TETRA TECH

February 5, 2021

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

Via Email: NPDES.Generalpermits@epa.gov

Re: Notice of Intent
NPDES RGP
75 & 109 Smith Place
Cambridge, MA

Dear Sir or Madam:

On behalf of QUAD 75 Smith Place, LLC, the owner of 75 Smith Place, and QUAD 109 Smith Place, LLC, the owner of 109 Smith Place, both properties collectively referred to as the Site, Tetra Tech has prepared this letter to supplement the attached Notice of Intent (NOI) submitted in accordance with the National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP), MAG910000. Construction activities are proposed at the Site which will include temporary construction-related dewatering. The water recovered during construction related dewatering will be treated and discharge to the City of Cambridge stormwater drainage system with eventual discharge to Alewife Brook. The discharge from the Site to Alewife Brook is subject to regulation under the NPDES RGP. A copy of the NOI for coverage under the NPDES RGP is provided as Attachment 1.

General Site Information: The Site is comprised of two parcels of vacant land identified as 75 and 109 Smith Place in Cambridge, Massachusetts. The Site is in a highly-urbanized area of Cambridge with adjacent commercial and industrial developments. The Site is currently a vacant industrial property with a vacant warehouse building with limited office space (75 Smith Place) and a vacant manufacturing and office building (109 Smith Place). The location of the Site is shown on Figure 1. The Site is proposed for redevelopment that will include the construction of a commercial/industrial building at both the 75 and 109 Smith Place properties.

The Site is associated with two active Disposal Sites that are regulated under the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000. Oil and hazardous materials (OHM) were identified in soil including polycyclic aromatic hydrocarbons (PAHs), metals (arsenic, chromium, lead and silver), naphthalene, and total petroleum hydrocarbons (TPH). The two active MCP Disposal Sites are associated with MassDEP Release Tracking Numbers (RTNs) 3-0036197 (75 Smith Place) and 3-0036198 (109 Smith Place). The Site is also associated with prior RTNs, and a Permanent Solution with Conditions exists at 75 Smith Place with an Activity and Use Limitation (AUL) that applies to this portion of the Site. The OHM present at the Site are consistent with the historic use of the Site area as a landfill and burning dump, and past oil use/storage activities, and are believed to be ubiquitous to the Site area. The hazardous materials present above the MCP Reportable Concentrations are believed to be related to the presence of coal, coal ash, wood ash, lead flecks, and leaded glass in the subsurface material at the Site.

Tetra Tech
Marlborough Technology Park, 100 Nickerson Road, Marlborough, MA 01752
Tel 508.786.2200 Fax 508.786.2201 tetratech.com

Redevelopment activities at the Site will be performed under the MCP via Release Abatement Measure (RAM) Plans which will be submitted for each RTN. Construction of the new building will include excavations below the water table, to incorporate sub-grade parking required by the City of Cambridge into the new building; therefore, construction-related dewatering will be necessary to facilitate work below the water table. Coverage under the NPDES RGP is being requested to facilitate the discharge of treated water recovered during construction-related excavation dewatering activities.

Receiving Water Information: The receiving water is Alewife Brook, which is part of the Boston Harbor Drainage Area and is within the Mystic River Sub-basin. Alewife Brook is included in the list of impaired waters for several factors including: debris/trash, copper, dissolved oxygen, Escherichia Coli, flocculant masses, lead, odor, oil and grease, polychlorinated biphenyls in fish tissue, phosphorus, scum/foam, sediment bioassay, and transparency/clarity. Of the listed impairments, Total Maximum Daily Loads (TMDL) have been developed for pathogens and phosphorus.

The treated water from the Site is proposed to be discharged to Alewife Brook via the City of Cambridge stormwater drainage system. The approximate location of the outfall from the stormwater drainage system to Alewife Brook is shown on Figure 1. A map of the City of Cambridge stormwater drainage infrastructure from the Site to the outfall is provided in Attachment 2.

The seven day, ten-year low flow (7Q10) of Alewife Brook at the approximate point of discharge was obtained using the United States Geological Survey (USGS) StreamStats application, as referenced in Appendix V of the NPDES RGP. A copy of the StreamStats Report is included in Attachment 2 Using the 7Q10, a dilution factor (DF) of 1.69 was calculated for the discharge. The calculations were submitted to MassDEP for review, and confirmed on February 3, 2021. The dilution factor calculations and MassDEP confirmation are included in Attachment 3.

A sample from the receiving water was collected on December 9, 2020, directly upstream of the outfall from the City of Cambridge stormwater drainage system. The surface water sample (identified as SW-1) was analyzed at Alpha Analytical, Inc. of Westborough, Massachusetts, for ammonia, hardness, and NPDES RGP metals. The laboratory analytical data are summarized in Table 1, and the laboratory certificate of analysis is provided in Attachment 4.

Source Water Information: The proposed source water includes groundwater and other waters collected during construction-related excavation dewatering at the Site. The dewatering activities will include well points and/or sumps installed within excavation areas. Based on the known Site history, water recovered during excavation dewatering is expected to contain typical urban-related contaminants including polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH) and metals.

Discharge Information: The discharge is considered a new discharge under the NPDES RGP. Water from the Site will be discharged to the City of Cambridge stormwater drainage system via inlets at or near the Site with eventual discharge to outfall (D36OF0080), as shown on Figure 1. A map of the stormwater drainage system from the Site to the outfall is included in Attachment 5. The stormwater drainage system is part of a municipal separate storm sewer system (MS4). The City of Cambridge has a NPDES permit for combined sewer overflows (CSO) that is identified as MA0101974. An application for a Dewatering Permit with the City of Cambridge is being submitted concurrently with this NOI, which constitutes notification to the owner of the MS4.

It is anticipated that dewatering will begin in spring 2021, and last for approximately one year.

Two representative untreated water samples of the proposed discharge water were collected from groundwater monitoring wells TT-1 (109 Smith Place) and TT-4 (75 Smith Place) on December 9, 2020. The water samples were analyzed at Alpha Analytical for the parameters required under Part 4.2 of the NPDES RGP. The laboratory

analytical data are summarized in Table 1, and the laboratory certificate of analysis is provided in Attachment 4. The data are summarized in the NPDES RGP "EnterData" form in Attachment 4. Also, these data are summarized in the NPDES RGP NOI form. The laboratory analysis reported NPDES RGP Group II PAHs, metals (arsenic, cadmium, copper, iron, lead, mercury, nickel, and zinc), ammonia, chloride, total suspended solids (TSS), and phthalates. Also, based on the Site history, TPH, naphthalene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, naphthalene, chromium, and silver were detected in soil at the Site above MCP Reportable Concentrations. However, these constituents were not detected in the water samples that are representative of the proposed discharge. These constituents are identified as "believed present" in the Section D, Part 4 of the NOI because they are present at the Site and may be mobilized by stormwater runoff or construction related disturbance of soil and groundwater at the Site.

The Water-Quality Based Effluent Limit (WQBEL) was calculated for each applicable constituent in accordance with Appendix V of the NPDES RGP. A summary of the calculated WQBELs for these select constituents are included in Table 1. The supporting calculations are included in Attachment 3.

Treatment System Information: Prior to discharge, the water will be treated to remove suspended solids and other contaminants that are not dissolved in the water. Physical separation/filtration will be performed via settlement in an appropriately sized holding tank (fractionation tank) followed by mechanical filtration via bag filters, sand filters, or other filters as appropriate. Additional treatment via adsorption/absorption with organophilic clay, granular activated carbon or similar media may be necessary to remove organic contaminants. Also, ion exchange resin may be used to remove dissolved metals to achieve NPDES RGP effluent limits. The proposed treatment system schematic is provided as Figure 2, and is subject to modification during final design to achieve the required effluent limits.

A Best Management Practices Plan (BMPP) for the treatment system and discharge activities at the Site will be developed and implemented by the operator upon initiation of the discharge.

Chemical and Additive Information: No chemicals or additives are proposed at this time.

Endangered Species and Historic Preservation Eligibility Determinations: In accordance with Appendices II and III of the NPDES RGP, we have completed the review of potential endangered species and historic preservation eligibility and made the following determinations:

Our review of the Endangered Species at the Site or action areas associated with the project and Outfall D36OF0080, was performed via a preliminary determination using the U.S. Fish and Wildlife Service (FWS) Information, Planning and Conservation (IPAC) online application. Copies of the letter issued by FWS for the Site and the discharge location are included as Attachment 6. There were no threatened, endangered, or candidate species identified by FWS. Also, there are no critical habitats within the project areas. Based on the results of these determinations by FWS, the project meets FWS Criteria A.

Our review of properties listed on or eligible for listing on the National Registry of Historic Places under the National Historic Preservation Act (NHPA) included a visual inspection of the Site, the on-site locations proposed for the temporary structures/elements comprising the treatment system, and the discharge location. We have also performed a review of potential historic properties via a review of the U.S. National Register of Historic Places and the Massachusetts Cultural Resource Information System (MACRIS). Copies of the search results are provided in Attachment 7. The findings of our assessment indicate that the conditions of Criteria A are met.

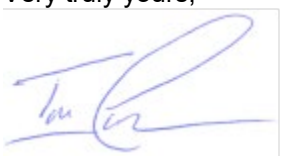
Summary and Conclusions:

The Site is proposed for redevelopment involving the construction of a commercial/industrial building at both the 75 and 109 Smith Place properties. The Site is associated with active MassDEP RTNs 3-0036197 (75 Smith

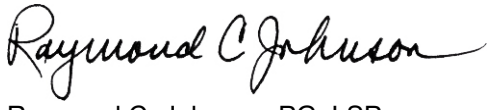
Place) and 3-0036198 (109 Smith Place). Redevelopment activities will be performed under MCP RAM Plans submitted for each RTN. The construction activities will include excavation dewatering with discharge to the City of Cambridge stormwater drainage MS4, which subsequently discharges to Alewife Brook. To obtain coverage for discharge to Alewife Brook, Tetra Tech has prepared the attached NOI and supporting documents for submittal to the U.S. EPA.

Please contact the undersigned at 508-786-2200 if you have any questions or require additional information regarding this submittal.

Very truly yours,



Ian S. Cannan, CHMM
Project Manager



Raymond C. Johnson, PG, LSP
Senior Vice President

CC: City of Cambridge, Public Works

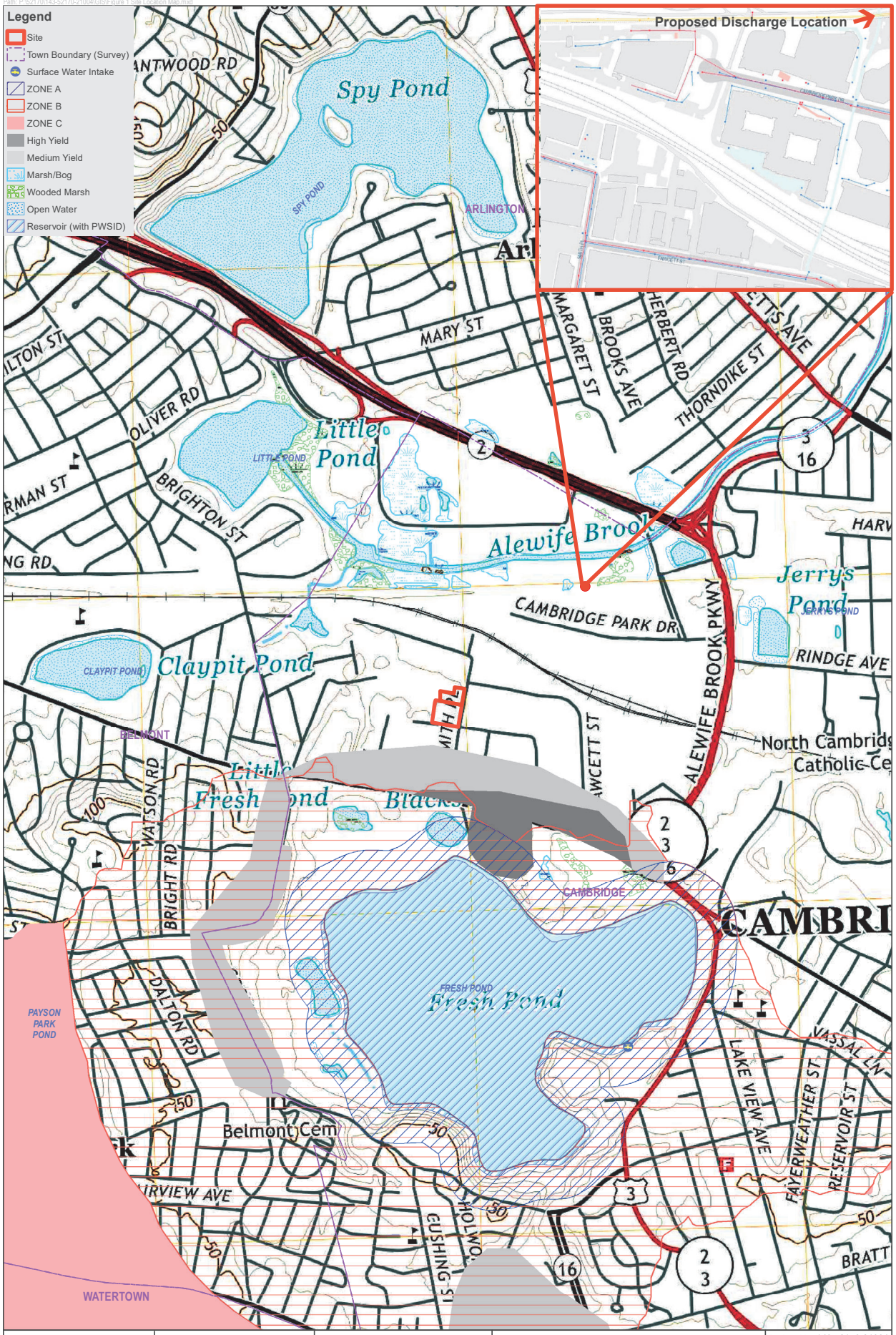
Figures:
1. Site Location Map
2. Proposed Treatment System Schematic

Table 1: Analytical Data Summary

Attachments:
1. Notice of Intent
2. Receiving Water Information
3. Data and Supporting Calculations
4. NPDES RGP EnterData Form and Laboratory Certificate of Analysis
5. Stormwater Drainage System
6. Endangered Species Documentation
7. Historic Preservation Documentation
8. References

P:\52170\143-52170-21004\DOCS\REPORTS\75-109 SMITHPLACE_NPDES_RGP\NPDES_RGP_LETTERATTACHMENT_75SMITHPLACE_DRAFT-2021-02-04.DOCX

Date: 12/28/2020
Path: P:\52170\143-52170-21004\GIS\Figure 1 Site Location Map.mxd



TETRATECH
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Marlborough, MA 01752
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www.tetratech.com

N

0 475 950
Feet

1 inch = 900 feet

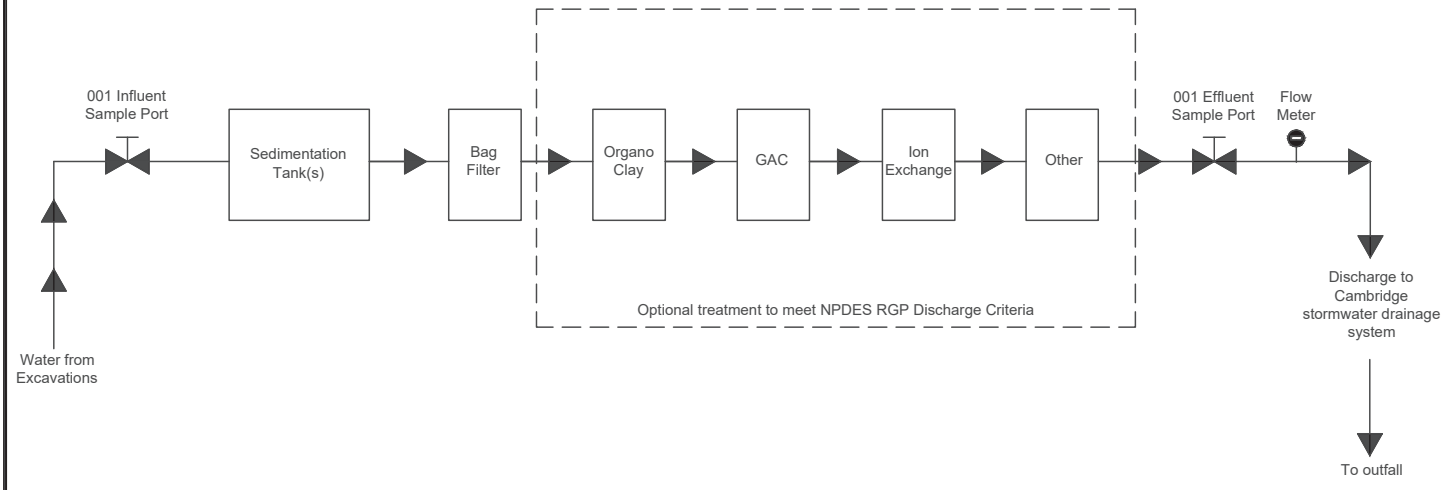
Information obtained from USGS Map of Lexington, Massachusetts Quadrangle dated 2018

75 and 109 Smith Place
Cambridge, Massachusetts

Site Location Map

Project No:	143-52170-21004
Date:	December 28, 2020
Designed By:	KML

Figure 1



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The Davis Companies

75 and 109 Smith Place
Cambridge, Massachusetts

Proposed Treatment System Schematic
(NOT TO SCALE)

Project No.:	143-52170-21004
Date:	December 28, 2020
Designed By:	
Figure	2

Bar Measures 1 inch

Copyright: Tetra Tech

12/29/2020 8:09:52 AM - P:\52170\143-52170-21004\CAD\SHEETFILES\FIGURE 2 PROCESS AND INSTRUMENTATION DIAGRAM.DWG - LEBLANC, KAITLYNE

Table 1 - Analytical Data Summary

Location:		Influent 1	Influent 2	Receiving Water	NPDES RGP	NPDES RGP	Calculated
Sample Name:		TT-1	TT-4	SW-1	TBEL [2]	WQBEL [3]	WQBEL [4]
Laboratory:		Alpha	Alpha	Alpha			
Laboratory I.D.:		L2054966-01	L2054966-02	L2054966-03			
Sample Date:		9-Dec-20	9-Dec-20	9-Dec-20			
Consultant:	Units	Tetra Tech	Tetra Tech	Tetra Tech			
Method(s):							
Acetone	µg/l	<10	<10			7.97	
Benzene	µg/l	<1.0	<1.0			5	
Carbon Tetrachloride	µg/l	<1.0	<1.0		4.4	1.6	
Dibromo-3-chloropropane, 1,2-	µg/l	<0.010	<0.010				
Dibromoethane, 1,2- (Ethylene Dibromide)	µg/l	<0.010	<0.010			0.05	
Dichlorobenzene, 1,2- (o-DCB)	µg/l	<5.0	<5.0			600	
Dichlorobenzene, 1,3- (m-DCB)	µg/l	<5.0	<5.0			320	
Dichlorobenzene, 1,4- (p-DCB)	µg/l	<5.0	<5.0			5.0	
Dichloroethane, 1,1-	µg/l	<1.5	<1.5			70	
Dichloroethane, 1,2-	µg/l	<1.5	<1.5			5.0	
Dichloroethene, 1,1-	µg/l	<1.0	<1.0			3.2	
Dichloroethene, cis-1,2 -	µg/l	<1.0	<1.0			70	
Dioxane, 1,4-	µg/l	<50.0	<50.0			200	
Ethylbenzene	µg/l	<1.0	<1.0				
Methyl tert-butyl ether	µg/l	<10.0	<10.0		70	20	
Methylene chloride (Dichloromethane)	µg/l	<1.0	<1.0			4.6	
Tertiary-amyl methyl ether (TAME)	µg/l	<20.0	<20.0			90	
Tetrachloroethene	µg/l	<1.0	<1.0		5.0	3.3	
Toluene	µg/l	<1.0	<1.0				
Trichloroethane, 1,1,1-	µg/l	<2.0	<2.0			200	
Trichloroethane, 1,1,2-	µg/l	<1.5	<1.5			5.0	
Trichloroethene	µg/l	<1.0	<1.0			5.0	
Trichloropropane, 1,2,3-	µg/l	<0.030	<0.031				
Vinyl chloride	µg/l	<1.0	<1.0			2.0	
Xylene (total)	µg/l	<1.0	<1.0				

Table 1 - Analytical Data Summary

Location:		Influent 1	Influent 2	Receiving Water	NPDES RGP	NPDES RGP	Calculated
Sample Name:		TT-1	TT-4	SW-1	TBEL [2]	WQBEL [3]	WQBEL [4]
Laboratory:		Alpha	Alpha	Alpha			
Laboratory I.D.:		L2054966-01	L2054966-02	L2054966-03			
Sample Date:		9-Dec-20	9-Dec-20	9-Dec-20			
Consultant:	Units	Tetra Tech	Tetra Tech	Tetra Tech			
Method(s):							
Acenaphthene	µg/l	0.48	0.20				
Acenaphthylene	µg/l	<0.100	<0.100				
Anthracene	µg/l	<0.100	<0.100				
Benzo(a)anthracene	µg/l	<0.100	<0.100			0.0038	
Benzo(a)pyrene	µg/l	<0.100	<0.100			0.0038	
Benzo(b)fluoranthene	µg/l	<0.100	<0.100			0.0038	
Benzo(g,h,i)perylene	µg/l	<0.100	<0.100				
Benzo(k)fluoranthene	µg/l	<0.100	<0.100			0.0038	
Chrysene	µg/l	<0.100	<0.100			0.0038	
Dibenzo(a,h)anthracene	µg/l	<0.100	<0.100			0.0038	
Fluoranthene	µg/l	<0.100	<0.100				
Fluorene	µg/l	<0.100	0.10				
Indeno(1,2,3-cd)pyrene	µg/l	<0.100	<0.100			0.0038	
Naphthalene	µg/l	<0.100	<0.100			20	
Phenanthrene	µg/l	<0.100	<0.100				
Pyrene	µg/l	<0.100	0.10				
Total Group I PAHs	µg/l	<0.100	<0.100		1.0	As Individual PAHs	
Total Group II PAHs	µg/l	0.48	0.41			100	
Bis(2-ethylhexyl)phthalate	µg/l	<2.20	4.2				
Di-n-butylphthalate	µg/l	<5.00	<5.00				
Di-n-octylphthalate	µg/l	<5.00	<5.00				
Diethyl phthalate	µg/l	<5.00	<5.00				
Dimethyl phthalate	µg/l	<5.00	<5.00				
Pentachlorophenol	µg/l	<1.00	<1.00			1.0	
Total Polychlorinated Biphenyls (PCBs)	µg/l	<0.250	<0.250			0.000064	
Total Petroleum Hydrocarbons (TPH)	mg/l	<4.40	<4.40			5.0	

Table 1 - Analytical Data Summary

Location:		Influent 1	Influent 2	Receiving Water	NPDES RGP	NPDES RGP	Calculated
Sample Name:		TT-1	TT-4	SW-1	TBEL [2]	WQBEL [3]	WQBEL [4]
Laboratory:		Alpha	Alpha	Alpha			
Laboratory I.D.:		L2054966-01	L2054966-02	L2054966-03			
Sample Date:		9-Dec-20	9-Dec-20	9-Dec-20			
Consultant:	Units	Tetra Tech	Tetra Tech	Tetra Tech			
Method(s):							
Chloride	mg/l	1,270	129			Report	
Cyanide, Total	mg/l	<0.005	<0.005		178	5.2	
Iron, Total	mg/l	2.1	21.4	2.2	5	1	
Nitrogen, Ammonia	mg/l	2.6	1.8	0.83		Report	
ORP	mV	-13.9	-194	49.2			
pH	SU	6.98	7.99	7.86			
Temperature	°C	16.59	16.01	8.37			
Hardness	mg/l	639	123	176			
Total Residual Chlorine	mg/l	<0.02	<0.02		0.011	0.011	
Phenol, Total	mg/l	<0.030	<0.030		1.08	0.3	
Solids, Total Suspended	mg/l	9.9	46.0			30	
Total Phthalates	µg/l	<5.0	4.2		190	2.2	
Ethanol	mg/l	<20	<20			Report	
Tert-Butyl Alcohol	µg/l	<100	<100			120	
Antimony, Total	µg/l	<20	<4	<4	206	640	1084
Arsenic, Total	µg/l	<5	3.8	<1	104	10	17
Cadmium, Total	µg/l	3.8	<0.2	<0.2	10.2	0.25	4.7
Chromium, Total	µg/l	<5	<1	1.3	323	74	442
Chromium (VI), Total	µg/l	<10	<10		323	11	18.6
Copper, Total	µg/l	35.3	2.3	7.1	242	9	78.0
Lead, Total	µg/l	27.7	10.7	4.3	160	2.5	13.0
Mercury, Total	µg/l	0.42	<0.2	<0.2	0.739	0.77	1.3
Nickel, Total	µg/l	17.7	<2	3.3	1450	52	314
Selenium, Total	µg/l	<25	<5	<5	235.8	5	8.5
Silver, Total	µg/l	<2	<0.4	<0.4	35.1	3.2	1.69
Zinc, Total	µg/l	1,822	17.0	49.1	420	120	667

Notes:

1) Parameters reported as < or ND were not detected above laboratory detection limits.

2) TBEL is technology based effluent limit, per Part 2 of the NPDES RGP

3) WQBEL is water quality based effluent limit, per Part 2 of the NPDES RGP

4) WQBEL adjusted for hardness and dilution factor of receiving water, see supporting calculations

Attachment 1
Notice of Intent

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

A. General site information:

<table>
<tr><td rowspan="3">1. Name of site:
75&109 Smith Place Redevelopment</td><td colspan="3">Site address: 75 and 109 Smith Place
Street:</td></tr>
<tr><td>City: Cambridge</td><td>State: MA</td><td>Zip: 02138</td></tr>
<tr><td colspan="3"></td></tr>
<tr><td rowspan="4">2. Site owner
QUAD 75 SMITH PLACE, LLC
QUAD 109 SMITH PLACE, LLC

Owner is (check one): ☐ Federal ☐ State/Tribal ■ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: Brian Fallon</td></tr>
<tr><td colspan="2">Telephone: 617-451-1300</td><td>Email: bfallon@thedaviscompanies.com</td></tr>
<tr><td colspan="3">Mailing address: 125 High Street, Suite 2111
Street:</td></tr>
<tr><td>City: Boston</td><td>State: MA</td><td>Zip: 02110</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
NA, same as owner</td><td colspan="3">Contact Person:</td></tr>
<tr><td colspan="2">Telephone:</td><td>Email:</td></tr>
<tr><td colspan="3">Mailing address:
Street:</td></tr>
<tr><td>City:</td><td>State:</td><td>Zip:</td></tr>
<tr><td>4. NPDES permit number assigned by EPA:
NA

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):
3-0036197, 3-0020883, 3-0002241
☐ 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):
Alewife Brook	MA71-04	B

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

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

Are sensitive receptors present near the site? (check one): ☐ Yes ■ No
If yes, specify:

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. Alewife Brook is listed per Section 303(d) for several uses, see attached letter. TMDLs available for pathogens and phosphorus.

4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.	0.309 ft3/s
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.	1.69

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: February 3, 2021 (see Attachment 3)

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: construction site dewatering

2. Source water contaminants: PAHs, SVOCs, and metals	
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): City of Cambridge - 42" Storm Runoff Outfall D36OF0080	Outfall location(s): (Latitude, Longitude) 42.396067, -71.146046
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ■ Indirect discharge, if so, specify: via City of Cambridge storm runoff drainage system and outfall, see attached map of piping from Site to outfall ☐ 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: City of Cambridge permit to dewater application submitted concurrently with this NOI 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): March 2021 to March 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="4">☐ I – Petroleum-Related Site Remediation
☐ II – Non-Petroleum-Related Site Remediation
■ III – Contaminated Site Dewatering
☐ IV – Dewatering of Pipelines and Tanks
☐ V – Aquifer Pump Testing
☐ VI – Well Development/Rehabilitation
☐ VII – Collection Structure Dewatering/Remediation
☐ VIII – Dredge-Related Dewatering</td><td colspan="2">a. If Activity Category I or II: (check all that apply)

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

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

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✓	2	4500NH3		2.560	2.200	Report mg/L	---
Chloride		✓	2	300.0		1270	700	Report µg/l	---
Total Residual Chlorine	✓		2	4500CL-D	0.02	<0.02	<0.02	0.2 mg/L	0.011
Total Suspended Solids		✓	2	2540D		46	28	30 mg/L	---
Antimony	✓		2	3005A/200	4	<4	<4	206 µg/L	1084
Arsenic		✓	2	3005A/200		3.82	3.82	104 µg/L	17
Cadmium		✓	2	3005A/200		3.8	2	10.2 µg/L	4.7
Chromium III		✓	2	3005A/200	1	<1	<1	323 µg/L	442
Chromium VI	✓		2	7196A	10	<10	<10	323 µg/L	18.6
Copper		✓	2	3005A/200		35.27	18.8	242 µg/L	78
Iron		✓	2	3005A/200		21400	11755	5,000 µg/L	1000
Lead		✓	2	3005A/200		27.65	19.19	160 µg/L	13
Mercury		✓	2	245.1/245	0.2	0.42	0.26	0.739 µg/L	1.3
Nickel		✓	2	3005A/200	2	17.73	9.37	1,450 µg/L	314
Selenium	✓		2	303005A/2	5	<5	<5	235.8 µg/L	8.5
Silver		✓	2	3005A/200	0.4	<0.4	<0.4	35.1 µg/L	3.2
Zinc		✓	2	3005A/200		1822	920	420 µg/L	667
Cyanide	✓		2	4500CN-C	0.005	<0.005	<0.005	178 mg/L	5.2
B. Non-Halogenated VOCs									
Total BTEX	✓		2	624.1	1	<1	<1	100 µg/L	---
Benzene	✓		2	624.1	1	<1	<1	5.0 µg/L	---
1,4 Dioxane	✓		2	624.1	50	<50	<50	200 µg/L	---
Acetone	✓		2	624.1	10	<10	<10	7.97 mg/L	---
Phenol	✓		2	624.1	0.00003	<0.00003	<0.00003	1,080 µg/L	300

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	✓		2	624.1	1	<1	<1	4.4 µg/L	1.6
1,2 Dichlorobenzene	✓		2	624.1	5	<5	<5	600 µg/L	---
1,3 Dichlorobenzene	✓		2	624.1	5	<5	<5	320 µg/L	---
1,4 Dichlorobenzene	✓		2	624.1	5	<5	<5	5.0 µg/L	---
Total dichlorobenzene	✓		2	624.1	5	<5	<5	763 µg/L in NH	---
1,1 Dichloroethane	✓		2	624.1	1.5	<1.5	<1.5	70 µg/L	---
1,2 Dichloroethane	✓		2	624.1	1.5	<1.5	<1.5	5.0 µg/L	---
1,1 Dichloroethylene	✓		2	624.1	1	<1	<1	3.2 µg/L	---
Ethylene Dibromide	✓		2	624.1	0.01	<0.01	<0.01	0.05 µg/L	---
Methylene Chloride	✓		2	624.1	1	<1	<1	4.6 µg/L	---
1,1,1 Trichloroethane	✓		2	624.1	2	<2	<2	200 µg/L	---
1,1,2 Trichloroethane	✓		2	624.1	1.5	<1.5	<1.5	5.0 µg/L	---
Trichloroethylene	✓		2	624.1	1	<1	<1	5.0 µg/L	---
Tetrachloroethylene	✓		2	624.1	1	<1	<1	5.0 µg/L	3.3
cis-1,2 Dichloroethylene	✓		2	624.1	1	<1	<1	70 µg/L	---
Vinyl Chloride	✓		2	624.1	1	<1	<1	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates		✓	2	625.1	5	4.19	4.19	190 µg/L	2.2
Diethylhexyl phthalate	✓		2	625.1	5	<5	<5	101 µg/L	2.2
Total Group I PAHs	✓		2	625.1-SIM	0.1	<0.1	<0.1	1.0 µg/L	---
Benzo(a)anthracene		✓	2	625.1-SIM	0.1	<0.1	<0.1	As Total PAHs	0.0038
Benzo(a)pyrene		✓	2	625.1-SIM	0.1	<0.1	<0.1		0.0038
Benzo(b)fluoranthene		✓	2	625.1-SIM	0.1	<0.1	<0.1		0.0038
Benzo(k)fluoranthene	✓		2	625.1-SIM	0.1	<0.1	<0.1		0.0038
Chrysene	✓		2	625.1-SIM	0.1	<0.1	<0.1		0.0038
Dibenzo(a,h)anthracene		✓	2	625.1-SIM	0.1	<0.1	<0.1		0.0038
Indeno(1,2,3-cd)pyrene		✓	2	6625.1-SI	0.1	<0.1	<0.1		0.0038

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs		✓	2	625.1		0.476	0.441	100 µg/L	---
Naphthalene		✓	2	625.1	0.1	<0.1	<0.1	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✓		2	608.3	0.25	<0.25	<0.25	0.000064 µg/L	---
Pentachlorophenol	✓		2	625.1 SIM	1	<1	<1	1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons		✓	2	1664A	4.4	<4.4	<4.4	5.0 mg/L	---
Ethanol	✓		2	600 1671A	20	<20	<20	Report mg/L	---
Methyl-tert-Butyl Ether	✓		2	624.1	10	<10	<10	70 µg/L	20
tert-Butyl Alcohol	✓		2	624.1	100	<100	<100	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✓		2	624.1	20	<20	<20	90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									
pH		✓	2	field	1	7.99	7.49		
Temperature		✓	2	field	1	16.59	16.3		
Hardness		✓	2	3005A		639	381		

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:
Organophilic clay, GAC and/or ion exchange to be used as needed to meet NPDES RGP effluent limits.

2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.
Water will be recovered and treated via settlement tanks, physical filters (e.g. bag filters), and other media, as needed to achieve NPDES RGP effluent limits. See attached letter and schematic drawing of treatment system components.

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: organophilic clay, granular activated carbon (GAC), ion exchange media, or other media as needed to meet NPDES RGP effluent limits.
Indicate if either of the following will occur (check any that apply):
☐ Chlorination ☐ De-chlorination

3. Provide the **design flow capacity** in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: bag filters Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	
Provide the proposed maximum effluent flow in gpm.	200
Provide the average effluent flow in gpm.	100
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	NA

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:
Chemical additives are not proposed at this time. If chemical additives are needed a separate Notice of Change will be submitted

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

See attached letter and supporting documents

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

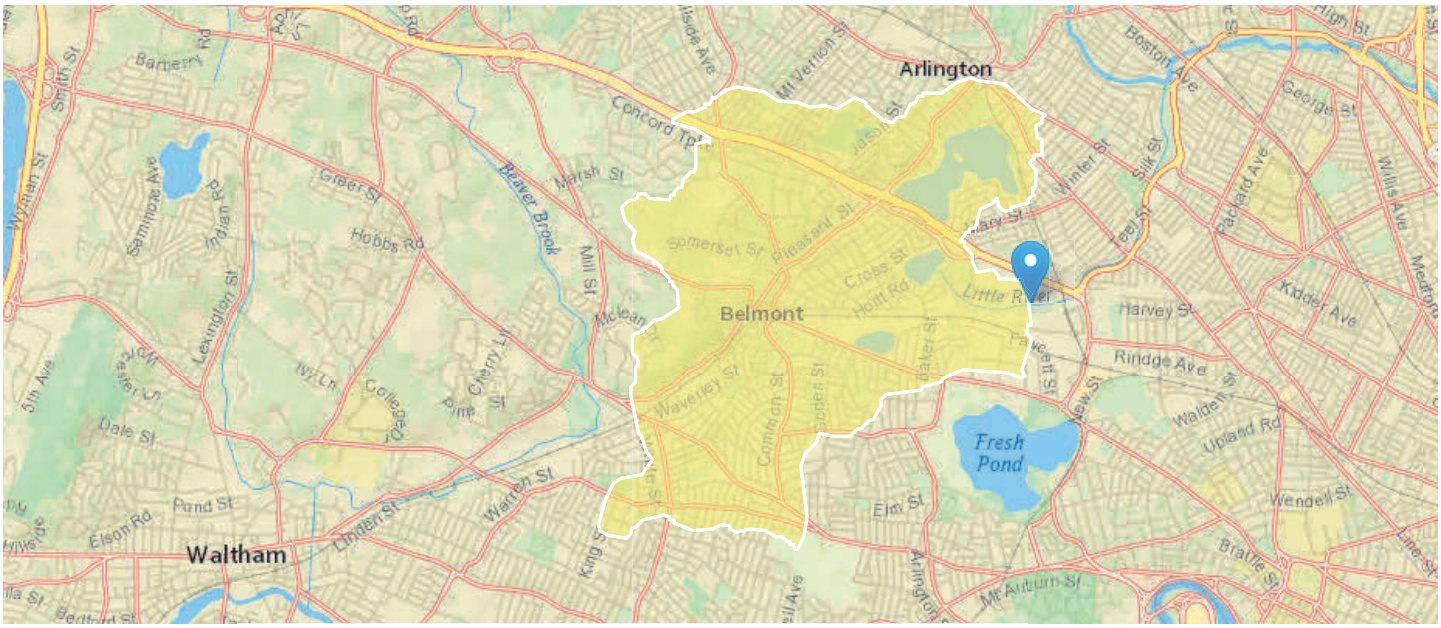
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage 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: A Best Management Practices Plan (BMPP) meeting the requirements of the NPDES RGP 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: Brian Fallon Digitally signed by Brian Fallon DN: cn=Brian Fallon, o, ou, email=bfallon@thedaviscompanies.com, c=US Date: 2021.02.10 12:03:25 -05'00'	Date: 02/10/2021
Print Name and Title: Brian Fallon, President	

Attachment 2
Receiving Water Information

StreamStats Report

Region ID: MA
Workspace ID: MA20201221185527929000
Clicked Point (Latitude, Longitude): 42.39691, -71.14732
Time: 2020-12-21 13:55:47 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	4.21	square miles
BSLDEM250	Mean basin slope computed from 1:250K DEM	2.587	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	0.4	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	4.21	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	2.587	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.4	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

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

PII: Prediction Interval-Lower, PIu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PII	PIu	SE	SEp
7 Day 2 Year Low Flow	0.627	ft^3/s	0.185	2.05	49.5	49.5
7 Day 10 Year Low Flow	0.309	ft^3/s	0.0729	1.22	70.8	70.8

Low-Flow Statistics Citations

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

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Application Version: 4.4.0

Category 5 waters listed alphabetically by major watershed
The 303(d) List – "Waters requiring a TMDL"

Water Body	Segment ID	Description	Size	Units	Impairment	EPA TMDL No.
Boston Harbor: Mystic						
Aberjona River	MA71-01	Source just south of Birch Meadow Drive, Reading to inlet Upper Mystic Lake at Mystic Valley Parkway, Winchester (portion culverted underground). (through former pond segments Judkins Pond MA71021 and Mill Pond MA71031).	9.10	Miles	(Physical substrate habitat alterations*)	
					Ammonia, Un-ionized	
					Arsenic	
					Benthic Macroinvertebrates	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	
					Phosphorus, Total	
					Sediment Bioassay (Chronic Toxicity Freshwater)	
Alewife Brook	MA71-04	Outlet of Little Pond, Belmont to confluence with Mystic River, Arlington/Somerville (portion in Belmont and Cambridge identified as Little River with name changing to Alewife Brook at Arlington corporate boundary).	2.30	Miles	(Debris*)	
					(Trash*)	
					Copper	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	
					Flocculant Masses	
					Lead	
					Odor	
					Oil And Grease	
					PCBs In Fish Tissue	
					Phosphorus, Total	
					Scum/Foam	
					Sediment Bioassay (Chronic Toxicity Freshwater)	
					Transparency / Clarity	
Belle Isle Inlet	MA71-14	From tidegate at Bennington Street, Boston/Revere to confluence with Winthrop Bay, Boston/Winthrop.	0.12	Square Miles	Cause Unknown (Contaminants in Fish and/or Shellfish)	
					Fecal Coliform	
					PCBs In Fish Tissue	
Blacks Nook	MA71005	Cambridge.	2.00	Acres	(Non-Native Aquatic Plants*)	
					Nutrient/Eutrophication Biological Indicators	
					Transparency / Clarity	

4.06: continued

TABLE 15
BOSTON HARBOR DRAINAGE AREA (continued)

BOUNDARY	MILE POINT	CLASS	QUALIFIERS
Malden River			
Entire Length	1.9 - 0.0	B	Warm Water
Alewife Brook			
Entire Length	2.0 - 0.0	B	Warm Water CSO
Horn Pond in Woburn		- -	B Warm Water
Belle Isle Inlet and tributaries thereto	-	SA	Shellfishing Outstanding Resource Water
North Reservoir and Middle Reservoir			
Source to outlet in Winchester, Stoneham and Medford and those tributaries thereto	-	A	Public Water Supply
South Reservoir			
Source to outlet in Medford and tributaries thereto		A	Public Water Supply
Fresh Pond			
Source to outlet in Cambridge and those tributaries thereto	-	A	Public Water Supply
Neponset Reservoir			
Upstream of dam at outlet of Crackrock Pond	Above 29.5	B	Warm Water High Quality Water
Neponset River			
Source to Mother Brook	29.5 - 7.9	B	Warm Water
Mother Brook to Milton Lower Falls Dam, Milton/Boston	7.9 - 4.2	B	Warm Water
Tidal Portion	4.2 - 0.0	SB	Shellfishing
Weymouth Fore River	-	SB* B*	Shellfishing Warm Water

Attachment 3
Data and Supporting Calculations

Supporting Calculations
Project: 143-52170-21004.006
Subject: NPDES RGP Notice of Intent
Calculated By: ISC
Checked By: RCJ

Parameter	Value	Units	Source/Formula
7Q10 (Qs)	0.309	ft^3/s	see note 1
7Q10 (Qs)	2.00E-01	MGD	$MGD = \frac{ft^3}{s} \text{ X } \frac{7.48\ gal}{ft^3} \text{ X } \frac{86400\ s}{day}\ X\ \frac{MGD}{1000000\ gal}$
Max. Discharge Flow (Qd)	2.88E-01	MGD	200 gal/min
Downstream Water Flow (Qr)	4.88E-01	MGD	Qr = Qs+Qd
Dilution Factor (DF)	1.69	unitless	$DF = \frac{Qs + Qd}{Qd}$
Discharge hardness (CdH)	639.00	mg/L	Lab data
Upstream hardness (CsH)	176.00	mg/L	Lab data
Downstream hardness (CrH)	449.42	mg/L	$CrH = \frac{QdCdH + QsCsH}{Qr}$
Water Quality Criteria (WQC) (for metals that are hardness-dependent) [2,3]	see next page	µg/L	WQC = $\exp\{m_c[\ln(CrH)]+b_c\}$
Discharge Concentration (Cd) [4,5,6]	see next page	µg/L	$Cd = \frac{QrWQC - QsCs}{Qd}$
Downstream Concentration (Cr)	see next page	µg/L	$Cr = \frac{QdCd + QsCs}{Qr}$

Notes:
1) 7Q10 obtained from StreamStats (http://water.usgs.gov/osw/streamstats/massachusetts.html)
2) m_c and b_c are pollutant-specific coefficients from 314 CMR 4.05(5)e
3) ln(CrH) is the natural logarithm of the downstream hardness (CrH)
4) WQBEL calculated using WQC calculated as above or the WQBEL from Part 2.1.1 of the NPDES RGP, if above calculation does not apply
5) Cs is the upstream concentration (from sample SW-1)
6) QsCs is 0 if receiving water sampling was not required or if pollutant was not detected in SW-1 sample

Supporting Calculations
Project: 143-52170-21004.006
Subject: NPDES RGP Notice of Intent
Calculated By: ISC
Checked By: RCJ

WQBEL Calculations for metals

				Pollutant-Specific Parameters from 314 CMR 4.05(5)e			
Pollutant	**WQC**	**Cd (WQBEL)**	**Cr**	**m_A**	**b_A**	**m_c**	**b_c**
Cadmium	2.80	4.74	2.80	1.0166	-3.9240	0.7409	-4.7190
Chromium III	260.67	442.34	261.76	0.8190	3.7256	0.8190	0.6848
Copper	43.16	77.98	48.94	0.9422	-1.7000	0.8545	-1.7020
Lead	5.97	13.05	9.45	1.2730	-1.4600	1.2730	-4.7050
Nickel	184.33	314.40	187.00	0.8460	2.2550	0.8460	0.0584
Silver	1.00	1.69	1.00	1.7200	-6.5900		
Zinc	374.01	667.40	414.23	0.8473	0.8840	0.8473	0.8840

Cannan, Ian

From: Vakalopoulos, Catherine (DEP) <catherine.vakalopoulos@state.ma.us>
Sent: Wednesday, February 3, 2021 8:04 AM
To: Cannan, Ian
Subject: FW: NPDES RGP - Dilution Factor Calculations - 75 & 109 Smith Place, Cambridge, MA

Follow Up Flag: Follow up
Flag Status: Flagged

⚠ **CAUTION:** This email originated from an external sender. Verify the source before opening links or attachments. ⚠

Hi Ian,
Using a revised design flow of 200 gpm for the proposed discharge described below, your calculation for the dilution factor of 1.69 (in your email dated 1/25/21) is correct.
Cathy

From: "Vakalopoulos, Catherine (DEP)" <catherine.vakalopoulos@mass.gov>
Date: Tuesday, January 26, 2021 at 7:47 AM
To: "Cannan, Ian" <ian.cannan@tetratech.com>
Cc: "Johnson, Ray" <ray.johnson@tetratech.com>
Subject: Re: NPDES RGP - Dilution Factor Calculations - 75 & 109 Smith Place, Cambridge, MA

Hi Ian,
Again, apologies for the delay and thanks for your patience. The 7Q10 of 0.309 cfs and the dilution factor calculation of 2.39 using a design flow of 100 gpm for the proposed discharge from 75 and 109 Smith Place in Cambridge to the Little River/Alewife Brook are correct.

Here is some water quality information to assist you with filling out the NOI (some of which you already have found):

Waterbody and ID: Little River/Alewife Brook (MA71-04) within the Mystic River Watershed
Classification: B (you attached the correct page from 314 CMR 4.06)
Outstanding Resource Water?: no
You attached the correct page from: https://www.epa.gov/sites/production/files/2020-01/documents/2016-ma-303d-list-report.pdf, which shows the causes of impairments
TMDLs: there is one approved TMDL for pathogens, https://www.mass.gov/doc/final-pathogen-tmdl-report-for-the-boston-harbor-weymouth-weir-and-mystic-watersheds/download

As you noted below, since these are current MCP sites, you do not need to apply with the MassDEP NPDES program.

Please let me know if you have any questions.

Cathy

Cathy Vakalopoulos
Massachusetts Department of Environmental Protection
1 Winter St., Boston, MA 02108, 617-348-4026
Please consider the environment before printing this e-mail

From: "Cannan, Ian" <ian.cannan@tetratech.com>
Date: Wednesday, December 30, 2020 at 3:32 PM
To: "Vakalopoulos, Catherine (DEP)" <catherine.vakalopoulos@mass.gov>
Cc: "Johnson, Ray" <ray.johnson@tetratech.com>
Subject: NPDES RGP - Dilution Factor Calculations - 75 & 109 Smith Place, Cambridge, MA

CAUTION: This email originated from a sender outside of the Commonwealth of Massachusetts mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Cathy,

Attached, please find our dilution factor calculations and supporting documentation including the StreatmStats Report from USGS. This proposed discharge will be from a construction dewatering project on two parcels 75 and 109 Smith Place in Cambridge, MA. The treated water is proposed to be discharged to Alewife Brook via the City of Cambridge stormwater system at an outfall near Cambridge Park Drive. The design flow of the discharge is anticipated to be 100 gallons/min. Please confirm the dilution factor calculated for this proposed discharge.

The properties are each current MCP disposal sites and the proposed work will be performed under a RAM for each site; therefore, no permitting from MassDEP for the surface water discharge will be necessary.

We have reviewed available information about the receiving water, which is also attached for your reference.

If you have any questions or require additional information please let me know.

Thank you and Happy New Year!

Ian S. Cannan, CHMM | Project Manager
Mobile **+1 (508) 259-3658** | NY Direct **+1 (585) 450-4013** | Main **+1 (508) 786-2200** | ian.cannan@tetratech.com

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MA Office – 100 Nickerson Rd. | Marlborough, MA 01752 | tetratech.com

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Please consider the environment before printing. Read more

TETRA TECH

Attachment 4
Laboratory Certificate of Analysis

Enter number values in green boxes based on the instructions to the right

Enter values in the units specified

↓		
2.00E-01	Q_R = Enter upstream flow in **MGD**	Freshwater: leave 0 unless 7Q10 or alternate Q_R AND a dilution factor >1 approved by the State;
2.88E-01	Q_P = Enter discharge flow in **MGD**	Saltwater (estuarine and marine): leave 0 unless QR approved by the State
4.88E-01	Downstream 7Q10	Enter the design flow or 1 MGD, whichever is less (100 gpm design flow = 0.144 MGD and is entered by default)
		Leave 0 unless Q_R approved by the State

Enter a dilution factor for saltwater receiving water (this box does not apply to freshwater receiving waters)

↓	
1.69	Freshwater: leave 0 Saltwater (estuarine and marine): leave 0 unless DF approved by the State

Enter values in the units specified

↓		
639.00	C_d = Enter influent hardness in **mg/L** $CaCO_3$	Applies to freshwater receiving waters only
176.00	C_s = Enter receiving water hardness in **mg/L** $CaCO_3$	

Enter **receiving water** concentrations in the units specified

↓		Impaired for metals?	pH, temperature, and ammonia required for all discharges
7.86	pH in **Standard Units**	↓	Hardness required for freshwater
8.37	Temperature in **°C**		Salinity required for saltwater (estuarine and marine)
0.828	Ammonia in **mg/L**		Metals required for all discharges if detected in the influent and if dilution factor approved by State
176	Hardness in **mg/L** $CaCO_3$		Enter 0 if non-detect or testing not required
0	Salinity in **ppt**		If receiving water is not listed as impaired for metals in State 303(d) List, change to "no" using dropdown
0	Antimony in **µg/L**	no	
0	Arsenic in **µg/L**	no	
0	Cadmium in **µg/L**	yes	
1.33	Chromium III in **µg/L**	yes	
0	Chromium VI in **µg/L**	yes	
7.06	Copper in **µg/L**	yes	
2220	Iron in **µg/L**	yes	
4.25	Lead in **µg/L**	yes	
0	Mercury in **µg/L**	yes	
3.26	Nickel in **µg/L**	yes	
0	Selenium in **µg/L**	yes	
0	Silver in **µg/L**	yes	
49.12	Zinc in **µg/L**	yes	

Enter **influent** concentrations in the units specified

↓		
0	TRC in **µg/L**	if >1 sample, enter maximum influent measurement
2.56	Ammonia in **mg/L**	if >10 samples, may enter 95th percentile of influent measurements using
0	Antimony in **µg/L**	EPA's *Technical Support Document for Water Quality-based Toxics Control*
3.82	Arsenic in **µg/L**	Enter 0 if non-detect or testing not required
3.8	Cadmium in **µg/L**	
0	Chromium III in **µg/L**	
0	Chromium VI in **µg/L**	
35.27	Copper in **µg/L**	
21400	Iron in **µg/L**	
27.65	Lead in **µg/L**	
0.42	Mercury in **µg/L**	
17.73	Nickel in **µg/L**	
0	Selenium in **µg/L**	
0	Silver in **µg/L**	
1822	Zinc in **µg/L**	
0	Cyanide in **µg/L**	
0	Phenol in **µg/L**	
0	Carbon Tetrachloride in **µg/L**	
0	Tetrachloroethylene in **µg/L**	
4.19	Total Phthalates in **µg/L**	
0	Diethylhexylphthalate in **µg/L**	
0	Benzo(a)anthracene in **µg/L**	
0	Benzo(a)pyrene in **µg/L**	
0	Benzo(b)fluoranthene in **µg/L**	
0	Benzo(k)fluoranthene in **µg/L**	
0	Chrysene in **µg/L**	
0	Dibenzo(a,h)anthracene in **µg/L**	
0	Indeno(1,2,3-cd)pyrene in **µg/L**	
0	Methyl-tert butyl ether in **µg/L**	

Notes: Revised 1-24-20

ANALYTICAL REPORT

Lab Number:	L2054966
Client:	Tetra Tech Rizzo Marlborough Technology Park 100 Nickerson Road Marlborough, MA 01752
ATTN:	Ian Cannan
Phone:	(508) 786-2200
Project Name:	SMITH PLACE
Project Number:	143-52170
Report Date:	12/23/20

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

Eight Walkup Drive, Westborough, MA 01581-1019
508-898-9220 (Fax) 508-898-9193 800-624-9220 - www.alphalab.com

Serial_No:12232012:29

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2054966-01	TT-1	WATER	Not Specified	12/09/20 11:00	12/09/20
L2054966-02	TT-4	WATER	Not Specified	12/09/20 12:00	12/09/20
L2054966-03	SW-1	WATER	Not Specified	12/09/20 13:00	12/09/20

Project Name:	SMITH PLACE	**Lab Number:**	L2054966
Project Number:	143-52170	**Report Date:**	12/23/20

Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

HOLD POLICY - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

Project Name: SMITH PLACE
Project Number: 143-52170
Lab Number: L2054966
Report Date: 12/23/20

Case Narrative (continued)

Report Submission

The analysis of Ethanol by EPA 1671 was subcontracted. A copy of the laboratory report is included as an addendum. Please note: This data is only available in PDF format and is not available on Data Merger.

Sample Receipt

L2054966-03: A sample container for Ammonia analysis was received for the "SW-1" sample, but was not listed on the chain of custody. The analysis was performed.

Microextractables

The WG1446063-2 LCS recovery for 1,2,3-trichloropropane (121%), associated with L2054966-01 and -02, is outside Alpha's acceptance criteria, but within the acceptance criteria specified in the method.

Total Metals

L2054966-01: The sample has elevated detection limits for all elements analyzed by Method 200.8 due to the dilution required by the high concentrations of non-target elements.

TPH, SGT-HEM

The WG1445827-4 MS recovery, performed on L2054966-02, is outside the acceptance criteria for tph (52%); however, the associated LCS recovery is within criteria. No further action was taken.

Anions by Ion Chromatography

The WG1445616-3 MS recovery, performed on L2054966-02, is outside the acceptance criteria for chloride (83%); however, the associated LCS recovery is within criteria. No further action was taken.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature: Jennifer L Clements

Title: Technical Director/Representative Date: 12/23/20

ORGANICS

VOLATILES

Project Name: SMITH PLACE
Project Number: 143-52170
Lab Number: L2054966
Report Date: 12/23/20

SAMPLE RESULTS

Lab ID: L2054966-01
Client ID: TT-1
Sample Location: Not Specified
Date Collected: 12/09/20 11:00
Date Received: 12/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 12/14/20 13:36
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	1.0	--	1
1,1-Dichloroethane	ND		ug/l	1.5	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethane	ND		ug/l	1.5	--	1
1,1,1-Trichloroethane	ND		ug/l	2.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	5.0	--	1
1,3-Dichlorobenzene	ND		ug/l	5.0	--	1
1,4-Dichlorobenzene	ND		ug/l	5.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
Acetone	ND		ug/l	10	--	1
Methyl tert butyl ether	ND		ug/l	10	--	1
Tert-Butyl Alcohol	ND		ug/l	100	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--	1

Project Name: SMITH PLACE
Project Number: 143-52170
Lab Number: L2054966
Report Date: 12/23/20

SAMPLE RESULTS

Lab ID: L2054966-01
Client ID: TT-1
Sample Location: Not Specified
Date Collected: 12/09/20 11:00
Date Received: 12/09/20
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	119		60-140
Fluorobenzene	92		60-140
4-Bromofluorobenzene	95		60-140

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

SAMPLE RESULTS

Lab ID: L2054966-01
Client ID: TT-1
Sample Location: Not Specified

Date Collected: 12/09/20 11:00
Date Received: 12/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1-SIM
Analytical Date: 12/14/20 13:36
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	50	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	98		60-140
4-Bromofluorobenzene	103		60-140

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

SAMPLE RESULTS

Lab ID: L2054966-01
Client ID: TT-1
Sample Location: Not Specified

Date Collected: 12/09/20 11:00
Date Received: 12/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 12/16/20 17:31
Analyst: GT

Extraction Method: EPA 504.1
Extraction Date: 12/16/20 15:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	--	1	B
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	--	1	B
1,2,3-Trichloropropane	ND		ug/l	0.030	--	1	B

Project Name: SMITH PLACE
Project Number: 143-52170
Lab Number: L2054966
Report Date: 12/23/20

SAMPLE RESULTS

Lab ID: L2054966-02
Client ID: TT-4
Sample Location: Not Specified
Date Collected: 12/09/20 12:00
Date Received: 12/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 12/14/20 14:13
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	1.0	--	1
1,1-Dichloroethane	ND		ug/l	1.5	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethane	ND		ug/l	1.5	--	1
1,1,1-Trichloroethane	ND		ug/l	2.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	5.0	--	1
1,3-Dichlorobenzene	ND		ug/l	5.0	--	1
1,4-Dichlorobenzene	ND		ug/l	5.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
Acetone	ND		ug/l	10	--	1
Methyl tert butyl ether	ND		ug/l	10	--	1
Tert-Butyl Alcohol	ND		ug/l	100	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--	1

Project Name: SMITH PLACE
Project Number: 143-52170
Lab Number: L2054966
Report Date: 12/23/20

SAMPLE RESULTS

Lab ID: L2054966-02
Client ID: TT-4
Sample Location: Not Specified
Date Collected: 12/09/20 12:00
Date Received: 12/09/20
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	95		60-140
Fluorobenzene	75		60-140
4-Bromofluorobenzene	91		60-140

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

SAMPLE RESULTS

Lab ID: L2054966-02
Client ID: TT-4
Sample Location: Not Specified

Date Collected: 12/09/20 12:00
Date Received: 12/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1-SIM
Analytical Date: 12/14/20 14:13
Analyst: NLK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	50	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	80		60-140
4-Bromofluorobenzene	100		60-140

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

SAMPLE RESULTS

Lab ID: L2054966-02
Client ID: TT-4
Sample Location: Not Specified

Date Collected: 12/09/20 12:00
Date Received: 12/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 12/16/20 17:36
Analyst: GT

Extraction Method: EPA 504.1
Extraction Date: 12/16/20 15:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	--	1	B
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	--	1	B
1,2,3-Trichloropropane	ND		ug/l	0.031	--	1	B

Project Name: SMITH PLACE
Project Number: 143-52170
Lab Number: L2054966
Report Date: 12/23/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 12/14/20 12:41
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1445847-8					
Methylene chloride	ND		ug/l	1.0	--
1,1-Dichloroethane	ND		ug/l	1.5	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.5	--
Tetrachloroethene	ND		ug/l	1.0	--
1,2-Dichloroethane	ND		ug/l	1.5	--
1,1,1-Trichloroethane	ND		ug/l	2.0	--
Benzene	ND		ug/l	1.0	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Vinyl chloride	ND		ug/l	1.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--
1,2-Dichlorobenzene	ND		ug/l	5.0	--
1,3-Dichlorobenzene	ND		ug/l	5.0	--
1,4-Dichlorobenzene	ND		ug/l	5.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-xylene	ND		ug/l	1.0	--
Xylenes, Total	ND		ug/l	1.0	--
Acetone	ND		ug/l	10	--
Methyl tert butyl ether	ND		ug/l	10	--
Tert-Butyl Alcohol	ND		ug/l	100	--
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 12/14/20 12:41
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1445847-8					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	101		60-140
Fluorobenzene	78		60-140
4-Bromofluorobenzene	90		60-140

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1-SIM
Analytical Date: 12/14/20 12:41
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG1445898-4					
1,4-Dioxane	ND		ug/l	50	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	84		60-140
4-Bromofluorobenzene	110		60-140

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 12/16/20 16:38
Analyst: GT

Extraction Method: EPA 504.1
Extraction Date: 12/16/20 15:30

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westborough Lab for sample(s): 01-02 Batch: WG1446063-1						
1,2-Dibromoethane	ND		ug/l	0.010	--	B
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	--	B
1,2,3-Trichloropropane	ND		ug/l	0.030	--	B

Lab Control Sample Analysis
Batch Quality Control

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1445847-7								
Methylene chloride	105		-		60-140	-		28
1,1-Dichloroethane	105		-		50-150	-		49
Carbon tetrachloride	95		-		70-130	-		41
1,1,2-Trichloroethane	100		-		70-130	-		45
Tetrachloroethene	100		-		70-130	-		39
1,2-Dichloroethane	90		-		70-130	-		49
1,1,1-Trichloroethane	110		-		70-130	-		36
Benzene	90		-		65-135	-		61
Toluene	100		-		70-130	-		41
Ethylbenzene	90		-		60-140	-		63
Vinyl chloride	110		-		5-195	-		66
1,1-Dichloroethene	95		-		50-150	-		32
cis-1,2-Dichloroethene	110		-		60-140	-		30
Trichloroethene	80		-		65-135	-		48
1,2-Dichlorobenzene	85		-		65-135	-		57
1,3-Dichlorobenzene	80		-		70-130	-		43
1,4-Dichlorobenzene	80		-		65-135	-		57
p/m-Xylene	92		-		60-140	-		30
o-xylene	85		-		60-140	-		30
Acetone	94		-		40-160	-		30
Methyl tert butyl ether	90		-		60-140	-		30
Tert-Butyl Alcohol	89		-		60-140	-		30
Tertiary-Amyl Methyl Ether	70		-		60-140	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: SMITH PLACE
Project Number: 143-52170
Lab Number: L2054966
Report Date: 12/23/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1445847-7								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	104				60-140
Fluorobenzene	82				60-140
4-Bromofluorobenzene	90				60-140

Lab Control Sample Analysis
Batch Quality Control

Project Name: SMITH PLACE
Project Number: 143-52170
Lab Number: L2054966
Report Date: 12/23/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1445898-3								
1,4-Dioxane	84		-		60-140	-		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Fluorobenzene	89				60-140
4-Bromofluorobenzene	109				60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab	Associated sample(s): 01-02	Batch:	WG1446063-2						
1,2-Dibromoethane	117		-		80-120	-			B
1,2-Dibromo-3-chloropropane	117		-		80-120	-			B
1,2,3-Trichloropropane	**121**	Q	-		80-120	-			B

Matrix Spike Analysis

Batch Quality Control

Project Name: SMITH PLACE
Project Number: 143-52170
Lab Number: L2054966
Report Date: 12/23/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab	Associated sample(s): 01-02	QC Batch ID: WG1446063-3	QC Sample: L2054919-02	Client ID: MS Sample									
1,2-Dibromoethane	ND	0.246	0.213	86		-	-		80-120	-		20	B
1,2-Dibromo-3-chloropropane	ND	0.246	0.254	103		-	-		80-120	-		20	B
1,2,3-Trichloropropane	ND	0.246	0.226	92		-	-		80-120	-		20	B

SEMIVOLATILES

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

SAMPLE RESULTS

Lab ID: L2054966-01
Client ID: TT-1
Sample Location: Not Specified

Date Collected: 12/09/20 11:00
Date Received: 12/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 12/17/20 15:58
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 12/16/20 00:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-ethylhexyl)phthalate	ND		ug/l	2.20	--	1
Butyl benzyl phthalate	ND		ug/l	5.00	--	1
Di-n-butylphthalate	ND		ug/l	5.00	--	1
Di-n-octylphthalate	ND		ug/l	5.00	--	1
Diethyl phthalate	ND		ug/l	5.00	--	1
Dimethyl phthalate	ND		ug/l	5.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	93		42-122
2-Fluorobiphenyl	90		46-121
4-Terphenyl-d14	111		47-138

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

SAMPLE RESULTS

Lab ID: L2054966-01
Client ID: TT-1
Sample Location: Not Specified

Date Collected: 12/09/20 11:00
Date Received: 12/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 12/17/20 15:27
Analyst: DV

Extraction Method: EPA 625.1
Extraction Date: 12/16/20 00:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	0.476		ug/l	0.100	--	1
Fluoranthene	ND		ug/l	0.100	--	1
Naphthalene	ND		ug/l	0.100	--	1
Benzo(a)anthracene	ND		ug/l	0.100	--	1
Benzo(a)pyrene	ND		ug/l	0.100	--	1
Benzo(b)fluoranthene	ND		ug/l	0.100	--	1
Benzo(k)fluoranthene	ND		ug/l	0.100	--	1
Chrysene	ND		ug/l	0.100	--	1
Acenaphthylene	ND		ug/l	0.100	--	1
Anthracene	ND		ug/l	0.100	--	1
Benzo(ghi)perylene	ND		ug/l	0.100	--	1
Fluorene	ND		ug/l	0.100	--	1
Phenanthrene	ND		ug/l	0.100	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.100	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.100	--	1
Pyrene	ND		ug/l	0.100	--	1
Pentachlorophenol	ND		ug/l	1.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	51		25-87
Phenol-d6	38		16-65
Nitrobenzene-d5	101		42-122
2-Fluorobiphenyl	75		46-121
2,4,6-Tribromophenol	92		45-128
4-Terphenyl-d14	89		47-138

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

SAMPLE RESULTS

Lab ID: L2054966-02
Client ID: TT-4
Sample Location: Not Specified

Date Collected: 12/09/20 12:00
Date Received: 12/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 12/17/20 17:16
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 12/16/20 00:17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-ethylhexyl)phthalate	4.19		ug/l	2.20	--	1
Butyl benzyl phthalate	ND		ug/l	5.00	--	1
Di-n-butylphthalate	ND		ug/l	5.00	--	1
Di-n-octylphthalate	ND		ug/l	5.00	--	1
Diethyl phthalate	ND		ug/l	5.00	--	1
Dimethyl phthalate	ND		ug/l	5.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	85		42-122
2-Fluorobiphenyl	84		46-121
4-Terphenyl-d14	92		47-138

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

SAMPLE RESULTS

Lab ID: L2054966-02
Client ID: TT-4
Sample Location: Not Specified

Date Collected: 12/09/20 12:00
Date Received: 12/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 12/17/20 15:43
Analyst: DV

Extraction Method: EPA 625.1
Extraction Date: 12/16/20 00:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	0.201		ug/l	0.100	--	1
Fluoranthene	ND		ug/l	0.100	--	1
Naphthalene	ND		ug/l	0.100	--	1
Benzo(a)anthracene	ND		ug/l	0.100	--	1
Benzo(a)pyrene	ND		ug/l	0.100	--	1
Benzo(b)fluoranthene	ND		ug/l	0.100	--	1
Benzo(k)fluoranthene	ND		ug/l	0.100	--	1
Chrysene	ND		ug/l	0.100	--	1
Acenaphthylene	ND		ug/l	0.100	--	1
Anthracene	ND		ug/l	0.100	--	1
Benzo(ghi)perylene	ND		ug/l	0.100	--	1
Fluorene	0.103		ug/l	0.100	--	1
Phenanthrene	ND		ug/l	0.100	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.100	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.100	--	1
Pyrene	0.102		ug/l	0.100	--	1
Pentachlorophenol	ND		ug/l	1.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		25-87
Phenol-d6	35		16-65
Nitrobenzene-d5	100		42-122
2-Fluorobiphenyl	74		46-121
2,4,6-Tribromophenol	84		45-128
4-Terphenyl-d14	81		47-138

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1-SIM
Analytical Date: 12/17/20 14:37
Analyst: DV

Extraction Method: EPA 625.1
Extraction Date: 12/16/20 00:21

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG1445607-1					
Acenaphthene	ND		ug/l	0.100	--
Fluoranthene	ND		ug/l	0.100	--
Naphthalene	ND		ug/l	0.100	--
Benzo(a)anthracene	ND		ug/l	0.100	--
Benzo(a)pyrene	ND		ug/l	0.100	--
Benzo(b)fluoranthene	ND		ug/l	0.100	--
Benzo(k)fluoranthene	ND		ug/l	0.100	--
Chrysene	ND		ug/l	0.100	--
Acenaphthylene	ND		ug/l	0.100	--
Anthracene	ND		ug/l	0.100	--
Benzo(ghi)perylene	ND		ug/l	0.100	--
Fluorene	ND		ug/l	0.100	--
Phenanthrene	ND		ug/l	0.100	--
Dibenzo(a,h)anthracene	ND		ug/l	0.100	--
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.100	--
Pyrene	ND		ug/l	0.100	--
Pentachlorophenol	ND		ug/l	1.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		25-87
Phenol-d6	28		16-65
Nitrobenzene-d5	92		42-122
2-Fluorobiphenyl	77		46-121
2,4,6-Tribromophenol	63		45-128
4-Terphenyl-d14	82		47-138

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1
Analytical Date: 12/17/20 13:21
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 12/16/20 00:17

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1446720-1					
Bis(2-ethylhexyl)phthalate	ND		ug/l	2.20	--
Butyl benzyl phthalate	ND		ug/l	5.00	--
Di-n-butylphthalate	ND		ug/l	5.00	--
Di-n-octylphthalate	ND		ug/l	5.00	--
Diethyl phthalate	ND		ug/l	5.00	--
Dimethyl phthalate	ND		ug/l	5.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	78		42-122
2-Fluorobiphenyl	77		46-121
4-Terphenyl-d14	79		47-138

Lab Control Sample Analysis
Batch Quality Control

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1445607-3								
Acenaphthene	75		-		60-132	-		30
Fluoranthene	84		-		43-121	-		30
Naphthalene	76		-		36-120	-		30
Benzo(a)anthracene	82		-		42-133	-		30
Benzo(a)pyrene	84		-		32-148	-		30
Benzo(b)fluoranthene	85		-		42-140	-		30
Benzo(k)fluoranthene	82		-		25-146	-		30
Chrysene	77		-		44-140	-		30
Acenaphthylene	84		-		54-126	-		30
Anthracene	90		-		43-120	-		30
Benzo(ghi)perylene	87		-		1-195	-		30
Fluorene	79		-		70-120	-		30
Phenanthrene	78		-		65-120	-		30
Dibenzo(a,h)anthracene	89		-		1-200	-		30
Indeno(1,2,3-cd)pyrene	98		-		1-151	-		30
Pyrene	83		-		70-120	-		30
Pentachlorophenol	70		-		38-152	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: SMITH PLACE
Project Number: 143-52170
Lab Number: L2054966
Report Date: 12/23/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1445607-3

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	55				25-87
Phenol-d6	39				16-65
Nitrobenzene-d5	109				42-122
2-Fluorobiphenyl	86				46-121
2,4,6-Tribromophenol	85				45-128
4-Terphenyl-d14	89				47-138

Lab Control Sample Analysis
Batch Quality Control

Project Name: SMITH PLACE
Project Number: 143-52170
Lab Number: L2054966
Report Date: 12/23/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1446720-2								
Bis(2-ethylhexyl)phthalate	100		-		29-137	-		82
Butyl benzyl phthalate	101		-		1-140	-		60
Di-n-butylphthalate	94		-		8-120	-		47
Di-n-octylphthalate	108		-		19-132	-		69
Diethyl phthalate	83		-		1-120	-		100
Dimethyl phthalate	83		-		1-120	-		183

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	88				42-122
2-Fluorobiphenyl	81				46-121
4-Terphenyl-d14	78				47-138

PCBS

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

SAMPLE RESULTS

Lab ID: L2054966-01
Client ID: TT-1
Sample Location: Not Specified

Date Collected: 12/09/20 11:00
Date Received: 12/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 12/20/20 12:07
Analyst: AWS

Extraction Method: EPA 608.3
Extraction Date: 12/19/20 16:44
Cleanup Method: EPA 3665A
Cleanup Date: 12/19/20
Cleanup Method: EPA 3660B
Cleanup Date: 12/20/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.250	--	1	A
Aroclor 1221	ND		ug/l	0.250	--	1	A
Aroclor 1232	ND		ug/l	0.250	--	1	A
Aroclor 1242	ND		ug/l	0.250	--	1	A
Aroclor 1248	ND		ug/l	0.250	--	1	A
Aroclor 1254	ND		ug/l	0.250	--	1	A
Aroclor 1260	ND		ug/l	0.200	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	89		37-123	B
Decachlorobiphenyl	82		38-114	B
2,4,5,6-Tetrachloro-m-xylene	79		37-123	A
Decachlorobiphenyl	66		38-114	A

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

SAMPLE RESULTS

Lab ID: L2054966-02
Client ID: TT-4
Sample Location: Not Specified

Date Collected: 12/09/20 12:00
Date Received: 12/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 12/20/20 12:15
Analyst: AWS

Extraction Method: EPA 608.3
Extraction Date: 12/19/20 16:44
Cleanup Method: EPA 3665A
Cleanup Date: 12/19/20
Cleanup Method: EPA 3660B
Cleanup Date: 12/20/20

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.250	--	1	A
Aroclor 1221	ND		ug/l	0.250	--	1	A
Aroclor 1232	ND		ug/l	0.250	--	1	A
Aroclor 1242	ND		ug/l	0.250	--	1	A
Aroclor 1248	ND		ug/l	0.250	--	1	A
Aroclor 1254	ND		ug/l	0.250	--	1	A
Aroclor 1260	ND		ug/l	0.200	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	83		37-123	B
Decachlorobiphenyl	76		38-114	B
2,4,5,6-Tetrachloro-m-xylene	73		37-123	A
Decachlorobiphenyl	62		38-114	A

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 127,608.3
Analytical Date: 12/20/20 10:09
Analyst: AWS

Extraction Method: EPA 608.3
Extraction Date: 12/19/20 16:44
Cleanup Method: EPA 3665A
Cleanup Date: 12/19/20
Cleanup Method: EPA 3660B
Cleanup Date: 12/20/20

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-02 Batch: WG1447218-1						
Aroclor 1016	ND		ug/l	0.250	--	A
Aroclor 1221	ND		ug/l	0.250	--	A
Aroclor 1232	ND		ug/l	0.250	--	A
Aroclor 1242	ND		ug/l	0.250	--	A
Aroclor 1248	ND		ug/l	0.250	--	A
Aroclor 1254	ND		ug/l	0.250	--	A
Aroclor 1260	ND		ug/l	0.200	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	87		37-123	B
Decachlorobiphenyl	88		38-114	B
2,4,5,6-Tetrachloro-m-xylene	79		37-123	A
Decachlorobiphenyl	75		38-114	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-02 Batch: WG1447218-2									
Aroclor 1016	91		-		50-140	-		36	A
Aroclor 1260	85		-		8-140	-		38	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	91				37-123	B
Decachlorobiphenyl	85				38-114	B
2,4,5,6-Tetrachloro-m-xylene	83				37-123	A
Decachlorobiphenyl	72				38-114	A

METALS

Project Name: SMITH PLACE
Project Number: 143-52170
Lab Number: L2054966
Report Date: 12/23/20

SAMPLE RESULTS

Lab ID: L2054966-01
Client ID: TT-1
Sample Location: Not Specified
Date Collected: 12/09/20 11:00
Date Received: 12/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.02000	--	5	12/19/20 12:00	12/22/20 10:53	EPA 3005A	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00500	--	5	12/19/20 12:00	12/22/20 10:53	EPA 3005A	3,200.8	AM
Cadmium, Total	0.00380		mg/l	0.00100	--	5	12/19/20 12:00	12/22/20 10:53	EPA 3005A	3,200.8	AM
Chromium, Total	ND		mg/l	0.00500	--	5	12/19/20 12:00	12/22/20 10:53	EPA 3005A	3,200.8	AM
Copper, Total	0.03527		mg/l	0.00500	--	5	12/19/20 12:00	12/22/20 10:53	EPA 3005A	3,200.8	AM
Iron, Total	2.11		mg/l	0.050	--	1	12/19/20 12:00	12/21/20 20:18	EPA 3005A	19,200.7	BV
Lead, Total	0.02765		mg/l	0.00500	--	5	12/19/20 12:00	12/22/20 10:53	EPA 3005A	3,200.8	AM
Mercury, Total	0.00042		mg/l	0.00020	--	1	12/19/20 12:35	12/20/20 11:46	EPA 245.1	3,245.1	EW
Nickel, Total	0.01773		mg/l	0.01000	--	5	12/19/20 12:00	12/22/20 10:53	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.02500	--	5	12/19/20 12:00	12/22/20 10:53	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00200	--	5	12/19/20 12:00	12/22/20 10:53	EPA 3005A	3,200.8	AM
Zinc, Total	1.822		mg/l	0.05000	--	5	12/19/20 12:00	12/22/20 10:53	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	639		mg/l	0.660	NA	1	12/19/20 12:00	12/21/20 20:18	EPA 3005A	19,200.7	BV
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		12/22/20 10:53	NA	107,-	

Project Name: SMITH PLACE
Project Number: 143-52170
Lab Number: L2054966
Report Date: 12/23/20

SAMPLE RESULTS

Lab ID: L2054966-02
Client ID: TT-4
Sample Location: Not Specified
Date Collected: 12/09/20 12:00
Date Received: 12/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	12/19/20 12:00	12/22/20 10:58	EPA 3005A	3,200.8	AM
Arsenic, Total	0.00382		mg/l	0.00100	--	1	12/19/20 12:00	12/22/20 10:58	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	12/19/20 12:00	12/22/20 10:58	EPA 3005A	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	12/19/20 12:00	12/22/20 10:58	EPA 3005A	3,200.8	AM
Copper, Total	0.00233		mg/l	0.00100	--	1	12/19/20 12:00	12/22/20 10:58	EPA 3005A	3,200.8	AM
Iron, Total	21.4		mg/l	0.050	--	1	12/19/20 12:00	12/21/20 20:22	EPA 3005A	19,200.7	BV
Lead, Total	0.01072		mg/l	0.00100	--	1	12/19/20 12:00	12/22/20 10:58	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	12/19/20 12:35	12/20/20 11:49	EPA 245.1	3,245.1	EW
Nickel, Total	ND		mg/l	0.00200	--	1	12/19/20 12:00	12/22/20 10:58	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	12/19/20 12:00	12/22/20 10:58	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	12/19/20 12:00	12/22/20 10:58	EPA 3005A	3,200.8	AM
Zinc, Total	0.01704		mg/l	0.01000	--	1	12/19/20 12:00	12/22/20 10:58	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	123		mg/l	0.660	NA	1	12/19/20 12:00	12/21/20 20:22	EPA 3005A	19,200.7	BV
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		12/22/20 10:58	NA	107,-	

Project Name: SMITH PLACE
Project Number: 143-52170
Lab Number: L2054966
Report Date: 12/23/20

SAMPLE RESULTS

Lab ID: L2054966-03
Client ID: SW-1
Sample Location: Not Specified
Sample Depth:
Matrix: Water

Date Collected: 12/09/20 13:00
Date Received: 12/09/20
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	12/19/20 12:00	12/22/20 11:02	EPA 3005A	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	12/19/20 12:00	12/22/20 11:02	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	12/19/20 12:00	12/22/20 11:02	EPA 3005A	3,200.8	AM
Chromium, Total	0.00133		mg/l	0.00100	--	1	12/19/20 12:00	12/22/20 11:02	EPA 3005A	3,200.8	AM
Copper, Total	0.00706		mg/l	0.00100	--	1	12/19/20 12:00	12/22/20 11:02	EPA 3005A	3,200.8	AM
Iron, Total	2.22		mg/l	0.050	--	1	12/19/20 12:00	12/21/20 20:45	EPA 3005A	19,200.7	BV
Lead, Total	0.00425		mg/l	0.00100	--	1	12/19/20 12:00	12/22/20 11:02	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	12/19/20 12:35	12/20/20 11:53	EPA 245.1	3,245.1	EW
Nickel, Total	0.00326		mg/l	0.00200	--	1	12/19/20 12:00	12/22/20 11:02	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	12/19/20 12:00	12/22/20 11:02	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	12/19/20 12:00	12/22/20 11:02	EPA 3005A	3,200.8	AM
Zinc, Total	0.04912		mg/l	0.01000	--	1	12/19/20 12:00	12/22/20 11:02	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	176		mg/l	0.660	NA	1	12/19/20 12:00	12/21/20 20:45	EPA 3005A	19,200.7	BV

Project Name: SMITH PLACE
Project Number: 143-52170
Lab Number: L2054966
Report Date: 12/23/20

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-03 Batch: WG1446811-1										
Iron, Total	ND		mg/l	0.050	--	1	12/19/20 12:00	12/21/20 19:50	19,200.7	BV

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab for sample(s): 01-03 Batch: WG1446811-1										
Hardness	ND		mg/l	0.660	NA	1	12/19/20 12:00	12/21/20 19:50	19,200.7	BV

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-03 Batch: WG1446844-1										
Mercury, Total	ND		mg/l	0.00020	--	1	12/19/20 12:35	12/20/20 11:29	3,245.1	EW

Prep Information

Digestion Method: EPA 245.1

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-03 Batch: WG1448110-1										
Antimony, Total	ND		mg/l	0.00400	--	1	12/19/20 12:00	12/22/20 11:30	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	12/19/20 12:00	12/22/20 11:30	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	12/19/20 12:00	12/22/20 11:30	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	12/19/20 12:00	12/22/20 11:30	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	12/19/20 12:00	12/22/20 11:30	3,200.8	AM

Project Name: SMITH PLACE
Project Number: 143-52170
Lab Number: L2054966
Report Date: 12/23/20

Method Blank Analysis
Batch Quality Control

Lead, Total	ND	mg/l	0.00100	--	1	12/19/20 12:00	12/22/20 11:30	3,200.8	AM
Nickel, Total	ND	mg/l	0.00200	--	1	12/19/20 12:00	12/22/20 11:30	3,200.8	AM
Selenium, Total	ND	mg/l	0.00500	--	1	12/19/20 12:00	12/22/20 11:30	3,200.8	AM
Silver, Total	ND	mg/l	0.00040	--	1	12/19/20 12:00	12/22/20 11:30	3,200.8	AM
Zinc, Total	ND	mg/l	0.01000	--	1	12/19/20 12:00	12/22/20 11:30	3,200.8	AM

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1446811-2								
Iron, Total	106		-		85-115	-		
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-03 Batch: WG1446811-2								
Hardness	103		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1446844-2								
Mercury, Total	114		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1448110-2								
Antimony, Total	101		-		85-115	-		
Arsenic, Total	102		-		85-115	-		
Cadmium, Total	106		-		85-115	-		
Chromium, Total	100		-		85-115	-		
Copper, Total	104		-		85-115	-		
Lead, Total	100		-		85-115	-		
Nickel, Total	98		-		85-115	-		
Selenium, Total	99		-		85-115	-		
Silver, Total	101		-		85-115	-		
Zinc, Total	109		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1446811-3 QC Sample: L2055701-01 Client ID: MS Sample												
Iron, Total	0.458	1	1.50	104		-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1446811-3 QC Sample: L2055701-01 Client ID: MS Sample												
Hardness	152	66.2	221	104		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1446844-3 QC Sample: L2055701-02 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00551	110		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1448110-3 QC Sample: L2055701-01 Client ID: MS Sample												
Antimony, Total	ND	0.5	0.5156	103		-	-		70-130	-		20
Arsenic, Total	ND	0.12	0.1229	102		-	-		70-130	-		20
Cadmium, Total	0.00029	0.051	0.05570	109		-	-		70-130	-		20
Chromium, Total	ND	0.2	0.1947	97		-	-		70-130	-		20
Copper, Total	0.00335	0.25	0.2614	103		-	-		70-130	-		20
Lead, Total	0.00656	0.51	0.5222	101		-	-		70-130	-		20
Nickel, Total	ND	0.5	0.4905	98		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1290	108		-	-		70-130	-		20
Silver, Total	ND	0.05	0.05107	102		-	-		70-130	-		20
Zinc, Total	0.01257	0.5	0.5512	108		-	-		70-130	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1446811-4 QC Sample: L2055701-01 Client ID: DUP Sample						
Iron, Total	0.458	0.504	mg/l	10		20
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1446844-4 QC Sample: L2055701-02 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1448110-4 QC Sample: L2055701-01 Client ID: DUP Sample						
Antimony, Total	ND	ND	mg/l	NC		20
Arsenic, Total	ND	ND	mg/l	NC		20
Cadmium, Total	0.00029	0.00029	mg/l	1		20
Chromium, Total	ND	ND	mg/l	NC		20
Copper, Total	0.00335	0.00400	mg/l	18		20
Lead, Total	0.00656	0.00680	mg/l	4		20
Nickel, Total	ND	0.00220	mg/l	NC		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	0.01257	0.01437	mg/l	13		20

INORGANICS
&
MISCELLANEOUS

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

SAMPLE RESULTS

Lab ID: L2054966-01
Client ID: TT-1
Sample Location: Not Specified

Sample Depth:
Matrix: Water

Date Collected: 12/09/20 11:00
Date Received: 12/09/20
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	9.9		mg/l	5.0	NA	1	-	12/15/20 15:45	121,2540D	AC
Cyanide, Total	ND		mg/l	0.005	--	1	12/21/20 12:00	12/21/20 20:34	121,4500CN-CE	JO
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	12/10/20 00:11	121,4500CL-D	AW
Nitrogen, Ammonia	2.56		mg/l	0.075	--	1	12/18/20 04:25	12/22/20 20:36	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.40	--	1.1	12/16/20 13:00	12/16/20 14:00	74,1664A	TL
Phenolics, Total	ND		mg/l	0.030	--	1	12/16/20 07:17	12/16/20 13:01	4,420.1	KP
Chromium, Hexavalent	ND		mg/l	0.010	--	1	12/10/20 09:48	12/10/20 10:30	1,7196A	KP
Anions by Ion Chromatography - Westborough Lab										
Chloride	1270		mg/l	50.0	--	100	-	12/15/20 22:22	44,300.0	SH

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

SAMPLE RESULTS

Lab ID: L2054966-02
Client ID: TT-4
Sample Location: Not Specified

Date Collected: 12/09/20 12:00
Date Received: 12/09/20
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	46.		mg/l	10	NA	2	-	12/15/20 15:45	121,2540D	AC
Cyanide, Total	ND		mg/l	0.005	--	1	12/21/20 12:00	12/21/20 19:58	121,4500CN-CE	JO
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	12/10/20 00:11	121,4500CL-D	AW
Nitrogen, Ammonia	1.84		mg/l	0.075	--	1	12/18/20 04:25	12/22/20 20:37	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.40	--	1.1	12/16/20 13:00	12/16/20 14:00	74,1664A	TL
Phenolics, Total	ND		mg/l	0.030	--	1	12/16/20 07:17	12/16/20 12:15	4,420.1	KP
Chromium, Hexavalent	ND		mg/l	0.010	--	1	12/10/20 09:48	12/10/20 10:31	1,7196A	KP
Anions by Ion Chromatography - Westborough Lab										
Chloride	129.		mg/l	5.00	--	10	-	12/15/20 22:37	44,300.0	SH

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

SAMPLE RESULTS

Lab ID: L2054966-03
Client ID: SW-1
Sample Location: Not Specified

Sample Depth:
Matrix: Water

Date Collected: 12/09/20 13:00
Date Received: 12/09/20
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Ammonia	0.828		mg/l	0.075	--	1	12/18/20 04:25	12/22/20 20:39	121,4500NH3-BH	AT

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1443135-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	12/10/20 00:11	121,4500CL-D	AW
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1443344-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	12/10/20 09:48	12/10/20 10:25	1,7196A	KP
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1445250-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	12/15/20 15:45	121,2540D	AC
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-02 Batch: WG1445616-1										
Chloride	ND		mg/l	0.500	--	1	-	12/15/20 16:39	44,300.0	SH
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1445716-1										
Phenolics, Total	ND		mg/l	0.030	--	1	12/16/20 07:17	12/16/20 12:12	4,420.1	KP
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1445827-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	12/16/20 13:00	12/16/20 14:00	74,1664A	TL
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1446441-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	12/18/20 04:25	12/22/20 20:33	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1447639-1										
Cyanide, Total	ND		mg/l	0.005	--	1	12/21/20 12:00	12/21/20 19:47	121,4500CN-CE	JO

Lab Control Sample Analysis
Batch Quality Control

Project Name: SMITH PLACE
Project Number: 143-52170
Lab Number: L2054966
Report Date: 12/23/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1443135-2								
Chlorine, Total Residual	104		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1443344-2								
Chromium, Hexavalent	104		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1445250-2								
Solids, Total Suspended	100		-		80-120	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 Batch: WG1445616-2								
Chloride	101		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1445716-2								
Phenolics, Total	101		-		70-130	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1445827-2								
TPH	72		-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1446441-2								
Nitrogen, Ammonia	97		-		80-120	-		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1447639-2					
Cyanide, Total	96	-	90-110	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1443135-4 QC Sample: L2054966-02 Client ID: TT-4												
Chlorine, Total Residual	ND	0.25	0.26	104		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1443344-4 QC Sample: L2054966-01 Client ID: TT-1												
Chromium, Hexavalent	ND	0.1	0.104	104		-	-		85-115	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1445616-3 QC Sample: L2054966-02 Client ID: TT-4												
Chloride	129	40	162	**83**	Q	-	-		90-110	-		18
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1445716-4 QC Sample: L2055518-02 Client ID: MS Sample												
Phenolics, Total	ND	0.4	0.40	99		-	-		70-130	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1445827-4 QC Sample: L2054966-02 Client ID: TT-4												
TPH	ND	21.5	11.2	**52**	Q	-	-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1446441-4 QC Sample: L2054966-02 Client ID: TT-4												
Nitrogen, Ammonia	1.84	4	5.53	92		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1447639-3 QC Sample: L2055242-01 Client ID: MS Sample												
Cyanide, Total	ND	0.2	0.187	94		-	-		90-110	-		30

Lab Duplicate Analysis
Batch Quality Control

Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1443135-3 QC Sample: L2054966-01 Client ID: TT-1						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1443344-3 QC Sample: L2054966-02 Client ID: TT-4						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1445250-3 QC Sample: L2054966-02 Client ID: TT-4						
Solids, Total Suspended	46	45	mg/l	2		29
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1445616-4 QC Sample: L2054966-02 Client ID: TT-4						
Chloride	129	129	mg/l	0		18
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1445716-3 QC Sample: L2055518-02 Client ID: DUP Sample						
Phenolics, Total	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1445827-3 QC Sample: L2054966-01 Client ID: TT-1						
TPH, SGT-HEM	ND	ND	mg/l	NC		34
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1446441-3 QC Sample: L2054966-02 Client ID: TT-4						
Nitrogen, Ammonia	1.84	1.94	mg/l	5		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1447639-4 QC Sample: L2055242-01 Client ID: DUP Sample						
Cyanide, Total	ND	0.030	mg/l	NC		30

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Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	*Custody Seal*
A	Absent
B	Absent

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2054966-01A	Vial Na2S2O3 preserved	A	NA		3.6	Y	Absent		624.1-SIM-RGP(7)
L2054966-01B	Vial Na2S2O3 preserved	A	NA		3.6	Y	Absent		624.1-SIM-RGP(7)
L2054966-01C	Vial Na2S2O3 preserved	A	NA		3.6	Y	Absent		624.1-SIM-RGP(7)
L2054966-01D	Vial Na2S2O3 preserved	A	NA		3.6	Y	Absent		624.1-RGP(7)
L2054966-01E	Vial Na2S2O3 preserved	A	NA		3.6	Y	Absent		624.1-RGP(7)
L2054966-01F	Vial Na2S2O3 preserved	A	NA		3.6	Y	Absent		624.1-RGP(7)
L2054966-01G	Vial Na2S2O3 preserved	A	NA		3.6	Y	Absent		504(14)
L2054966-01H	Vial Na2S2O3 preserved	A	NA		3.6	Y	Absent		504(14)
L2054966-01I	Vial unpreserved	A	NA		3.6	Y	Absent		SUB-ETHANOL(14)
L2054966-01J	Vial unpreserved	A	NA		3.6	Y	Absent		SUB-ETHANOL(14)
L2054966-01K	Vial unpreserved	A	NA		3.6	Y	Absent		SUB-ETHANOL(14)
L2054966-01L	Plastic 250ml NaOH preserved	A	>12	>12	3.6	Y	Absent		TCN-4500(14)
L2054966-01M	Plastic 250ml HNO3 preserved	A	<2	<2	3.6	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),HARDU(180),CU-2008T(180),FE-UI(180),AS-2008T(180),AG-2008T(180),SE-2008T(180),HG-U(28),PB-2008T(180),SB-2008T(180),CR-2008T(180)
L2054966-01N	Plastic 500ml H2SO4 preserved	A	<2	<2	3.6	Y	Absent		NH3-4500(28)
L2054966-01O	Plastic 950ml unpreserved	A	7	7	3.6	Y	Absent		CL-300(28),HEXCR-7196(1),TRC-4500(1)
L2054966-01P	Plastic 950ml unpreserved	A	7	7	3.6	Y	Absent		TSS-2540(7)
L2054966-01Q	Amber 950ml H2SO4 preserved	A	<2	<2	3.6	Y	Absent		TPHENOL-420(28)
L2054966-01R	Amber 1000ml Na2S2O3	A	7	7	3.6	Y	Absent		625.1-SIM-RGP(7)
L2054966-01S	Amber 1000ml Na2S2O3	A	7	7	3.6	Y	Absent		625.1-SIM-RGP(7)
L2054966-01T	Amber 1000ml Na2S2O3	A	7	7	3.6	Y	Absent		625.1-RGP(7)

*Values in parentheses indicate holding time in days

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Project Name: SMITH PLACE
Project Number: 143-52170

Lab Number: L2054966
Report Date: 12/23/20

Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2054966-01U	Amber 1000ml Na2S2O3	A	7	7	3.6	Y	Absent		625.1-RGP(7)
L2054966-01V	Amber 1000ml Na2S2O3	A	7	7	3.6	Y	Absent		PCB-608.3(365)
L2054966-01W	Amber 1000ml Na2S2O3	A	7	7	3.6	Y	Absent		PCB-608.3(365)
L2054966-01X	Amber 1000ml HCl preserved	A	NA		3.6	Y	Absent		TPH-1664(28)
L2054966-01Y	Amber 1000ml HCl preserved	A	NA		3.6	Y	Absent		TPH-1664(28)
L2054966-02A	Vial Na2S2O3 preserved	B	NA		4.3	Y	Absent		624.1-SIM-RGP(7)
L2054966-02B	Vial Na2S2O3 preserved	B	NA		4.3	Y	Absent		624.1-SIM-RGP(7)
L2054966-02C	Vial Na2S2O3 preserved	B	NA		4.3	Y	Absent		624.1-SIM-RGP(7)
L2054966-02D	Vial Na2S2O3 preserved	B	NA		4.3	Y	Absent		624.1-RGP(7)
L2054966-02E	Vial Na2S2O3 preserved	B	NA		4.3	Y	Absent		624.1-RGP(7)
L2054966-02F	Vial Na2S2O3 preserved	B	NA		4.3	Y	Absent		624.1-RGP(7)
L2054966-02G	Vial Na2S2O3 preserved	B	NA		4.3	Y	Absent		504(14)
L2054966-02H	Vial Na2S2O3 preserved	B	NA		4.3	Y	Absent		504(14)
L2054966-02I	Vial unpreserved	B	NA		4.3	Y	Absent		SUB-ETHANOL(14)
L2054966-02J	Vial unpreserved	B	NA		4.3	Y	Absent		SUB-ETHANOL(14)
L2054966-02K	Vial unpreserved	B	NA		4.3	Y	Absent		SUB-ETHANOL(14)
L2054966-02L	Plastic 250ml NaOH preserved	B	>12	>12	4.3	Y	Absent		TCN-4500(14)
L2054966-02M	Plastic 250ml HNO3 preserved	B	<2	<2	4.3	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),HARDU(180),AG-2008T(180),AS-2008T(180),HG-U(28),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L2054966-02N	Plastic 500ml H2SO4 preserved	B	<2	<2	4.3	Y	Absent		NH3-4500(28)
L2054966-02O	Plastic 950ml unpreserved	B	7	7	4.3	Y	Absent		CL-300(28),HEXCR-7196(1),TRC-4500(1)
L2054966-02P	Plastic 950ml unpreserved	B	7	7	4.3	Y	Absent		TSS-2540(7)
L2054966-02Q	Amber 950ml H2SO4 preserved	B	<2	<2	4.3	Y	Absent		TPHENOL-420(28)
L2054966-02R	Amber 1000ml Na2S2O3	B	7	7	4.3	Y	Absent		625.1-SIM-RGP(7)
L2054966-02S	Amber 1000ml Na2S2O3	B	7	7	4.3	Y	Absent		625.1-SIM-RGP(7)
L2054966-02T	Amber 1000ml Na2S2O3	B	7	7	4.3	Y	Absent		625.1-RGP(7)
L2054966-02U	Amber 1000ml Na2S2O3	B	7	7	4.3	Y	Absent		625.1-RGP(7)

*Values in parentheses indicate holding time in days

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Container Information

Container ID	*Container Type*	*Cooler*	*Initial pH*	*Final pH*	*Temp deg C*	*Pres*	*Seal*	*Frozen Date/Time*	*Analysis(*)*
L2054966-02V	Amber 1000ml Na2S2O3	B	7	7	4.3	Y	Absent		PCB-608.3(365)
L2054966-02W	Amber 1000ml Na2S2O3	B	7	7	4.3	Y	Absent		PCB-608.3(365)
L2054966-02X	Amber 1000ml HCl preserved	B	NA		4.3	Y	Absent		TPH-1664(28)
L2054966-02Y	Amber 1000ml HCl preserved	B	NA		4.3	Y	Absent		TPH-1664(28)
L2054966-03A	Plastic 250ml HNO3 preserved	B	<2	<2	4.3	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),HARDU(180),FE-UI(180),AG-2008T(180),SE-2008T(180),AS-2008T(180),HG-U(28),SB-2008T(180),CR-2008T(180),PB-2008T(180)
L2054966-03B	Plastic 500ml H2SO4 preserved	B	<2	<2	4.3	Y	Absent		NH3-4500(28)

*Values in parentheses indicate holding time in days

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GLOSSARY

Acronyms

DL - Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

EDL - Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).

EMPC - Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.

EPA - Environmental Protection Agency.

LCS - Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

LFB - Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.

LOD - Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

LOQ - Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)

MDL - Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

NC - Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

NP - Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.

NR - No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.

RL - Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.

RPD - Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.

SRM - Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.

STLP - Semi-dynamic Tank Leaching Procedure per EPA Method 1315.

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

TIC - Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

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Footnotes

1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

Terms

Analytical Method: Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1,8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

Difference: With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

Final pH: As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

Frozen Date/Time: With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

Initial pH: As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

PAH Total: With respect to Alkylated PAH analyses, the 'PAHs, Total' result is defined as the summation of results for all or a subset of the following compounds: Naphthalene, C1-C4 Naphthalenes, 2-Methylnaphthalene, 1-Methylnaphthalene, Biphenyl, Acenaphthylene, Acenaphthene, Fluorene, C1-C3 Fluorenes, Phenanthrene, C1-C4 Phenanthrenes/Anthracenes, Anthracene, Fluoranthene, Pyrene, C1-C4 Fluoranthenes/Pyrenes, Benz(a)anthracene, Chrysene, C1-C4 Chrysenes, Benzo(b)fluoranthene, Benzo(j)+(k)fluoranthene, Benzo(e)pyrene, Benzo(a)pyrene, Perylene, Indeno(1,2,3-cd)pyrene, Dibenz(ah)+(ac)anthracene, Benzo(g,h,i)perylene. If a 'Total' result is requested, the results of its individual components will also be reported.

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. In addition, the 'PFAS, Total (6)' result is defined as the summation of results at or above the RL for: PFHpA, PFHxS, PFOA, PFNA, PFDA and PFOS. (Note: 'PFAS, Total (6)' is applicable to MassDEP DW compliance analysis only.). If a 'Total' result is requested, the results of its individual components will also be reported.

The target compound Chlordane (CAS No. 57-74-9) is reported for GC ECD analyses. Per EPA,this compound "refers to a mixture of chlordane isomers, other chlorinated hydrocarbons and numerous other components." (Reference: USEPA Toxicological Review of Chlordane, In Support of Summary Information on the Integrated Risk Information System (IRIS), December 1997.)

Total: With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

Data Qualifiers

A - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.

B - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

C - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.

D - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.

E - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.

F - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.

G - The concentration may be biased high due to matrix interferences (i.e, co-elution) with non-target compound(s). The result should be considered estimated.

H - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.

I - The lower value for the two columns has been reported due to obvious interference.

J - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

M - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.

ND - Not detected at the reporting limit (RL) for the sample.

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

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Data Qualifiers

the identification is based on a mass spectral library search.

P - The RPD between the results for the two columns exceeds the method-specified criteria.

Q - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

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REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.

4 Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. Revised March 1983.

14 Methods for the Determination of Organic Compounds in Finished Drinking Water and Raw Source Water. EPA/600/4-88/039, Revised July 1991.

19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.

44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.

74 Method 1664,Revision A: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-98-002, February 1999.

107 Alpha Analytical - In-house calculation method.

121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

127 Method 608.3: Organochlorine Pesticides and PCBs by GC/HSD, EPA 821-R-16-009, December 2016.

128 Method 624.1: Purgeables by GC/MS, EPA 821-R-16-008, December 2016.

129 Method 625.1: Base/Neutrals and Acids by GC/MS, EPA 821-R-16-007, December 2016.

LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.

Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

Mansfield Facility
SM 2540D: TSS
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
EPA TO-12 Non-methane organics
EPA 3C Fixed gases
Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**
EPA 332: Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT,SM9222D**.

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522.

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb**,** As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.
EPA 245.1 Hg.
SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

Serial_No:12232012:29

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 12/9/20

ALPHA Job #: L2054966

8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

320 Forbes Blvd
Mansfield, MA 02048
Tel: 508-822-9300

Client Information

Client: Tetra Tech
Address: 100 Nickerson
Marlborough, MA
Phone:
Email: Ray.Johnson@terratech
Ian.Cannan@terraTech

Additional Project Information:

Project Information

Project Name: Smith Place
Project Location:
Project #: 143-52170
Project Manager: Johnson
ALPHA Quote #:

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved)
Date Due:

Report Information - Data Deliverables

☑ ADEx ☐ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☐ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

ANALYSIS

VOC: ☐ 8260 ☐ 624 ☐ 524.2
SVOC: ☐ ABN ☐ PAH
METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15
METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
EPH: ☐ Ranges & Targets ☐ Ranges Only
VPH: ☐ Ranges & Targets ☐ Ranges Only
☐ PCB ☐ PEST
TPH: ☐ Quant Only ☐ Fingerprint
MA NPDES RGP Package
Hardness
NPDES RGP Metals

SAMPLE INFO
Filtration
☐ Field
☐ Lab to do
Preservation
☐ Lab to do

TOTAL # BOTTLES

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Sample Comments
54966-01	TT-1	12/9/20	11:00	GW	M	
02	TT-4	↓	12:00	GW	↓	
03	SW-1	↓	13:00	SW	↓	

Container Type															
Preservative															

Container Type
P= Plastic
A= Amber glass
V= Vial
G= Glass
B= Bacteria cup
C= Cube
O= Other
E= Encore
D= BOD Bottle

Preservative
A= None
B= HCl
C= HNO_3
D= H_2SO_4
E= NaOH
F= MeOH
G= $NaHSO_4$
H= $Na_2S_2O_3$
I= Ascorbic Acid
J= NH_4Cl
K= Zn Acetate
O= Other

Relinquished By:	Date/Time	Received By:	Date/Time
	12/9/20 1445	C Gelreau	12/9/20 1445

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST (Continuation Sheet)

21. Generator ID Number: MAD985276518

22. Page: 2

23. Manifest Tracking Number: 015379679 FLE

24. Generator's Name: Alpha Analytical - Westborough
Eight Walkup Drive
Westborough, MA 01581

25. Transporter 3 Company Name

U.S. EPA ID Number

26. Transporter 4 Company Name

U.S. EPA ID Number

27a. HM	27b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	28. Containers No.	28. Containers Type	29. Total Quantity	30. Unit Wt./Vol.	31. Waste Codes		
X	5 UN3286, Waste Flammable liquid, toxic, corrosive, n.o.s. (Dichloromethane, Acetone) 3(6.1)(8), II RQ (D001,F002)	001	DF	00302	P	D001 F003	D002 F005	F002
X	6 UN1992, Waste Flammable liquids, toxic, n.o.s. (Acetone, Dichloromethane) 3(6.1), II RQ (D001,F002)	004	DF	01077	P	D001	F002	F003

32. Special Handling Instructions and Additional Information

5 - (1 X 30) 12609 6 - (4 X 30) 12624 7 - 8 - 9 - 10 - 11 - 12 - 13 - 14 -

GENERATOR

TRANSPORTER

33. Transporter 3 Acknowledgment of Receipt of Materials

Printed/Typed Name | Signature | Month | Day | Year

34. Transporter 4 Acknowledgment of Receipt of Materials

Printed/Typed Name | Signature | Month | Day | Year

DESIGNATED FACILITY

35. Discrepancy

36. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

EPA Form 8700-22A (Rev. 12-17) Previous editions are obsolete.

DESIGNATED FACILITY TO EPA's e-MANIFEST SYSTE

ALPHA ANALYTICAL
World Class Chemistry

Subcontract Chain of Custody

Tek Lab, Inc.
5445 Horsehoe Lake Road
Collinsville, IL 62234-7425

Alpha Job Number
L2054966

Client Information

Client: Alpha Analytical Labs
Address: Eight Walkup Drive
Westborough, MA 01581-1019

Phone: 508.439.5137
Email: nhunt@alphalab.com

Project Information

Project Location: MA
Project Manager: Nichole Hunt

Turnaround & Deliverables Information

Due Date: 12/23/20
Deliverables:

Regulatory Requirements/Report Limits

State/Federal Program:
Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L2054966

Report to include Method Blank, LCS/LCSD: YES

Additional Comments: Send all results/reports to subreports@alphalab.com Report Data to the MDL for Ethanol

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	TT-1	12-09-20 11:00	WATER	Ethanol by EPA 1671 Revision A	
	TT-4	12-09-20 12:00	WATER	Ethanol by EPA 1671 Revision A	

	Relinquished By:	Date/Time:	Received By:	Date/Time:
	C. Tebeau	12/10/20		
Form No: AL_subcoc				

Teklab, Inc.
Environmental Laboratory
http://www.teklabinc.com/

December 15, 2020

Nichole Hunt
Alpha Analytical
145 Flanders Road
Westborough, MA 01581
TEL: (508) 898-9220
FAX:

Illinois	100226
Kansas	E-10374
Louisiana	05002
Louisiana	05003
Oklahoma	9978

RE: L2054966 **WorkOrder:** 20120783

Dear Nichole Hunt:

TEKLAB, INC received 2 samples on 12/11/2020 10:10:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Elizabeth A. Hurley

Elizabeth A. Hurley
Project Manager
(618)344-1004 ex 33
ehurley@teklabinc.com

Teklab, Inc.
Environmental Laboratory

Report Contents

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 20120783
Client Project: L2054966
Report Date: 15-Dec-20

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Quality Control Results	9
Receiving Check List	10
Chain of Custody	Appended

Teklab, Inc. Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: Alpha Analytical **Work Order:** 20120783

Client Project: L2054966 **Report Date:** 15-Dec-20

Abbr	Definition
*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
NC	Data is not acceptable for compliance purposes
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Definitions

Client: Alpha Analytical

Work Order: 20120783

Client Project: L2054966

Report Date: 15-Dec-20

Qualifiers

- # - Unknown hydrocarbon
- B - Analyte detected in associated Method Blank
- C - RL shown is a Client Requested Quantitation Limit
- E - Value above quantitation range
- H - Holding times exceeded
- I - Associated internal standard was outside method criteria
- J - Analyte detected below quantitation limits
- M - Manual Integration used to determine area response
- ND - Not Detected at the Reporting Limit
- R - RPD outside accepted recovery limits
- S - Spike Recovery outside recovery limits
- T - TIC(Tentatively identified compound)
- X - Value exceeds Maximum Contaminant Level

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: Alpha Analytical
Client Project: L2054966

Work Order: 20120783
Report Date: 15-Dec-20

Cooler Receipt Temp: 2.4 °C

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Teklab, Inc. Environmental Laboratory

Accreditations

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 20120783
Client Project: L2054966
Report Date: 15-Dec-20

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2021	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2021	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2021	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2021	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2021	Collinsville
Arkansas	ADEQ	88-0966		3/14/2021	Collinsville
Illinois	IDPH	17584		5/31/2021	Collinsville
Kentucky	UST	0073		1/31/2021	Collinsville
Missouri	MDNR	00930		5/31/2021	Collinsville
Missouri	MDNR	930		1/31/2022	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 20120783
Client Project: L2054966
Report Date: 15-Dec-20
Lab ID: 20120783-001
Client Sample ID: TT-1
Matrix: AQUEOUS
Collection Date: 12/09/2020 11:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 600 1671A, PHARMACEUTICAL MANUFACTURING INDUSTRY NON-PURGEABLE VOLATILE ORGANICS								
Ethanol	*	20		**ND**	mg/L	1	12/11/2020 14:29	R285140

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 20120783
Client Project: L2054966
Report Date: 15-Dec-20
Lab ID: 20120783-002
Client Sample ID: TT-4
Matrix: AQUEOUS
Collection Date: 12/09/2020 12:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 600 1671A, PHARMACEUTICAL MANUFACTURING INDUSTRY NON-PURGEABLE VOLATILE ORGANICS								
Ethanol	*	20		**ND**	mg/L	1	12/11/2020 15:05	R285140

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Alpha Analytical
Client Project: L2054966

Work Order: 20120783
Report Date: 15-Dec-20

EPA 600 1671A, PHARMACEUTICAL MANUFACTURING INDUSTRY NON-PURGEABLE VOLATILE ORG

Batch R285140 **SampType:** MBLK Units **mg/L**
SampID: MBLK-121120

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		**ND**						12/11/202

Batch R285140 **SampType:** LCS Units **mg/L**
SampID: LCS-121120

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		**250**	250.0	0	100.7	70	132	12/11/202

Batch R285140 **SampType:** MS Units **mg/L**
SampID: 20120656-002AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		**260**	250.0	0	103.4	70	132	12/11/202

Batch R285140 **SampType:** MSD Units **mg/L** RPD Limit **30**
SampID: 20120656-002AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Ethanol	*	20		**260**	250.0	0	102.6	258.6	0.82	12/11/202

Teklab, Inc. Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: Alpha Analytical
Client Project: L2054966

Work Order: 20120783
Report Date: 15-Dec-20

Carrier: UPS

Completed by: Amanda R. Ham
On: 11-Dec-20

Received By: AMD

Reviewed by: Elizabeth A. Hurley
On: 11-Dec-20

Pages to follow: Chain of custody 1 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 2.4
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		

When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.

Water – at least one vial per sample has zero headspace?	Yes ☑	No ☐	No VOA vials ☐
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑

Any No responses must be detailed below or on the COC.

Serial_No:12232012:29

20120783

ALPHA ANALYTICAL
World Class Chemistry

Subcontract Chain of Custody

Tek Lab, Inc.
5445 Horsehoe Lake Road
Collinsville, IL 62234-7425

Alpha Job Number
L2054966

Client Information	Project Information	Regulatory Requirements/Report Limits
Client: Alpha Analytical Labs Address: Eight Walkup Drive Westborough, MA 01581-1019	Project Location: MA Project Manager: Nichole Hunt	State/Federal Program: Regulatory Criteria:
Phone: 508.439.5137 Email: nhunt@alphalab.com	**Turnaround & Deliverables Information** Due Date: 12/23/20 Deliverables:	

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L2054966 | Report to include Method Blank, LCS/LCSD: YES

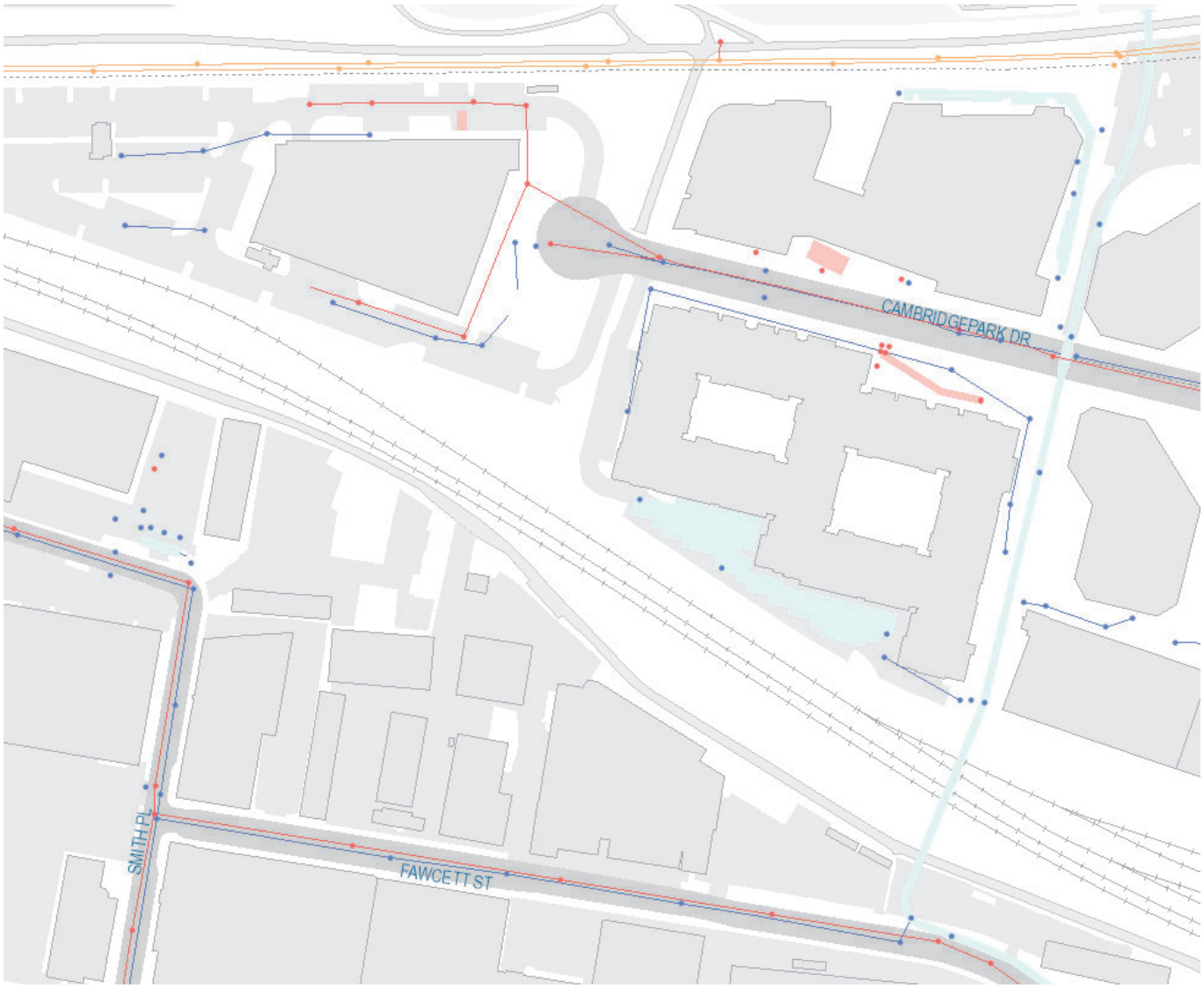
Additional Comments: Send all results/reports to subreports@alphalab.com Report Data to the MDL for Ethanol   1.4°C [illegible]

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
20120783-001	TT-1	12-09-20 11:00	WATER	Ethanol by EPA 1671 Revision A	
002	TT-4	12-09-20 12:00	WATER	Ethanol by EPA 1671 Revision A	

Relinquished By:	Date/Time:	Received By:	Date/Time:
C Jebreau	12/10/20	[illegible]	12/11/20 1010

Form No: AL_subcoc

Attachment 5
Stormwater Drainage System


CAMBRIDGEPARK DR
FAWCETT ST
SMITH PL

Attachment 6

Endangered Species Documentation

FEDERALLY LISTED ENDANGERED AND THREATENED SPECIES IN MASSACHUSETTS

COUNTY	SPECIES	FEDERAL STATUS	GENERAL LOCATION/HABITAT	TOWNS
Essex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Gloucester, Essex and Manchester
	Piping Plover	Threatened	Coastal Beaches	Gloucester, Essex, Ipswich, Rowley, Revere, Newbury, Newburyport and Salisbury
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Franklin	Northeastern bulrush	Endangered	Wetlands	Montague, Warwick
	Dwarf wedgemussel	Endangered	Mill River	Whately
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Hampshire	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Hadley
	Puritan tiger beetle	Threatened	Sandy beaches along the Connecticut River	Northampton and Hadley
	Dwarf wedgemussel	Endangered	Rivers and Streams.	Hatfield, Amherst and Northampton
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Hampden	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Southwick
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Middlesex	Small whorled Pogonia	Threatened	Forests with somewhat poorly drained soils and/or a seasonally high water table	Groton
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide
Nantucket	Piping Plover	Threatened	Coastal Beaches	Nantucket
	Roseate Tern	Endangered	Coastal beaches and the Atlantic Ocean	Nantucket
	American burying beetle	Endangered	Upland grassy meadows	Nantucket
	Red Knot[1]	Threatened	Coastal Beaches and Rocky Shores, sand and mud flats	Coastal Towns
	Northern Long-eared Bat	Threatened Final 4(d) Rule	Winter- mines and caves, Summer – wide variety of forested habitats	Statewide

Updated 02/05/2016

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:
Consultation Code: 05E1NE00-2021-SLI-0807
Event Code: 05E1NE00-2021-E-02419
Project Name: 75 Smith Place

December 22, 2020

Subject: List of threatened and endangered species that may occur in your proposed project location, and/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: 05E1NE00-2021-SLI-0807

Event Code: 05E1NE00-2021-E-02419

Project Name: 75 Smith Place

Project Type: SPILL / RELEASE

Project Description: redevelopment

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.39284890532357N71.15096535583287W

Counties: Middlesex, MA

Endangered Species Act Species

There is a total of 0 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.

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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.

Critical habitats

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

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:
Consultation Code: 05E1NE00-2021-SLI-0811
Event Code: 05E1NE00-2021-E-02428
Project Name: Outfall D36OF0080

December 22, 2020

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

To Whom It May Concern:

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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.

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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:

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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.

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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: 05E1NE00-2021-SLI-0811

Event Code: 05E1NE00-2021-E-02428

Project Name: Outfall D36OF0080

Project Type: ** OTHER **

Project Description: discharge

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.39656103506066N71.14593391987901W

Counties: Middlesex, MA

Endangered Species Act Species

There is a total of 0 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.

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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.

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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.

Critical habitats

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

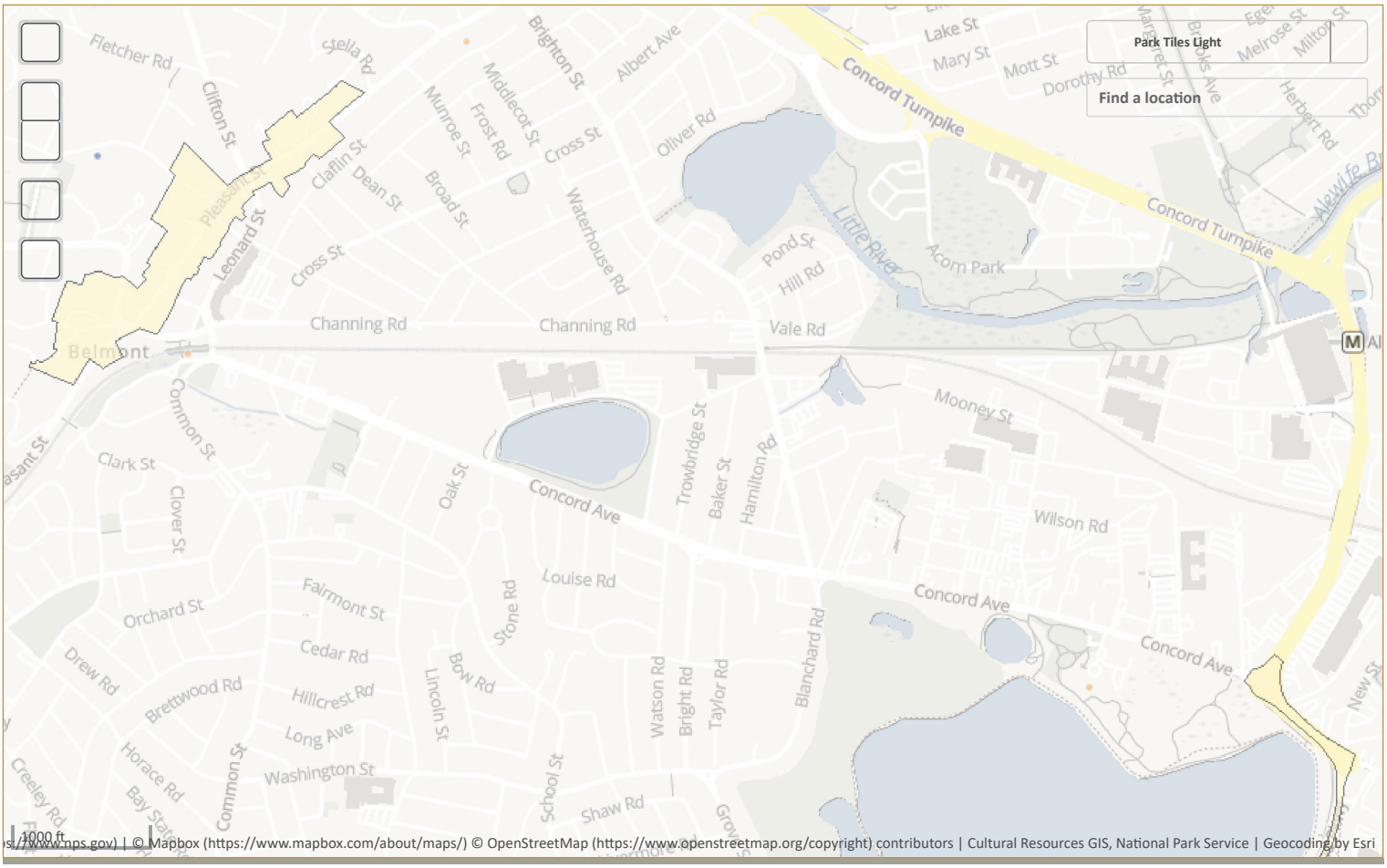
Attachment 7

Historic Preservation Documentation

National Register of Historic Places

National Park Service
U.S. Department of the Interior

Public, non-restricted data depicting National Register spatial data processed by the Cultural Resources GIS facility. ...



s://www.nps.gov) | © Mapbox (https://www.mapbox.com/about/maps/) © OpenStreetMap (https://www.openstreetmap.org/copyright) contributors | Cultural Resources GIS, National Park Service | Geocoding by Esri

Contact Us (https://www.nps.gov/contacts.htm)

Massachusetts Cultural Resource Information System
MACRIS

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Results

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Below are the results of your search, using the following search criteria:
Town(s): Cambridge
Street No: 75
Street Name: Smith Pl
Resource Type(s): Area, Building, Burial Ground, Object, Structure

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Below are the results of your search, using the following search criteria:
Town(s): Cambridge
Place: Fresh Pond
Resource Type(s): Area, Building, Burial Ground, Object, Structure

For more information about this page and how to use it, click here

Inv. No.	Property Name	Street	Town	Year	SR			
CAM.AL	Fresh Pond		Cambridge				INV	
CAM.AS	Metropolitan Park System of Greater Boston		Cambridge		SR		INV	NR DCS
CAM.AX	Fresh Pond Parkway		Cambridge		SR			NR
CAM.1365	Cambridge Home for the Aged and Infirm	650 Concord Ave	Cambridge	1928	SR		INV	NR
CAM.919	Fresh Pond Lane over B & M Railroad	Fresh Pond Ln	Cambridge	1926			INV	
CAM.9014	Fresh Pond Parkway	Fresh Pond Pkwy	Cambridge	1899	SR			
CAM.9015	Fresh Pond Parkway - Concord Avenue Rotary Islands	Fresh Pond Pkwy	Cambridge	1928	SR			
CAM.904	Huron Avenue Bridge over B & M Railroad	Huron Ave	Cambridge	1892			INV	

8 Properties Found

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Results

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Below are the results of your search, using the following search criteria:
Town(s): Cambridge
Place: Cambridge Highlands
Resource Type(s): Area, Building, Burial Ground, Object, Structure

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Below are the results of your search, using the following search criteria:
Town(s): Cambridge
Street Name: Smith Pl
Resource Type(s): Area, Building, Burial Ground, Object, Structure

For more information about this page and how to use it, click here

No Results Found.

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Attachment 8

References

1. United States Geological Survey, StreamStats Application, https://streamstats.usgs.gov/ss/. Accessed December 2020.
2. United States Department of the Interior, Fish and Wildlife Service, New England Ecological Services Field Office, Consultation Codes: 05E1NE00-2021-SLI-0807 and 05E1NE00-2021-SLI-0811, Event Codes: 05E1NE00-2021-E-02419 and 05E1NE00-2021-E-02428. December 22, 2020. https://ecos.fws.gov/ipac
3. United States Department of the Interior, National Park Service, National Register of Historic Places. https://www.nps.gov/maps. Accessed December 2020.
4. Massachusetts Historical Commission, Massachusetts Cultural Resource Information System, https://mhc-macris.net/. Accessed December 2020.