

1.7 Other Agency Partners And Interested Parties

Ms. Shauna Little

U.S. Environmental Protection Agency

Office of Ecosystem Protection

EPA/OEP RGP Applications Coordinator

5 Post Office Square - Suite 100 (OEP06-01)

Boston, MA 02109-3912

1.8 Other Reports And Helpful Information

no other documents would be helpful for this project

2 Species Effects Analysis

This section describes, species by species, the effects of the proposed action on listed, proposed, and candidate species, and the habitat on which they depend. In this document, effects are broken down as direct interactions (something happening directly to the species) or indirect interactions (something happening to the environment on which a species depends that could then result in effects to the species).

These interactions encompass effects that occur both during project construction and those which could be ongoing after the project is finished. All effects, however, should be considered, including effects from direct and indirect interactions and cumulative effects.

2.1 Monarch Butterfly

2.1.1 Status of the species

This section should provide information on the species' background, its biology and life history that is relevant to the proposed project within the action area that will inform the effects analysis.

2.1.1.1 Legal status

The Monarch Butterfly is federally listed as 'Candidate' and additional information regarding its legal status can be found on the ECOS species profile.

2.1.1.2 Recovery plans

Available recovery plans for the Monarch Butterfly can be found on the ECOS species profile.

2.1.1.3 Life history information

Note - the monarch is a candidate species and not yet listed or proposed for listing. There are generally no section 7 requirements for candidate species (see our Section 7 Questions and Answers on the monarch here - https://www.fws.gov/savethemonarch/FAQ-Section7.html), but we encourage all agencies to take advantage of any opportunity they may have to conserve the species.

For information on monarch conservation, visit https://www.fws.gov/savethemonarch/, http://www.mafwa.org/?page_id=2347, and, for the West, https://wafwa.org/committees-working-groups/monarch-working-group/.

Adult monarch butterflies are large and conspicuous, with bright orange wings surrounded by a black border and covered with black veins. The black border has a double row of white spots, present on the upper side of the wings. Adult monarchs are sexually dimorphic, with males having narrower wing venation and scent patches. The bright coloring of a monarch serves as a warning to predators that eating them can be toxic.

During the breeding season, monarchs lay their eggs on their obligate milkweed host plant (primarily Asclepias spp.), and larvae emerge after two to five days. Larvae develop through five larval instars (intervals between molts) over a period of 9 to 18 days, feeding on milkweed and sequestering toxic chemicals (cardenolides) as a defense against predators. The larva then pupates into a chrysalis before emerging 6 to 14 days later as an adult butterfly. There are multiple generations of monarchs produced during the breeding season, with most adult butterflies living approximately two to five weeks; overwintering adults enter into reproductive diapause (suspended reproduction) and live six to nine months.

In many regions where monarchs are present, monarchs breed year-round. Individual monarchs in temperate climates, such as eastern and western North America, undergo long-distance migration, and live for an extended period of time. In the fall, in both eastern and western North America, monarchs begin migrating to their respective overwintering sites. This migration can take monarchs distances of over 3,000 km and last for over two months. In early spring (February-March), surviving monarchs break diapause and mate at the overwintering sites before dispersing. The same individuals that undertook the initial southward migration begin flying back through the breeding grounds and their offspring start the cycle of generational migration over again.

Identified resource needs

Intermittent stream

Unsure

2.1.1.4 Conservation needs

unsure

2.1.2 Environmental baseline

The environmental baseline describes the species' health within the action area only at the time of the consultation, and does not include the effects of the action under review. Unlike the species information provided above, the environmental baseline is at the scale of the Action area.

2.1.2.1 Species presence and use

possibly to spawn

2.1.2.2 Species conservation needs within the action area

unsure

2.1.2.3 Habitat condition (general)

intermittent stream (unsure)

wetland located behind area of construction

2.1.2.4 Influences

unsure

2.1.2.5 Additional baseline information

unsure

2.1.3 Effects of the action

This section considers and discusses all effects on the listed species that are caused by the proposed action and are reasonably certain to occur, including the effects of other activities that would not occur but for the proposed action.

2.1.3.1 Indirect interactions

RESOURCE NEED	STRESSORS	CONSERVATION MEASURES	AMOUNT OF RESOURCE IMPACTED	INDIVIDUALS AFFECTED
Intermittent stream (unsure)	Change in topography Change in surface runoff Increase in surface runoff		***There will be no impacts to this resource*** **unsure**	***There will be no impacts to this resource, so no individuals will be affected.***

2.1.3.2 Direct interactions

No direct interactions leading to effects on species are expected to occur from the proposed project.

2.1.4 Cumulative effects

the subject property is being transformed into a retail gas station. from then on there will be constant human presence

2.1.5 Discussion and conclusion

Determination: NE

2.2 Northern Long-Eared Bat

2.2.1 Status of the species

This section should provide information on the species' background, its biology and life history that is relevant to the proposed project within the action area that will inform the effects analysis.

2.2.1.1 Legal status

The Northern Long-eared Bat is federally listed as 'Threatened' and additional information regarding its legal status can be found on the ECOS species profile.

2.2.1.2 Recovery plans

Available recovery plans for the Northern Long-eared Bat can be found on the ECOS species profile.

2.2.1.3 Life history information

The northern long-eared bat is a medium-sized bat about 3 to 3.7 inches in length but with a wingspan of 9 to 10 inches. As its name suggests, this bat is distinguished by its long ears, particularly as compared to other bats in its genus, Myotis, which are actually bats noted for their small ears (Myotis means mouse-eared). The northern long-eared bat is found across much of the eastern and north central United States and all Canadian provinces from the Atlantic coast west to the southern Northwest Territories and eastern British Columbia. The species range includes 37 states. White-nose syndrome, a fungal disease known to affect bats, is currently the predominant threat to this bat, especially throughout the Northeast where the species has declined by up to 99 percent from pre-white-nose syndrome levels at many hibernation sites. Although the disease has not yet spread throughout the northern long-eared bats entire range (white-nose syndrome is currently found in at least 25 of 37 states where the northern long-eared bat occurs), it continues to spread. Experts expect that where it spreads, it will have the same impact as seen in the Northeast.

Identified resource needs

Hibernacula

Humidity: high, noise: low, with minimal distrubance, temperature: 0-9 degrees celsius, time of year: august through april, type: caves, mines, sewers and spillways

Insects

Type: lepidoptera (moths and butterflies), coleoptera (beetles), trichoptera (caddisflies), diptera (flies), spiders and lepidopterous larvae

Open water

Type: streams, rivers, ponds, wetlands, lakes and road ruts

Travel corridors

Location: between forest patches, type: riparian corridors, wooded paths, hedgerows and fence rows

Trees

Size: > or equal to 3 inch dbh, spatial arrangement: within 1000 feet of forest, structure: cracks, crevices, cavities, exfoliating bark, time of year: april through august, type: dead, nearly dead, living tree with dead parts and living with appropriate structure

2.2.1.4 Conservation needs

unkown

2.2.2 Environmental baseline

The environmental baseline describes the species' health within the action area only at the time of the consultation, and does not include the effects of the action under review. Unlike the species information provided above, the environmental baseline is at the scale of the Action area.

2.2.2.1 Species presence and use
unknown, site is vacant lot that has not been touched in years

2.2.2.2 Species conservation needs within the action area
unknown

2.2.2.3 Habitat condition (general)

open water (type: streams, rivers, ponds, wetlands, lakes and road ruts)
site is located near wetland's and a pond

2.2.2.4 Influences
unkown

2.2.2.5 Additional baseline information
unkown

2.2.3 Effects of the action
This section considers and discusses all effects on the listed species that are caused by the proposed action and are reasonably certain to occur, including the effects of other activities that would not occur but for the proposed action.

2.2.3.1 Indirect interactions

RESOURCE NEED	STRESSORS	CONSERVATION MEASURES	AMOUNT OF RESOURCE IMPACTED	INDIVIDUALS AFFECTED
Hibernacula (humidity: high, noise: low, with minimal distrubance, temperature: 0-9 degrees celsius, time of year: august through april, type: caves, mines, sewers and spillways)			***This resource is not present in the action area*** **work being completed in March with temperatures likely to be below 0 Celsius, no caves present**	***There will be no impacts to this resource, so no individuals will be affected.***

RESOURCE NEED	STRESSORS	CONSERVATION MEASURES	AMOUNT OF RESOURCE IMPACTED	INDIVIDUALS AFFECTED
Insects (type: lepidoptera (moths and butterflies), coleoptera (beetles), trichoptera (caddisflies), diptera (flies), spiders and lepidopterous larvae)			***This resource is not present in the action area*** **cant confirm if these insects are present at site. work being completed in March, insects not likely to be present**	***There will be no impacts to this resource, so no individuals will be affected.***
Open water (type: streams, rivers, ponds, wetlands, lakes and road ruts)	Increase in vehicle traffic Increase in soil compaction Increase in soil disturbance Decrease in vegetation Change in topography Increase in fuel load Increase in surface runoff	Frac tank with bag filters Erosion controls	***There will be no impacts to this resource*** **water being discharged to streams will be treated before release**	***There will be no impacts to this resource, so no individuals will be affected.***
Travel corridors (location: between forest patches, type: riparian corridors, wooded paths, hedgerows and fence rows)			***This resource is not present in the action area*** **workers will remain on vacant site while conducting work**	***There will be no impacts to this resource, so no individuals will be affected.***

RESOURCE NEED	STRESSORS	CONSERVATION MEASURES	AMOUNT OF RESOURCE IMPACTED	INDIVIDUALS AFFECTED
Trees (size: > or equal to 3 inch dbh, spatial arrangement: within 1000 feet of forest, structure: cracks, crevices, cavities, exfoliating bark, time of year: april through august, type: dead, nearly dead, living tree with dead parts and living with appropriate structure)			***This resource is not present in the action area*** **work being performed in March**	***There will be no impacts to this resource, so no individuals will be affected.***

2.2.3.2 Direct interactions

DIRECT IMPACT	CONSERVATION MEASURES	INDIVIDUALS IMPACTED	IMPACT EXPLANATION
Auditory disturbance		Yes	**unkown how many are in the area or if they live in the area**
Burial		Yes	**unkown how many bats live in the area or if they do at all**

DIRECT IMPACT	CONSERVATION MEASURES	INDIVIDUALS IMPACTED	IMPACT EXPLANATION
Collisions		Yes	**unkown how many bats live in area or if they do**
Crushing		Yes	**unkown how many bats live in the area or if they do**
Disease	Masks/ social distance	No	**unkown how many bats live in the area or if they do**
Disturbance		Yes	**unkown how many bats live in the area or if they do**

DIRECT IMPACT	CONSERVATION MEASURES	INDIVIDUALS IMPACTED	IMPACT EXPLANATION
Entrapment		Yes	**unkown how many bats live in the area or if they do**
Injury		Yes	**unkown how many bats live in the area or if they do**
Toxicity		Yes	**unkown how many bats live in the area or if they do**

2.2.4 Cumulative effects

construction of a retail gasoline dispensing facility with convenience store

2.2.5 Discussion and conclusion

Determination: NLAA

Compensation measures
unkown how many bats live in the area or if they do

3 Critical Habitat Effects Analysis

No critical habitats intersect with the project action area.

4 Summary Discussion, Conclusion, And Effect Determinations

4.1 Effect Determination Summary

SPECIES (COMMON NAME)	SCIENTIFIC NAME	LISTING STATUS	PRESENT IN ACTION AREA	EFFECT DETERMINATION
Monarch Butterfly	Danaus plexippus	Candidate	Yes	NE
Northern Long-eared Bat	Myotis septentrionalis	Threatened	Yes	NLAA

4.2 Summary Discussion

the foot print of the work area is very small and work will only be conducted within that foot print. if vegetation and trees are removed it will be minimal.

4.3 Conclusion

I believe that nor harm will come to either endangered species. work is being conducted in winter months so neither species will be in contact with workers or in the work area. the work area footprint is very small and not located within a zone of critical environmental concern. work being conducted is de-watering of an excavation and then disposing of that water after treatment into a small pond located near the site.

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
http://www.fws.gov/newengland

In Reply Refer To: January 20, 2022
Consultation Code: 05E1NE00-2022-SLI-1283
Event Code: 05E1NE00-2022-E-04532
Project Name: MA8691 Endangered special

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 ***et seq.***).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 ***et seq.***), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 ***et seq.***), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm; http://www.towerkill.com; and http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2022-SLI-1283
Event Code: Some(05E1NE00-2022-E-04532)
Project Name: MA8691 Endangered special
Project Type: DEVELOPMENT
Project Description: location of project is 60 West Main Street in Norton Massachusetts. scope is de-watering of a UST installation excavation, then discharging the water into storm drain which eventually drains into a wetland near the site. this project is scheduled to begin in March 2022

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@41.96381517224703,-71.19124218144708,14z

Counties: Bristol County, Massachusetts

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

---

1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat ***Myotis septentrionalis***	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9045

Insects

NAME	STATUS
Monarch Butterfly ***Danaus plexippus***	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

ATTACHMENT F – Historical Documentation

60 W MAIN ST

60 W MAIN ST

Norton, MA 02766

Inquiry Number: 5232622.3

March 23, 2018

Certified Sanborn® Map Report

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

Certified Sanborn® Map Report

03/23/18

Site Name:

60 W MAIN ST
60 W MAIN ST
Norton, MA 02766
EDR Inquiry # 5232622.3

Client Name:

Kleinfelder, Inc.
4 Technology Dr Suite 100
Westborough, MA 01581
Contact: Madeline Soule

The Sanborn Library has been searched by EDR and maps covering the target property location as provided by Kleinfelder, Inc. were identified for the years listed below. The Sanborn Library is the largest, most complete collection of fire insurance maps. The collection includes maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow, and others. Only Environmental Data Resources Inc. (EDR) is authorized to grant rights for commercial reproduction of maps by the Sanborn Library LLC, the copyright holder for the collection. Results can be authenticated by visiting www.edrnet.com/sanborn.

The Sanborn Library is continually enhanced with newly identified map archives. This report accesses all maps in the collection as of the day this report was generated.

Certified Sanborn Results:

Certification # 4CA1-474C-9393

PO # 20184095.001A

Project CFI Norton

Maps Provided:

1944
1937

Sanborn® Library search results

Certification #: 4CA1-474C-9393

The Sanborn Library includes more than 1.2 million fire insurance maps from Sanborn, Bromley, Perris & Browne, Hopkins, Barlow and others which track historical property usage in approximately 12,000 American cities and towns. Collections searched:

- ☑ Library of Congress
- ☑ University Publications of America
- ☑ EDR Private Collection

The Sanborn Library LLC Since 1866™

Limited Permission To Make Copies

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Sanborn Sheet Key

This Certified Sanborn Map Report is based upon the following Sanborn Fire Insurance map sheets.

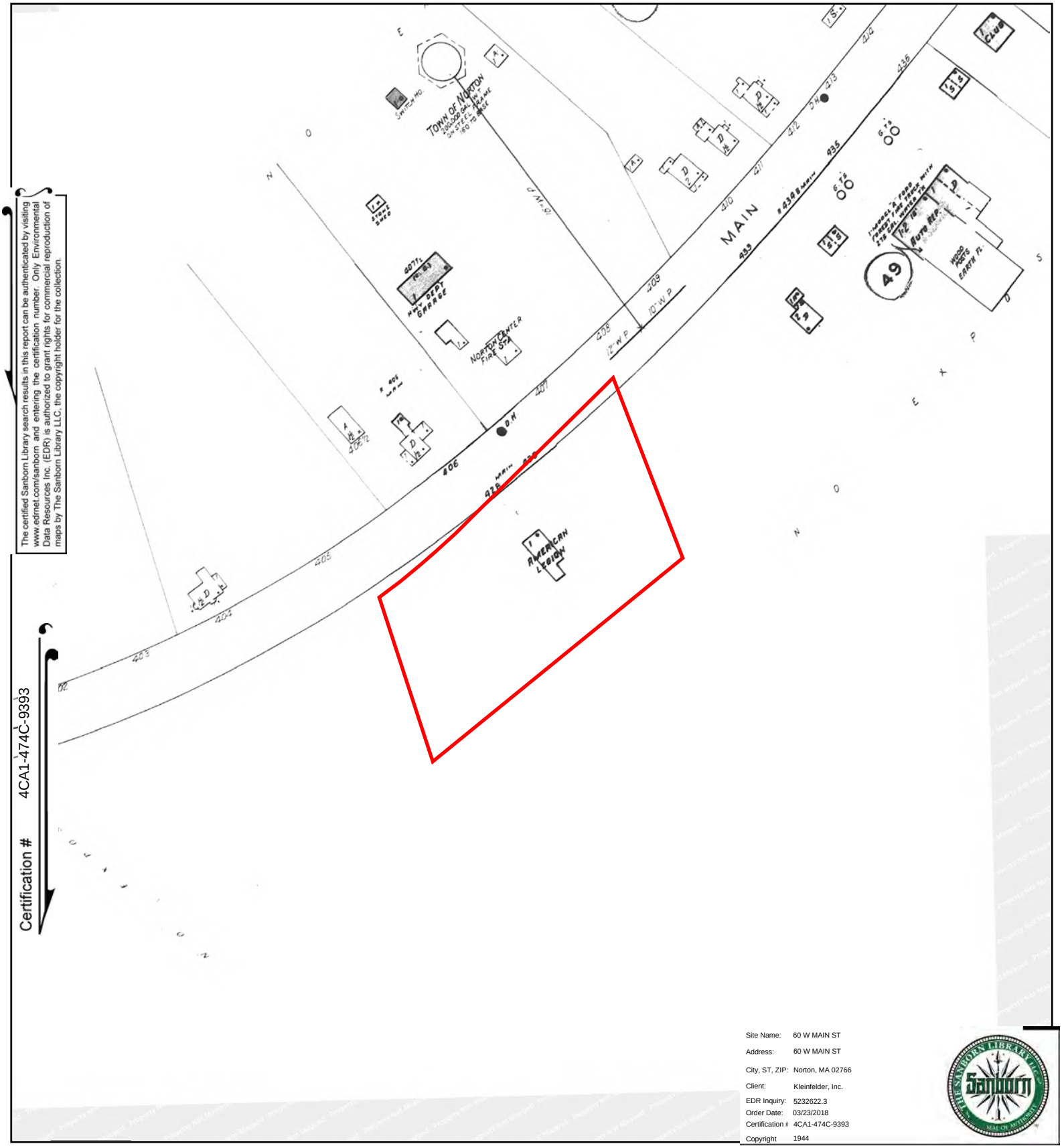
1944 Source Sheets

Volume 1, Sheet Keymap/Sheet1
1944

Volume 1, Sheet Keymap/Sheet1
1944

1937 Source Sheets

Volume 1, Sheet Keymap/Sheet1
1937



Certification # 4CA1-474C-9393

Site Name:	60 W MAIN ST
Address:	60 W MAIN ST
City, ST, ZIP:	Norton, MA 02766
Client:	Kleinfelder, Inc.
EDR Inquiry:	5232622.3
Order Date:	03/23/2018
Certification #:	4CA1-474C-9393
Copyright	1944

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

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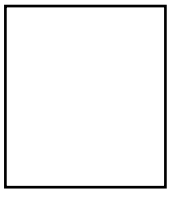

Volume 1, Sheet Keymap/Sheet1
Volume 1, Sheet Keymap/Sheet1

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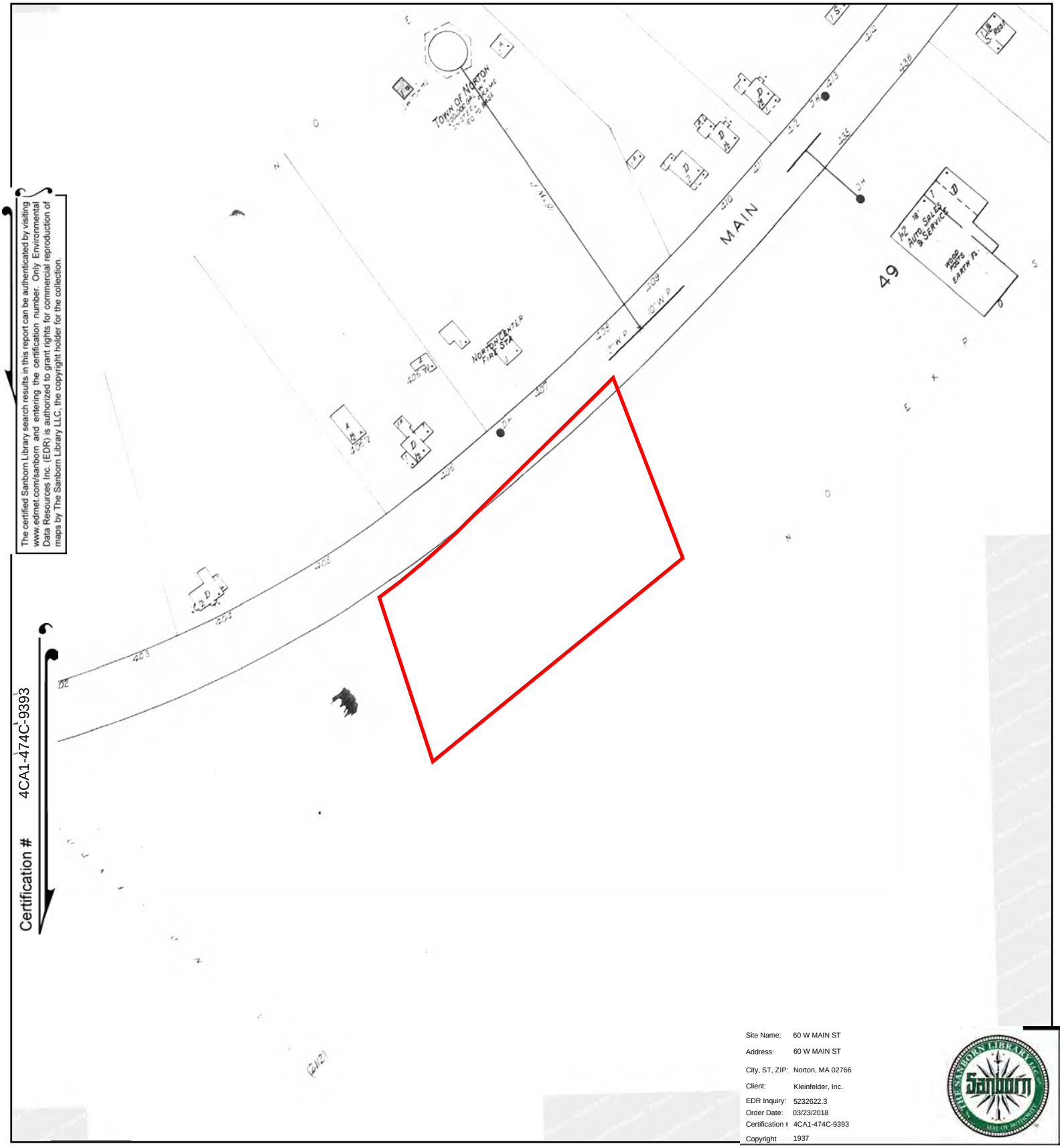

Certification # 4CA1-474C-9393

Site Name:	60 W MAIN ST
Address:	60 W MAIN ST
City, ST, ZIP:	Norton, MA 02766
Client:	Kleinfelder, Inc.
EDR Inquiry:	5232622.3
Order Date:	03/23/2018
Certification #	4CA1-474C-9393
Copyright	1937

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

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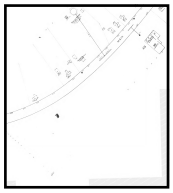
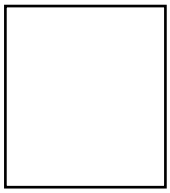




Volume 1, Sheet Keymap/Sheet1

N

60 W MAIN ST

60 W MAIN ST

Norton, MA 02766

Inquiry Number: 5232622.4

March 23, 2018

EDR Historical Topo Map Report

with QuadMatch™

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Historical Topo Map Report

03/23/18

Site Name:

60 W MAIN ST
60 W MAIN ST
Norton, MA 02766
EDR Inquiry # 5232622.4

Client Name:

Kleinfelder, Inc.
4 Technology Dr Suite 100
Westborough, MA 01581
Contact: Madeline Soule

EDR Topographic Map Library has been searched by EDR and maps covering the target property location as provided by Kleinfelder, Inc. were identified for the years listed below. EDR's Historical Topo Map Report is designed to assist professionals in evaluating potential liability on a target property resulting from past activities. EDRs Historical Topo Map Report includes a search of a collection of public and private color historical topographic maps, dating back to the late 1800s.

Search Results:

P.O.# 20184095.001A
Project: CFI Norton

Coordinates:

Latitude: 41.963781 41° 57' 50" North
Longitude: -71.191186 -71° 11' 28" West
UTM Zone: Zone 19 North
UTM X Meters: 318423.55
UTM Y Meters: 4648077.11
Elevation: 108.00' above sea level

Maps Provided:

2012
1987
1979
1964
1951
1947
1944
1918
1893
1888

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

2012 Source Sheets

Norton
2012
7.5-minute, 24000

1987 Source Sheets

Taunton
1987
7.5-minute, 25000
Aerial Photo Revised 1980

1979 Source Sheets

NORTON
1979
7.5-minute, 25000
Photo Revised 1979

1964 Source Sheets

Norton
1964
7.5-minute, 24000

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

19□1 Source Sheets

Norton
1951
7.5-minute, 24000

1947 Source Sheets

NORTON
1947
7.5-minute, 25000

1944 Source Sheets

Norton
1944
7.5-minute, 31680

1918 Source Sheets

Taunton
1918
15-minute, 62500

Topo Sheet Key

This EDR Topo Map Report is based upon the following USGS topographic map sheets.

189□ Source Sheets

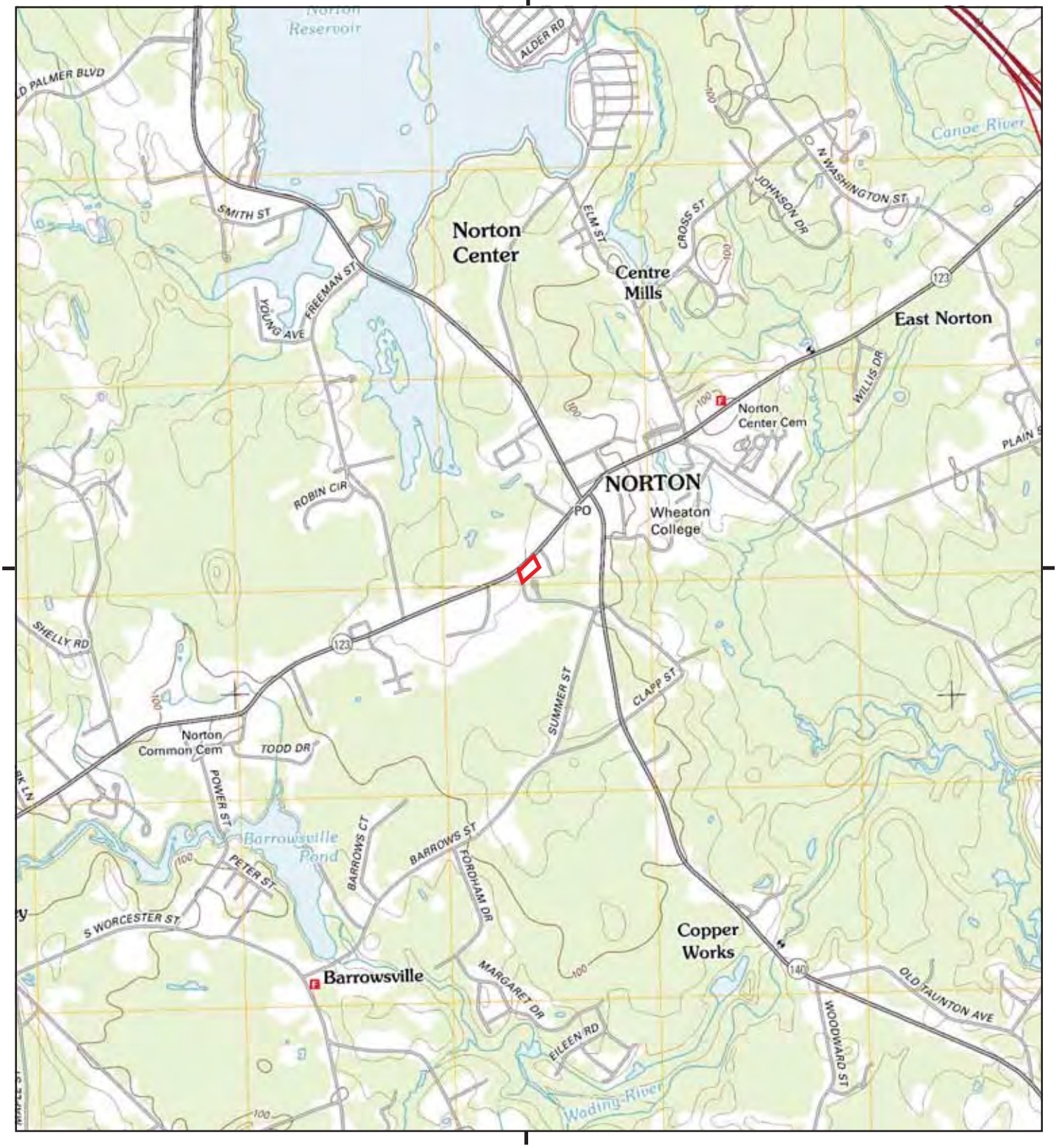
Taunton
1893
15-minute, 62500

1888 Source Sheets

Taunton
1888
15-minute, 62500

Historical Topo Map

2012



This report includes information from the following map sheet(s).

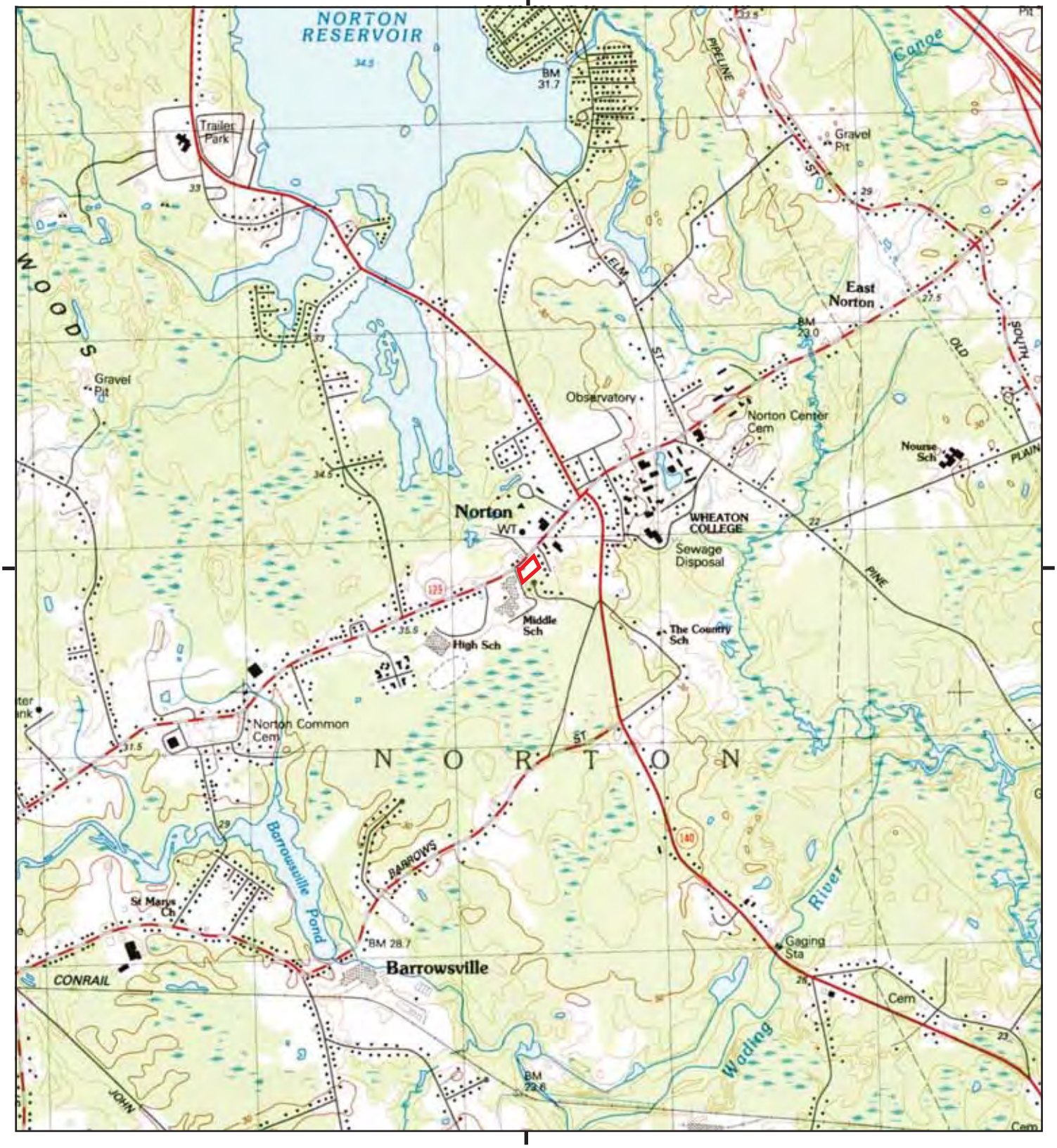
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Norton, 2012, 7.5-minute

SITE NAME: 60 W MAIN ST
ADDRESS: 60 W MAIN ST
Norton, MA 02766
CLIENT: Kleinfelder, Inc.

N



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NW N NE
W E
SW S SE

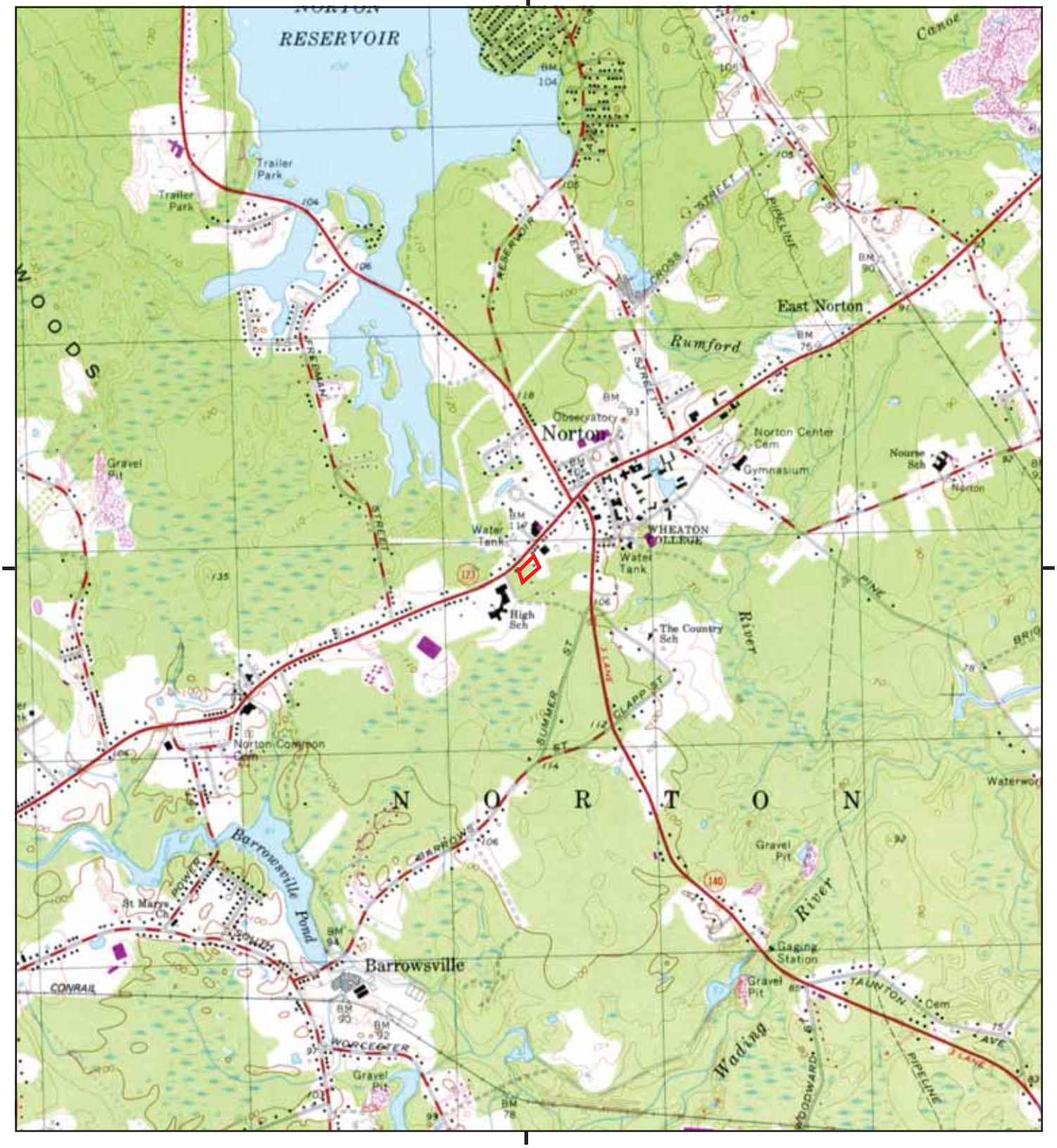
TP, Taunton, 1987, 7.5-minute

SITE NAME: 60 W MAIN ST
ADDRESS: 60 W MAIN ST
Norton, MA 02766
CLIENT: Kleinfelder, Inc.

N

Historical Topo Map

1979



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

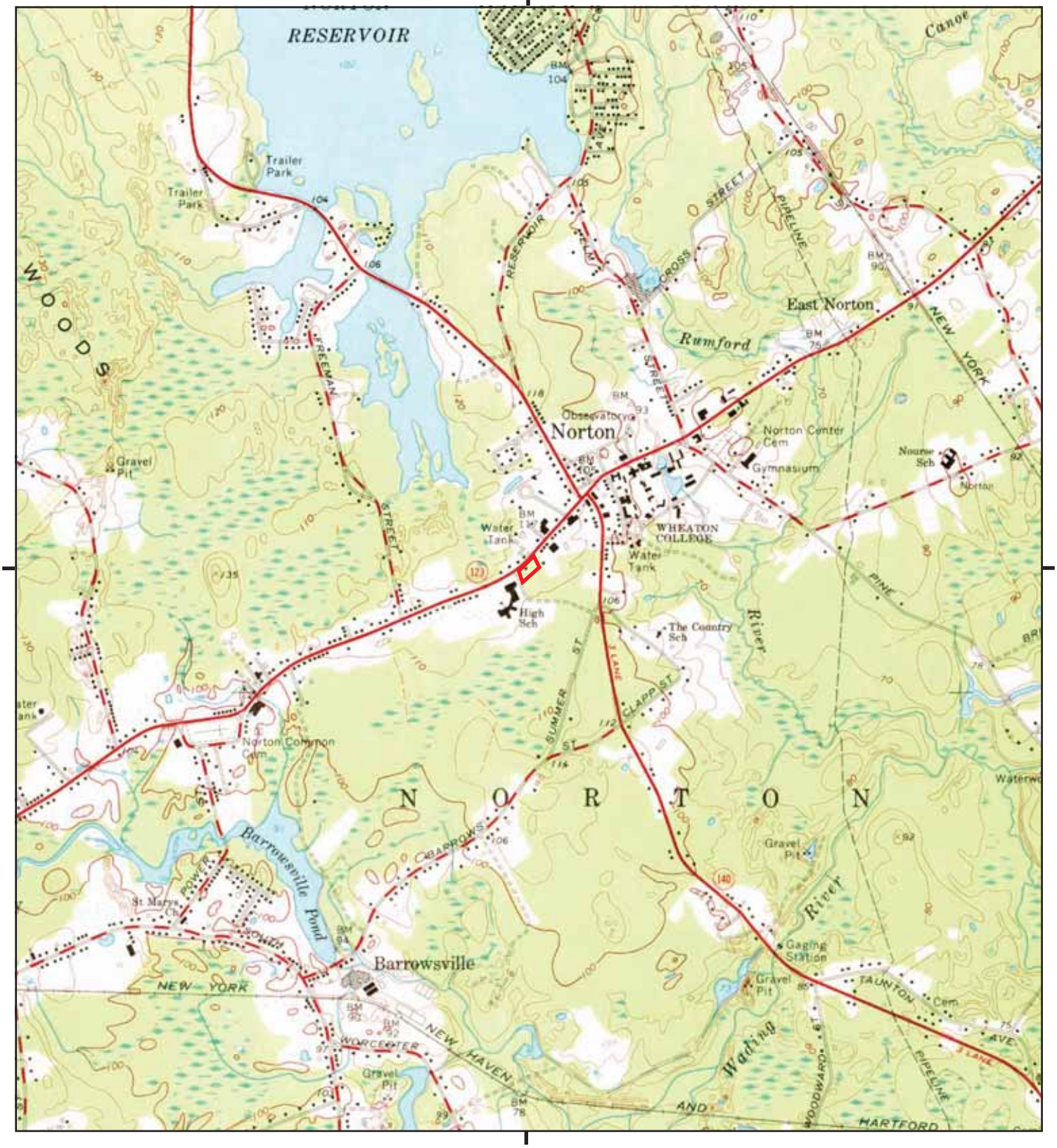
TP, NORTON, 1979, 7.5-minute

SITE NAME: 60 W MAIN ST
ADDRESS: 60 W MAIN ST
Norton, MA 02766
CLIENT: Kleinfelder, Inc.

N

Historical Topo Map

1964



This report includes information from the following map sheet(s).

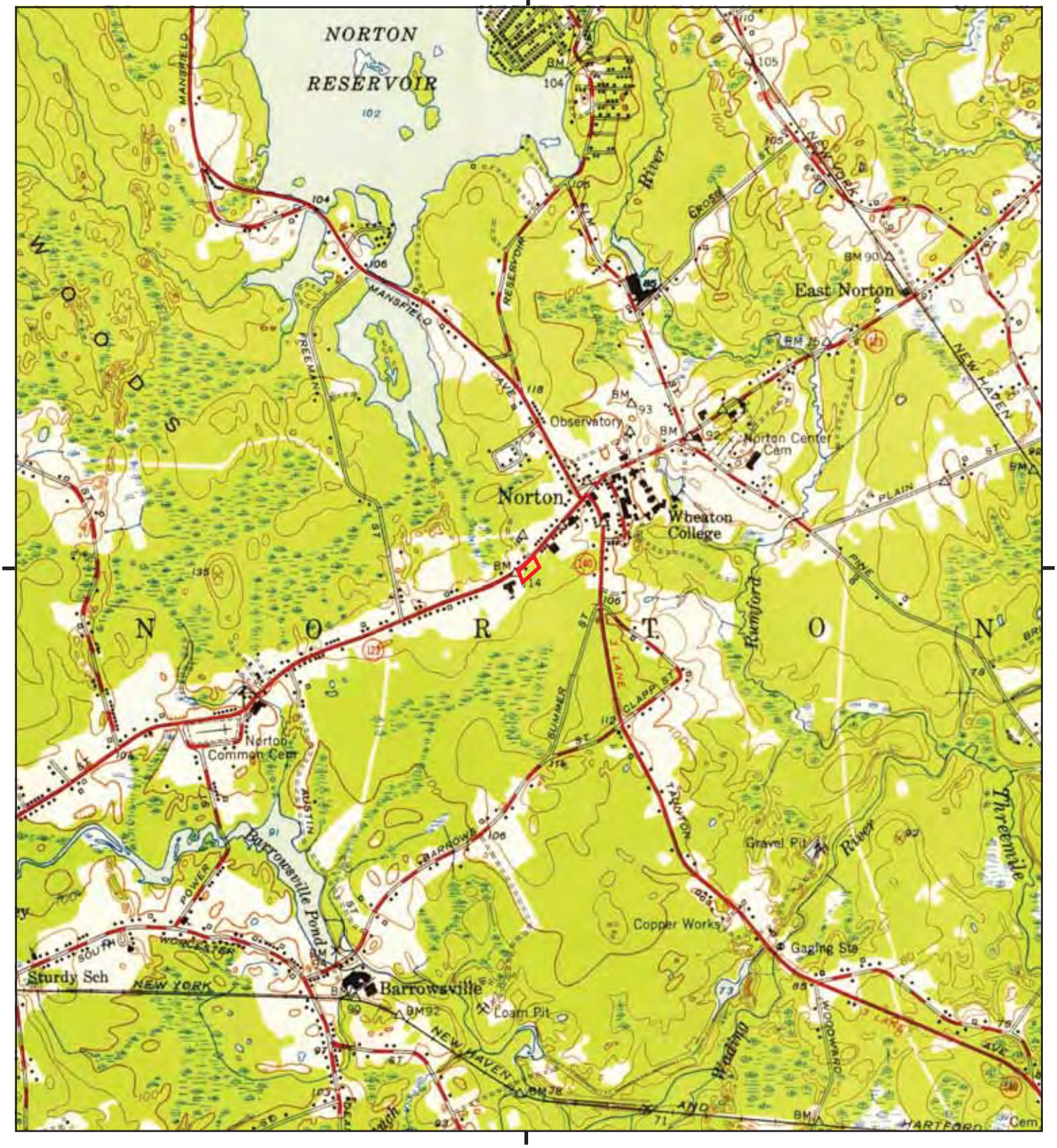
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Norton, 1964, 7.5-minute

SITE NAME: 60 W MAIN ST
ADDRESS: 60 W MAIN ST
Norton, MA 02766
CLIENT: Kleinfelder, Inc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

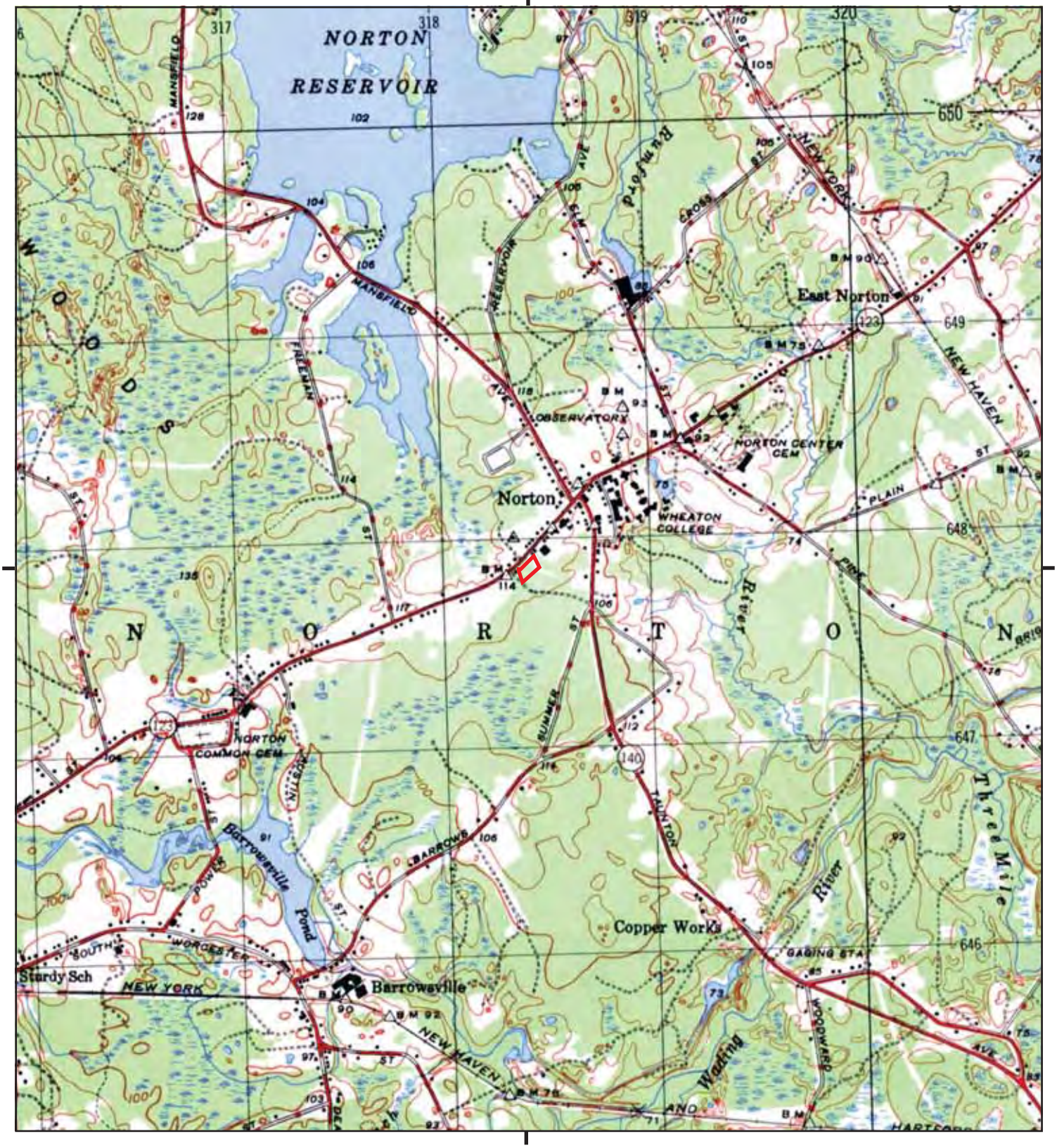
TP, Norton, 1951, 7.5-minute

SITE NAME: 60 W MAIN ST
ADDRESS: 60 W MAIN ST
Norton, MA 02766
CLIENT: Kleinfelder, Inc.

N

Historical Topo Map

1947



This report includes information from the following map sheet(s).

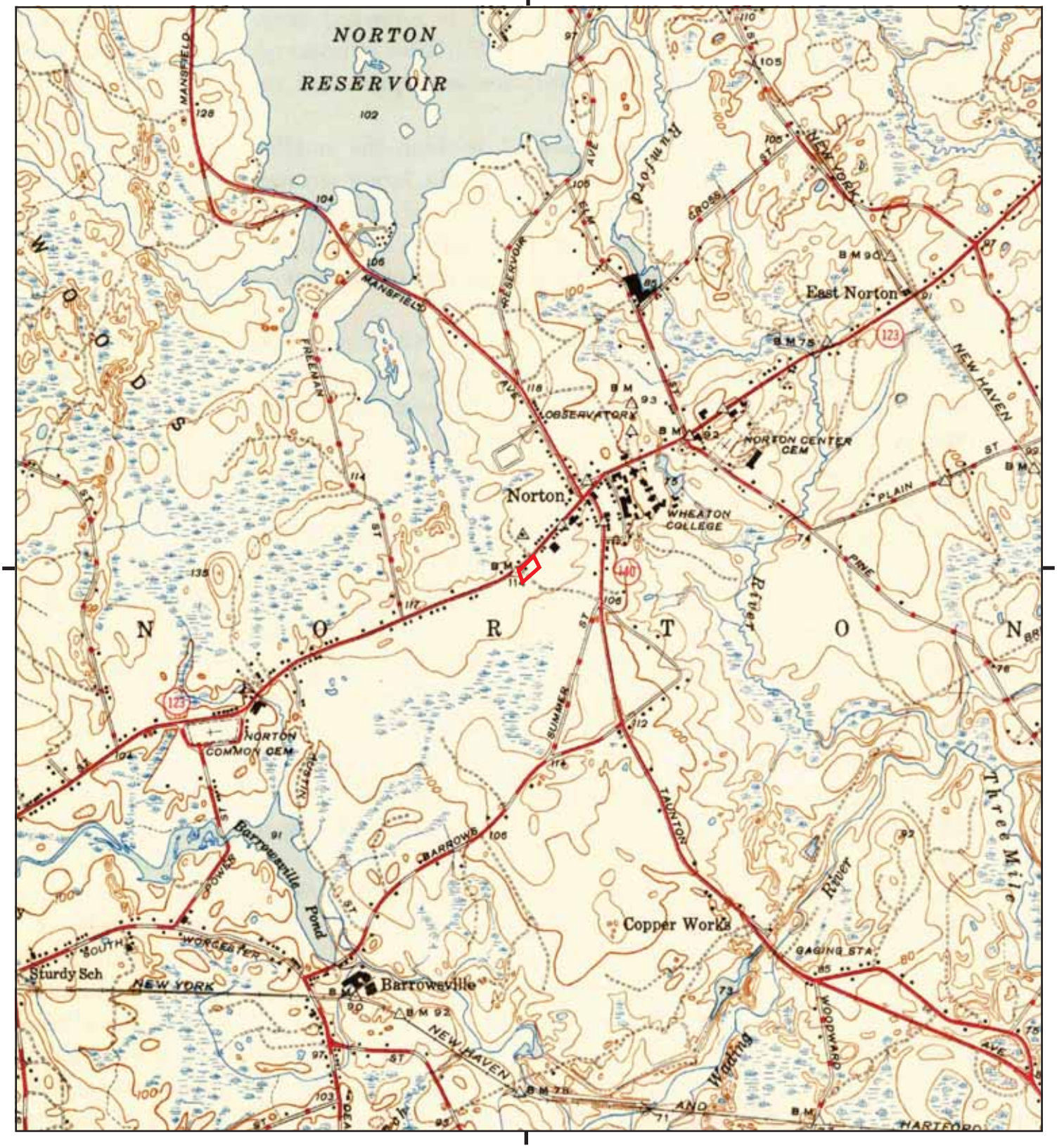
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, NORTON, 1947, 7.5-minute

SITE NAME: 60 W MAIN ST
ADDRESS: 60 W MAIN ST
Norton, MA 02766
CLIENT: Kleinfelder, Inc.

N



This report includes information from the following map sheet(s).

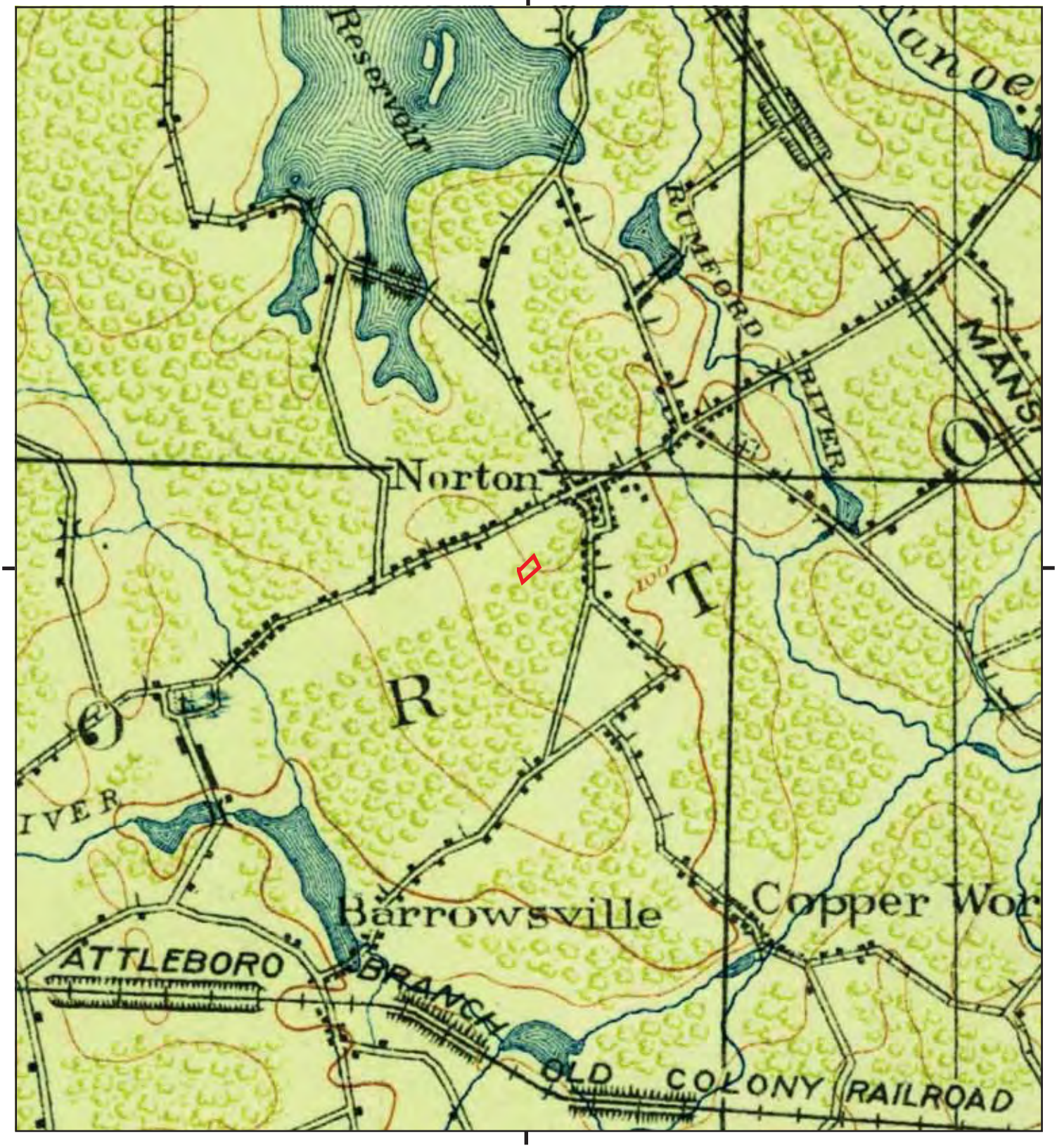
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Norton, 1944, 7.5-minute

SITE NAME: 60 W MAIN ST
ADDRESS: 60 W MAIN ST
Norton, MA 02766
CLIENT: Kleinfelder, Inc.

N



This report includes information from the following map sheet(s).

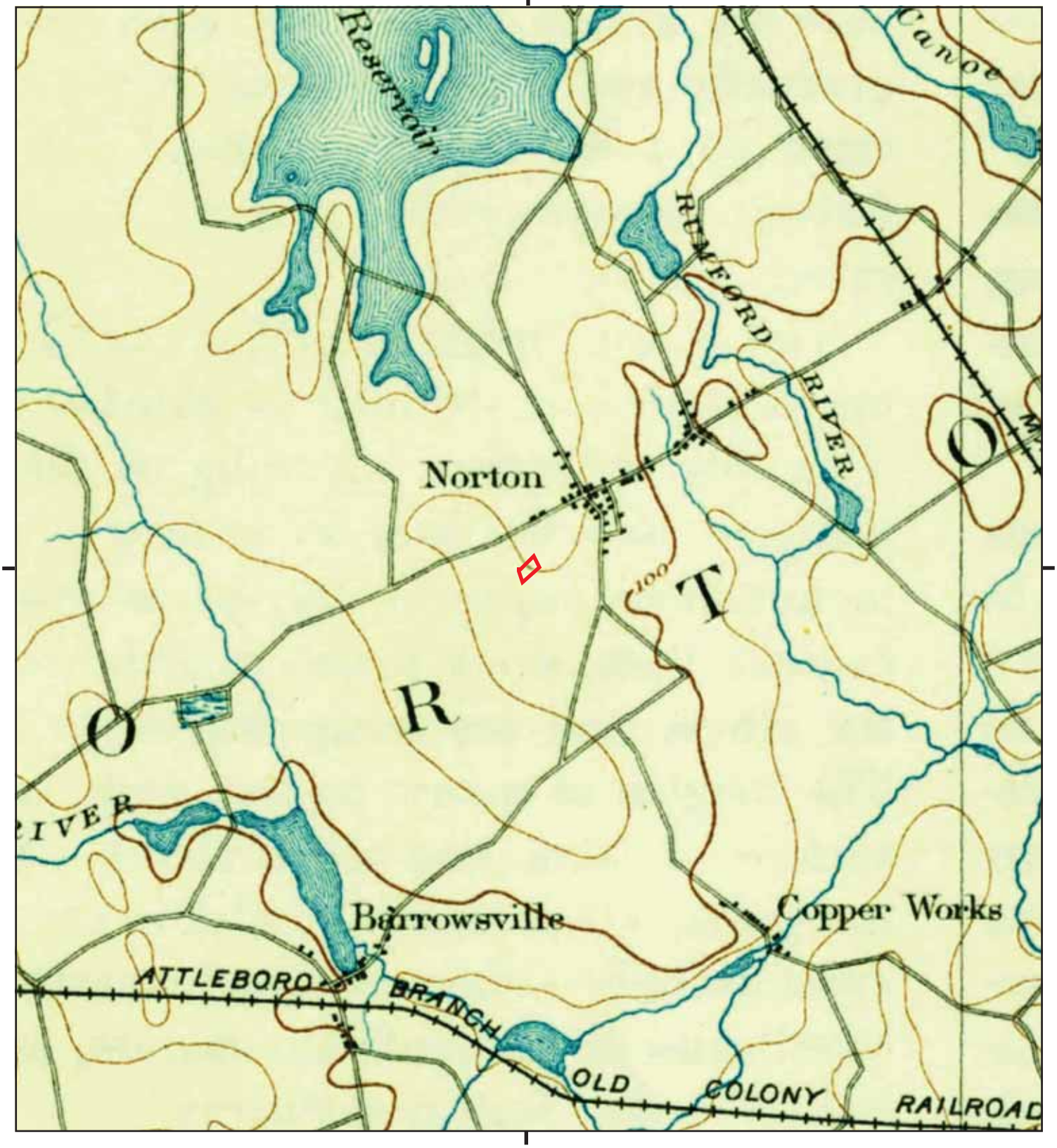
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Taunton, 1918, 15-minute

SITE NAME: 60 W MAIN ST
ADDRESS: 60 W MAIN ST
Norton, MA 02766
CLIENT: Kleinfelder, Inc.

N



This report includes information from the following map sheet(s).

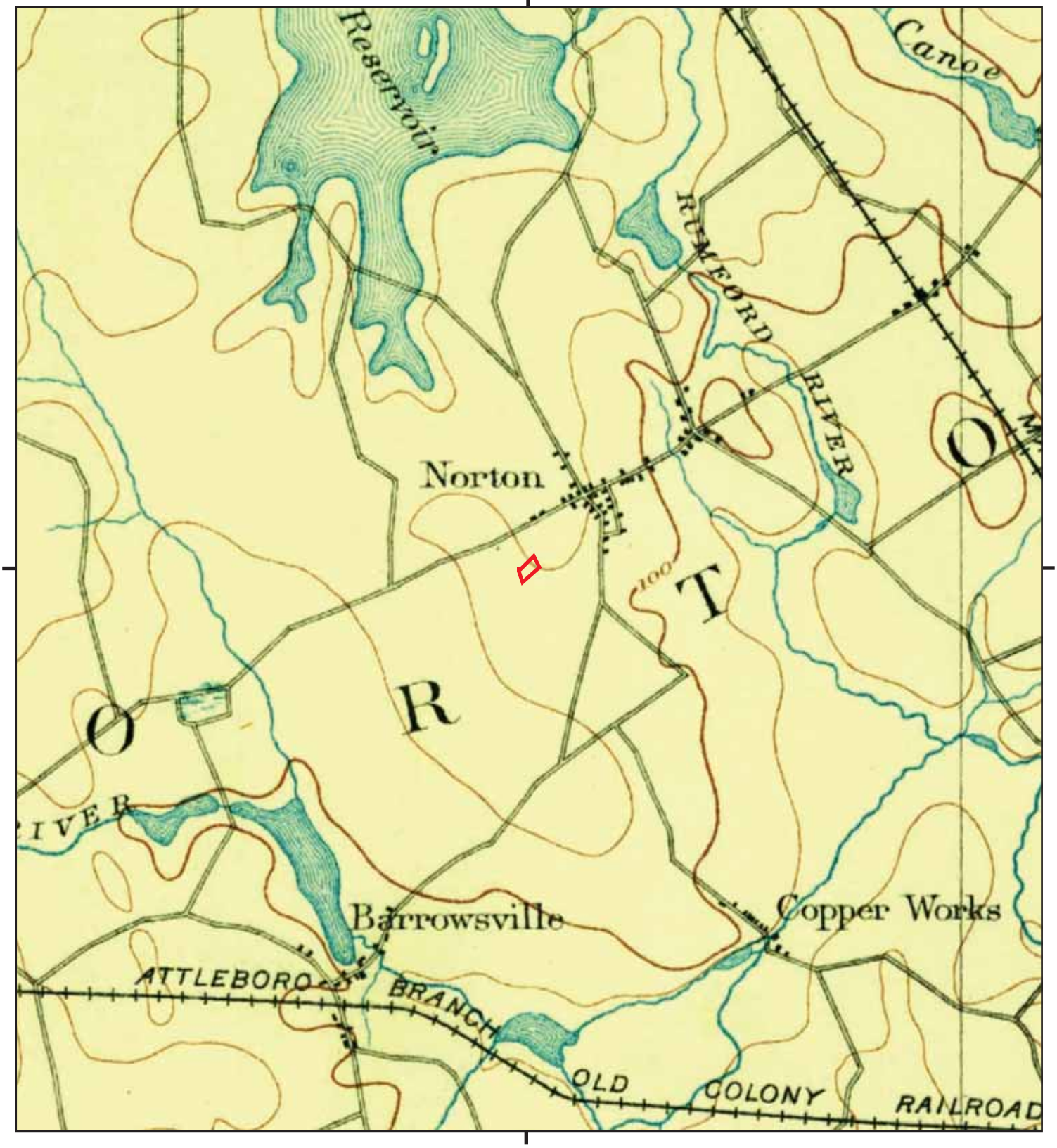
0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Taunton, 1893, 15-minute

SITE NAME: 60 W MAIN ST
ADDRESS: 60 W MAIN ST
Norton, MA 02766
CLIENT: Kleinfelder, Inc.

N



This report includes information from the following map sheet(s).

0 Miles 0.25 0.5 1 1.5

NW N NE
W E
SW S SE

TP, Taunton, 1888, 15-minute

SITE NAME: 60 W MAIN ST
ADDRESS: 60 W MAIN ST
Norton, MA 02766
CLIENT: Kleinfelder, Inc.

N

60 W MAIN ST

60 W MAIN ST

Norton, MA 02766

Inquiry Number: 5232622.9

March 23, 2018

The EDR Aerial Photo Decade Package

6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

EDR Aerial Photo Decade Package

03/23/18

Site Name:

60 W MAIN ST
60 W MAIN ST
Norton, MA 02766
EDR Inquiry # 5232622.9

Client Name:

Kleinfelder, Inc.
4 Technology Dr Suite 100
Westborough, MA 01581
Contact: Madeline Soule

Environmental Data Resources, Inc. (EDR) Aerial Photo Decade Package is a screening tool designed to assist environmental professionals in evaluating potential liability on a target property resulting from past activities. EDR's professional researchers provide digitally reproduced historical aerial photographs, and when available, provide one photo per decade.

Search Results:

Year	Scale	Details	Source
2010	1"=500'	Flight Year: 2010	USDA/NAIP
2006	1"=500'	Flight Year: 2006	USDA/NAIP
1995	1"=500'	Acquisition Date: March 29, 1995	USGS/DOQQ
1992	1"=750'	Flight Date: April 13, 1992	USGS
1986	1"=500'	Flight Date: March 30, 1986	USGS
1975	1"=500'	Flight Date: July 23, 1975	USDA
1970	1"=500'	Flight Date: October 06, 1970	USDA
1961	1"=500'	Flight Date: April 12, 1961	USGS
1952	1"=500'	Flight Date: October 12, 1952	USDA
1941	1"=500'	Flight Date: October 08, 1941	USGS

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INQUIRY #: 5232622.9
YEAR: 2010
= 500'
N
EDR


INQUIRY #: 5232622.9
YEAR: 2006
= 500'
N
EDR


INQUIRY #: 5232622.9
YEAR: 1995
= 500'
N
EDR

INQUIRY #: 5232622.9

YEAR: 1992

= 750'

N

EDR


INQUIRY #: 5232622.9
YEAR: 1986
= 500'
N
EDR


INQUIRY #: 5232622.9
YEAR: 1975
= 500'
N
EDR


INQUIRY #: 5232622.9
YEAR: 1970
= 500'
N
EDR


INQUIRY #: 5232622.9
YEAR: 1961
= 500'
N
EDR


INQUIRY #: 5232622.9
YEAR: 1952
= 500'
N
EDR


INQUIRY #: 5232622.9
YEAR: 1941
= 500'
N
EDR