SANBORN HEAD

Building Trust. Engineering Success.

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

March 30, 2022
File No. 4954.00

Re: Notice of Intent for the Remediation General Permit
Temporary Construction Dewatering
103 Fourth Avenue
Waltham, Massachusetts

Dear Sir/Madam:

On behalf BP 103 Fourth Avenue LLC (BXP, Client), Sanborn, Head & Associates, Inc. (Sanborn Head) is submitting this Notice of Intent (NOI) to the United States Environmental Protection Agency (USEPA) for coverage under the National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP) MAG910000 for 103 Fourth Avenue in Waltham, Massachusetts (the Site). This letter and supporting documentation were prepared in accordance with the general requirements of the NPDES RGP and related guidance documentation provided by USEPA. Commodore Builders LLC is the construction manager for the project and will have responsibility for the subcontractors performing the dewatering activities at the Site. Subcontractors working for Commodore Builders LLC on the project will be required to meet the requirements of this NOI and the RGP. The completed NOI form is provided as Appendix A.

This NOI has been prepared for the management of groundwater that will be generated during dewatering activities associated with construction of a new below-grade parking structure. The work is anticipated to be completed within 12 months. The location of the Site and the discharge locations into Beaver Brook via private on-Site storm water catch basins are shown on Figure 1 and Figure 2.

The Site is approximately 6-acres and is occupied by a vacant, 2-story, approximately 62,000-square foot (sf) brick and steel building that will be demolished prior to construction of the parking garage, as well as approximately 75,000 sf of paved area. The 2-story building was constructed in 1961 to be used as office and laboratory space. Abutting properties include a multi-level office building and parking garage at 230 Third Avenue to the southwest, a multi-level office building at 300 Fifth Avenue to the east, and a multi-level office building at 400 Fifth Avenue to the southeast. Parking lots surround the Site to the north, east, and south.

The proposed development consists of the construction of a 4-level office building occupying a footprint of approximately 21,000 square feet (sf) attached to a 1-level manufacturing

building occupying a footprint of approximately 27,000 sf. A parking garage is proposed to be constructed to the north of the buildings.

Groundwater is anticipated to be encountered between approximately 5.2 and 6.5 feet below ground surface (bgs). Groundwater that requires dewatering and cannot be discharged back into the ground will be treated prior to discharge to the existing storm water system and associated private on-Site catch basins such that the discharged effluent meets the effluent limitations established by NPDES Part 2.1 and Appendix V of the RGP Application. Figure 3 includes a schematic of the proposed dewatering treatment system.

On January 27, 2022, Sanborn Head, the project's environmental consultant, collected three water samples to characterize the receiving and source waters in support of this NOI. The source water samples were collected from groundwater monitoring wells identified as SH-105 and SH-106 on Figure 2. The receiving water sample was collected from the surface water immediately downstream of the closest outlet, which empties into Kendall Brook. Kendall Brook ultimately empties into Beaver Brook. The water samples were collected using dedicated, disposable bailers and were submitted to Alpha Analytical Laboratories, Inc. (Alpha) of Westborough, MA for analysis for the 2017 NPDES suite of parameters.

The discharge point for the treatment system will be an on-Site private storm water catch basins, which discharges to a detention basin that empties into Kendell Brook. The intent of this permit application is to be able to discharge to the catch basin during construction dewatering to accommodate total flow rates of up to 500 gallons per minute (GPM).

Information regarding the receiving water was collected from the Massachusetts Year 2016 Integrated List of Waters which is included in Appendix B. Receiving water calculations are included in Appendix C. Analytical laboratory data for on-Site and surface water sampling is summarized in Tables 1 and 2, respectively, and analytical data reports are included in Appendix D. Concentrations of certain metals were detected in groundwater at concentrations above the respective NPDES RGP Effluent Limitations. To meet these standards, source water will undergo treatment that includes bag filtration prior to discharge.

A water treatment system schematic is provided as Figure 3. Source water will be pumped to a treatment system with a design flow rate of up to 500 gallons per minute (gpm); the average effluent flow of the system is estimated to be 350 gpm, and the maximum flow will not exceed 500 gpm. Source water will enter two weir tanks plumbed in parallel, at the head of the system. From the weir tanks, water will be pumped to a multi-bag filter skid (consisting of two multi-bag filter housings each containing six bag filters) and subsequently discharged to the approved discharge point. If required, contingency treatment items will include pH adjustment system (sulfuric acid) mixed inside both weir tanks, carbon treatment and ion exchange media.

Discharge from the water treatment system will pass through a flow/totalizer meter prior to discharge into a private catch basin that discharges to Kendall Brook, which then discharges to Beaver Brook.

The contingency pH adjustment system includes an automated feed system with a mix tank, chemical feed pumps and setpoint controls that maintain the pH to within discharge permit parameters. The maximum application concentration for sulfuric acid or sodium hydroxide would be 333 mg/L.

The addition of pH conditioners will 1) not add any pollutants in concentrations which exceed permit effluent limitations; 2) not result in the exceedance of any applicable water quality standard; and 3) not add any pollutants that would justify the application of permit conditions that are different from or absent in this permit. The addition of sulfuric acid or sodium hydroxide to control pH is a standard treatment for temporary construction dewatering and is not expected to exceed applicable permit limitations and water quality standards or alter conditions in the receiving water. No additional testing is considered necessary for use of this product or to demonstrate that use of this product will not adversely affect the receiving water.

According to the Information for Planning and Conservation (IPaC), available through the U.S. Fish and Wildlife Service (FWS) website, the proposed on-Site dewatering activities will not impact Areas of Critical Environmental Concern (ACEC) or Habitats of Rare Wetland Wildlife. A letter from the FWS is included in Appendix E. Based on the proposed activities a no-effects determination has been made.

A review of the National Register of Historic Places within Waltham was performed. Based on the review, the discharge and discharge-related activities do not have the potential to cause effects on historic properties. A list of the properties reviewed is included in Appendix F.

Thank you for your consideration of this NOI/Permit. Please feel free to contact us if you wish to discuss the information contained in this application, or if any additional information is needed.

Very truly yours,
SANBORN, HEAD & ASSOCIATES, INC.

Laura J. Garvey, P.E., LSP
Senior Project Manager

Kevin P. Stetson, P.E.
Senior Vice President

Encl. Table 1 – Summary of Influent Water Quality Data
Table 2 – Summary of Receiving Water Quality Data
Figure 1 – Locus Plan
Figure 2 – Exploration Location Plan
Figure 3 – Proposed Groundwater Treatment Schematic
Appendix A – Notice of Intent Form
Appendix B – Selected Massachusetts Category 5 Waters
Appendix C – Receiving Water Calculations

Appendix D – Analytical Data Reports
Appendix E – NOAA and US Fishery and Wildlife Services
Appendix F – National Register of Historic Places – Waltham, MA

cc: City of Waltham Board of Health
DEP Bureau of Water Resources

P:\4900s\4954.00\Source Files\NPDES RGP NOI\20220330 NPDES RGP NOI Cover Letter.docx

TABLES

Table 1
Summary of Influent Water Quality Data
103 4th Avenue
Waltham, Massachusetts

LOCATION	NPDES TBEL	Units	SH-105	SH-106
SAMPLING DATE			1/27/2022	1/27/2022
LAB SAMPLE ID			L2204656-01	L2204656-02
Anions by Ion Chromatography				
Chloride	Monitor Only	mg/l	**328**	**841**
General Chemistry				
Chromium, Trivalent	0.323	mg/l	<0.01	<0.01
Solids, Total Suspended	30	mg/l	**510**	**14**
Cyanide, Total	178	mg/l	<0.005	0.005
Chlorine, Total Residual	0.2	mg/l	<0.02	<0.02
Nitrogen, Ammonia	Monitor Only	mg/l	<0.75	0.082
TPH, SGT-HEM	5	mg/l	<4	<4
Phenolics, Total	NS	mg/l	<0.03	<0.03
Chromium, Hexavalent	0.323	mg/l	<0.01	<0.01
Hardness as CaCO3	NS	mg/l	45.4	79.9
pH (H)	NS	SU	6.8	6.3
Microextractables by GC				
1,2-Dibromoethane	NS	mg/l	<0.00001	<0.00001
1,2-Dibromo-3-chloropropane	NS	mg/l	<0.00001	<0.00001
1,2,3-Trichloropropane	NS	mg/l	<0.00003	<0.00003
Polychlorinated Biphenyls by GC				
Total PCBs	0.064	mg/l	BDL (<0.00025)	BDL (<0.00025)
Semivolatile Organics by GC/MS				
Total Phthalates	0.19	mg/l	BDL (<0.0022)	BDL (<0.0022)
Semivolatile Organics by GC/MS-SIM				
Total Group 1 PAHs	0.001	mg/l	BDL (<0.0001)	BDL (<0.0001)
Total Group 2 PAHs	0.1	mg/l	BDL (<0.0001)	BDL (<0.0001)
Total SVOCs	NS	mg/l	BDL (<0.001)	BDL (<0.001)
Total Metals				
Antimony, Total	0.206	mg/l	<0.004	<0.004
Arsenic, Total	0.104	mg/l	**0.00143**	<0.001
Cadmium, Total	0.0102	mg/l	<0.0002	**0.00032**
Chromium, Total	0.323	mg/l	**0.00465**	**0.00109**
Copper, Total	0.242	mg/l	**0.02147**	**0.00892**
Iron, Total	5	mg/l	**3.89**	**1.1**
Lead, Total	0.16	mg/l	**0.00397**	<0.001
Mercury, Total	0.00739	mg/l	<0.0002	<0.0002
Nickel, Total	1.45	mg/l	**0.008**	**0.00487**
Selenium, Total	0.2358	mg/l	<0.005	<0.005
Silver, Total	0.0351	mg/l	**0.00681**	**0.0031**
Zinc, Total	0.42	mg/l	**0.04327**	**0.02425**
Volatile Organics by GC/MS				
Total BTEX	0.1	mg/l	BDL (<0.001)	BDL (<0.001)
Volatile Organics by GC/MS-SIM				
1,4-Dioxane	NS	mg/l	<0.05	<0.05

Notes:
1. Samples were collected by Sanborn, Head & Associates, Inc. (Sanborn Head) on the indicated dates and were analyzed by Alpha Analytical Laboratories, Inc. of Westborough, MA.
2. Bolded values indicate detections above the laboratory reporting limits.
3. Abbreviations:
NPDES = National Pollutant Discharge Elimination System
TBEL = Technology based effluent limitation
WQBEL = Water quality based effluent limitation
MCP = Massachusetts Continentcy Plan
ug/L = micrograms per liter
mg/L = milligrams per liter
"<" indicates the analyte was not detected above the laboratory reporting limit shown
BDL = below detection limit
NS = No Standard

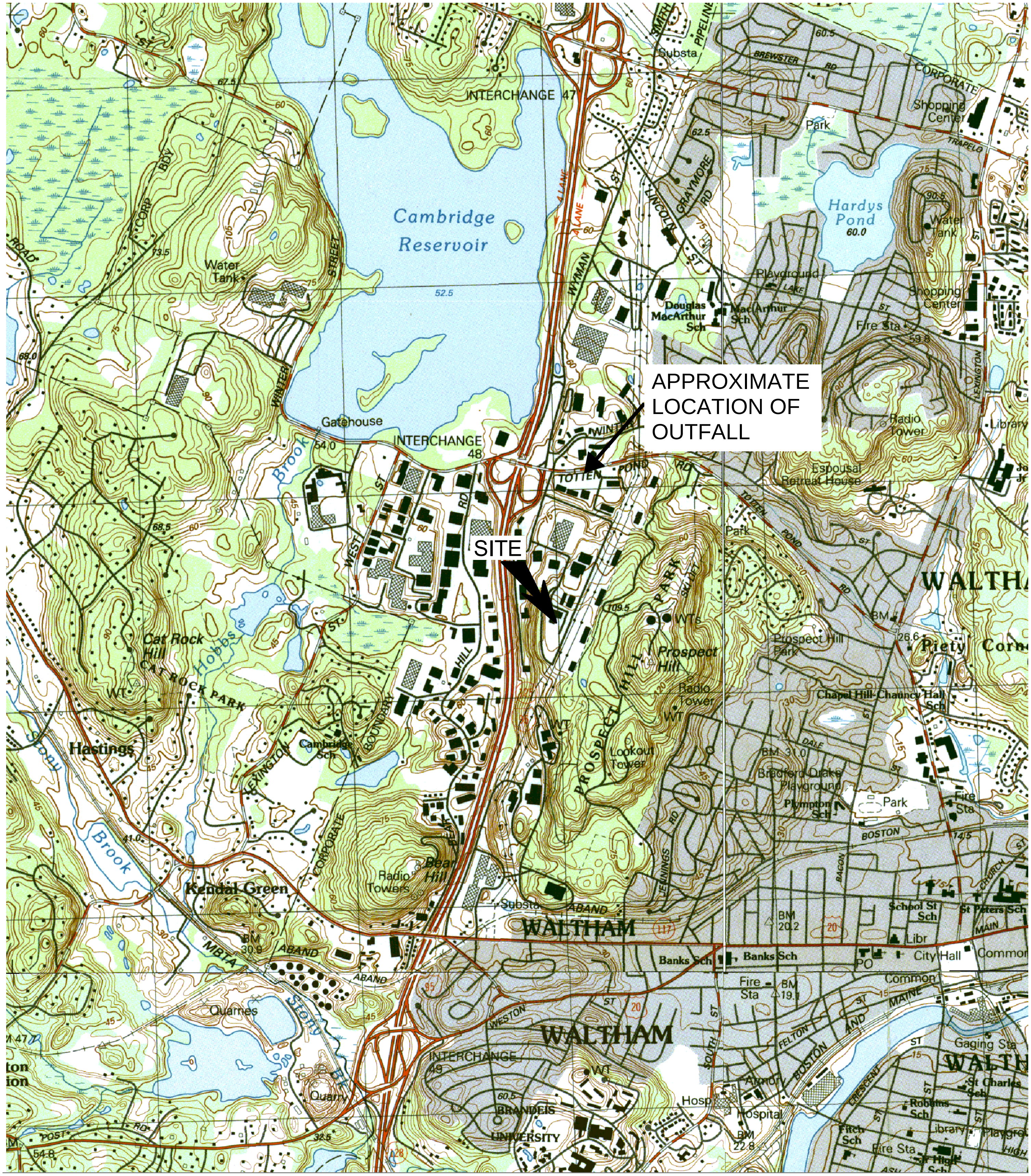
Table 2
Summary of Receiving Water Quality Data
103 4th Avenue
Waltham, Massachusetts

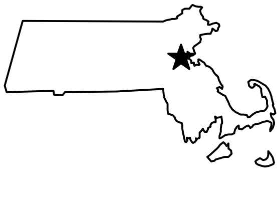
LOCATION	NPDES TBEL	NPDES WQBEL	Units	Surface
SAMPLING DATE				1/27/2022
LAB SAMPLE ID				L2204656-03
General Chemistry				
Nitrogen, Ammonia	Monitor Only	Monitor Only	mg/l	1.1
Hardness as CaCO3	NS	-	mg/l	291
pH (H)	NS	-	SU	7.2
Total Metals				
Antimony, Total	0.206	-	mg/l	<0.004
Arsenic, Total	0.104	-	mg/l	<0.001
Cadmium, Total	0.0102	-	mg/l	<0.0002
Chromium, Total	0.323	-	mg/l	<0.001
Copper, Total	0.242	-	mg/l	**0.00202**
Iron, Total	5	1	mg/l	**0.383**
Lead, Total	0.16	-	mg/l	<0.001
Mercury, Total	0.00739	-	mg/l	<0.0002
Nickel, Total	1.45	-	mg/l	<0.002
Selenium, Total	0.2358	-	mg/l	<0.005
Silver, Total	0.0351	-	mg/l	<0.0004
Zinc, Total	0.42	-	mg/l	0.0243

Notes:
1. Samples were collected by Sanborn, Head & Associates, Inc. (Sanborn Head) on the indicated dates and were analyzed by Alpha Analytical Laboratories, Inc. of Westborough, MA.
2. Bolded values indicate detections above the laboratory reporting limits.
3. Abbreviations:
NPDES = National Pollutant Discharge Elimination System
TBEL = Technology based effluent limitation
WQBEL = Water quality based effluent limitation
MCP = Massachusetts Continentcy Plan
mg/L = milligrams per liter
"<" indicates the analyte was not detected above the laboratory reporting limit shown

FIGURES

File:P:\4900s\4954.00\Graphics Files\CAD\GT-DEC21\Locus.dwg Plot Date: 1-7-22





N
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NOTES:
Base map was taken from the "Office of Geographic and Environmental Information (MassGIS), Commonwealth of Massachusetts Information Technology Division"
7.5 minute USGS Quadrangle Maps: Waltham, Massachusetts, REV: 1987

Drawn By: M.Revere
Designed By: L.Aborn
Reviewed By: L.Garvey
Project No: 4954.00
Date: March 2022

SCALE: 1:25,000

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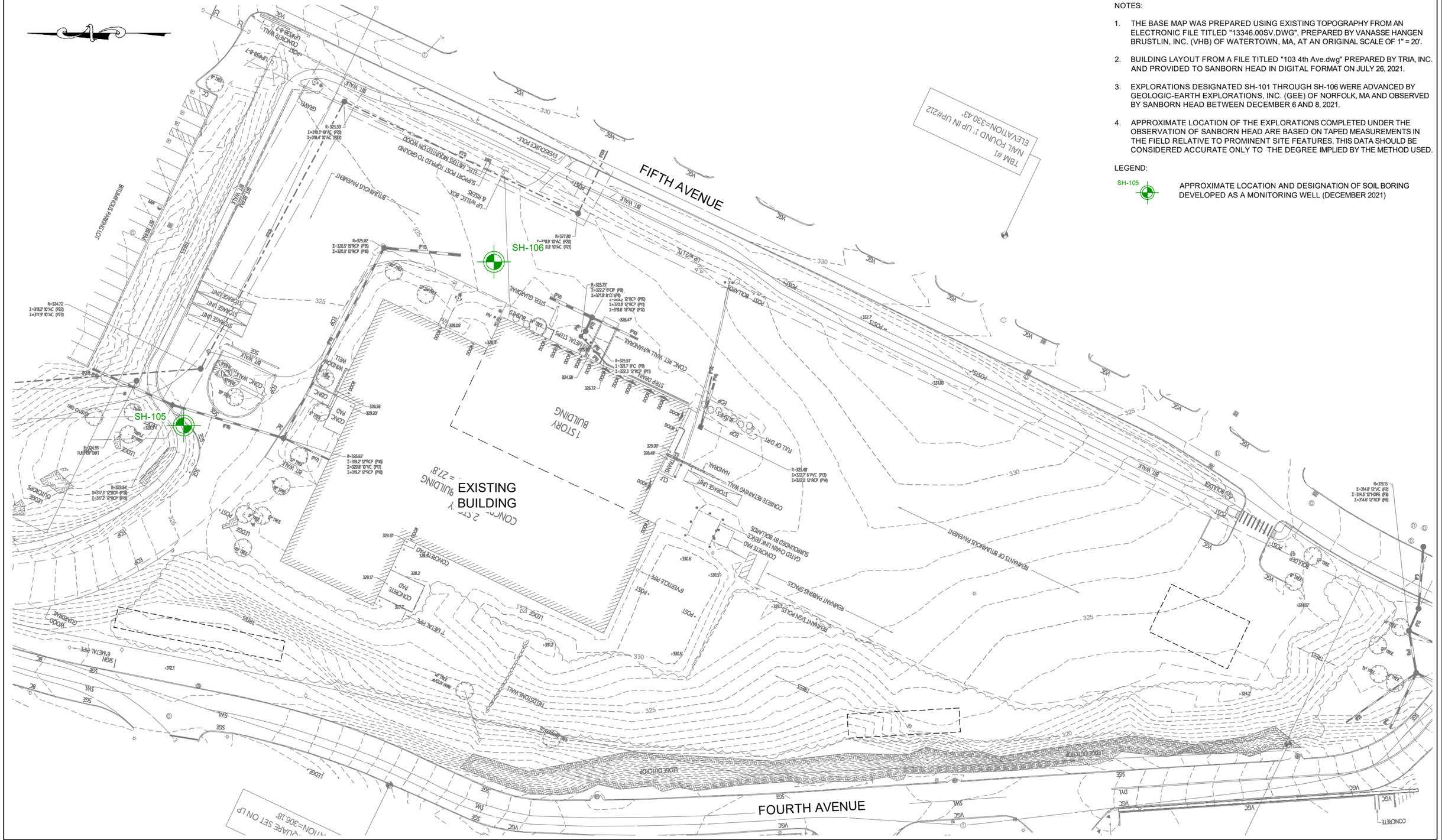
Figure 1

Locus Plan

NPDES Remediation General Permit

103 Forth Avenue
Waltham, Massachusetts



NOTES:

1. THE BASE MAP WAS PREPARED USING EXISTING TOPOGRAPHY FROM AN ELECTRONIC FILE TITLED "13346.00SV.DWG", PREPARED BY VANASSE HANGEN BRUSTLIN, INC. (VHB) OF WATERTOWN, MA, AT AN ORIGINAL SCALE OF 1" = 20'.
2. BUILDING LAYOUT FROM A FILE TITLED "103 4th Ave.dwg" PREPARED BY TRIA, INC. AND PROVIDED TO SANBORN HEAD IN DIGITAL FORMAT ON JULY 26, 2021.
3. EXPLORATIONS DESIGNATED SH-101 THROUGH SH-106 WERE ADVANCED BY GEOLOGIC-EARTH EXPLORATIONS, INC. (GEE) OF NORFOLK, MA AND OBSERVED BY SANBORN HEAD BETWEEN DECEMBER 6 AND 8, 2021.
4. APPROXIMATE LOCATION OF THE EXPLORATIONS COMPLETED UNDER THE OBSERVATION OF SANBORN HEAD ARE BASED ON TAPED MEASUREMENTS IN THE FIELD RELATIVE TO PROMINENT SITE FEATURES. THIS DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

LEGEND:

SH-105 — APPROXIMATE LOCATION AND DESIGNATION OF SOIL BORING DEVELOPED AS A MONITORING WELL (DECEMBER 2021)

SANBORN HEAD

GRAPHICAL SCALE
30' 15' 0' 30' 60'

NO.	DATE	DESCRIPTION	BY

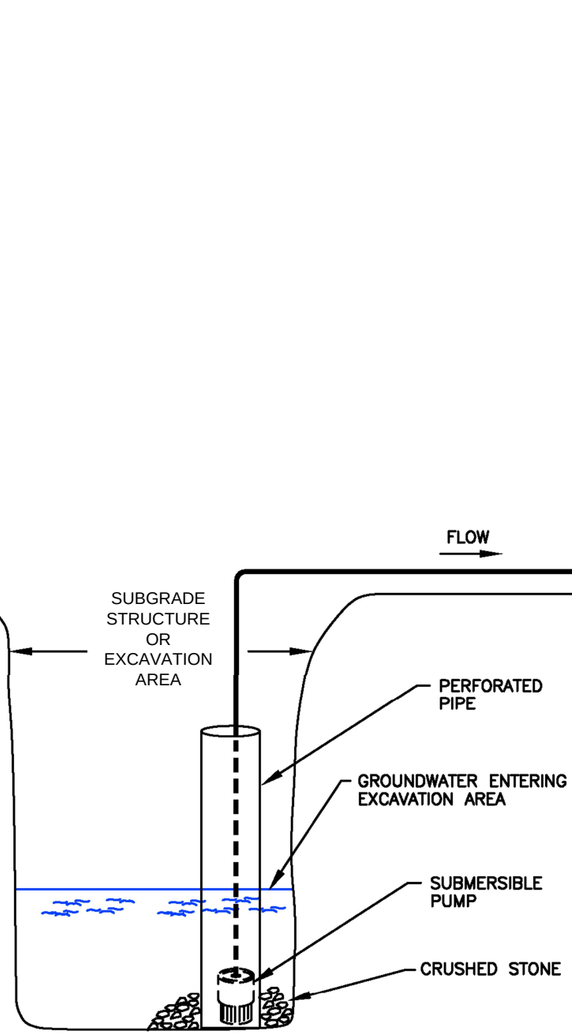
DRAWN BY: M.REVERE
DESIGNED BY: M. REISENAUER
REVIEWED BY: K. STETSON
PROJECT MGR: L. GARVEY
PIC: K. STETSON
DATE: MARCH 2022

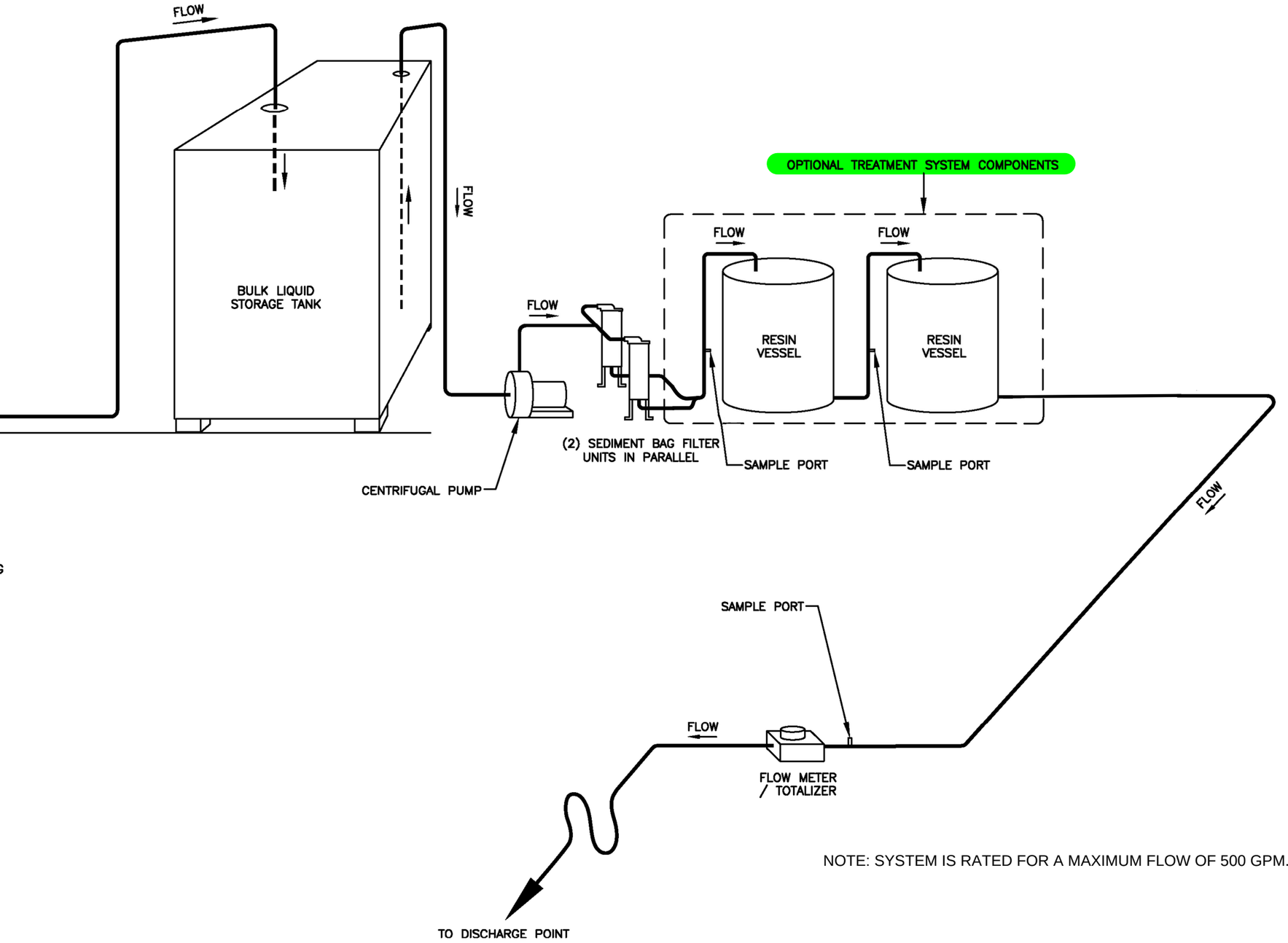
SOIL PRE-CHARACTERIZATION MEMORANDUM
103 FOURTH AVENUE
WALTHAM, MASSACHUSETTS

PROJECT NUMBER: 4954.00

EXPLORATION LOCATION PLAN

SHEET NUMBER: 2





NOTE: SYSTEM IS RATED FOR A MAXIMUM FLOW OF 500 GPM.

SANBORN HEAD

GRAPHICAL SCALE
20' 10' 0' 20' 40'

NO.	DATE	DESCRIPTION	BY

DRAWN BY: L. ABORN
DESIGNED BY: L. ABORN
REVIEWED BY: L. GARVEY
PROJECT MGR: L. GARVEY
PIC: K. STETSON
DATE: MARCH 2022

NPDES REMEDIATION GENERAL PERMIT
103 FOURTH AVE
WALTHAM, MASSACHUSETTS

PROJECT NUMBER: 4954.00

PROPOSED GROUNDWATER TREATMENT SCHEMATIC

SHEET NUMBER: 3

APPENDIX A

NOTICE OF INTENT FORM

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

A. General site information:

<table>
<tr><td rowspan="2">1. Name of site:
103 Fourth Avenue</td><td colspan="3">Site address: 103
Street: Fourth Avenue</td></tr>
<tr><td>City: Waltham</td><td>State: MA</td><td>Zip: 02451</td></tr>
<tr><td rowspan="4">2. Site owner
BP 103 Fourth Avenue LLC

Owner is (check one): ☐ Federal ☐ State/Tribal ■ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: Katie Ownes</td></tr>
<tr><td colspan="2">Telephone: 617-236-2369</td><td>Email: kownes@bxp.com</td></tr>
<tr><td colspan="3">Mailing address: 800 Boylston Street, Suite 1900
Street:</td></tr>
<tr><td>City: Boston</td><td>State: MA</td><td>Zip: 02119</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
Commodore Builders LLC</td><td colspan="3">Contact Person: Michael P. Roche, General Counsel</td></tr>
<tr><td colspan="2">Telephone: 617-614-3500</td><td>Email: mroche@commodorebuilders.com</td></tr>
<tr><td colspan="3">Mailing address:
Street: 404 Wyman St, Suite 400</td></tr>
<tr><td>City: Waltham</td><td>State: MA</td><td>Zip: 02451</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):
☐ 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):
Beaver Brook via Unnamed Stream	MA-72-28	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. Refer to App B for Listed Impairments and TMDLs.

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.	NA - See App C
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 - See App C

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: April 30, 2021

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

C. Source water information:

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

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

2. Source water contaminants: Metals, TSS	
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): Unamed Wetland (drainage to Beaver Brook via Kendal Brook)	Outfall location(s): (Latitude, Longitude) Approximately 42.39647 Latitude, -71.25683 Longitude
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ■ Indirect discharge, if so, specify: Discharge through public/private storm water system ■ 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: Permission confirmed from owner of private system. 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): 4/15/2022 - 4/15/2023 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 See Figure 3	

<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-	75	82	82	Report mg/L	---
Chloride		✔	2	300.0	25000	841000	584500	Report µg/l	---
Total Residual Chlorine	✔		2	4500CL-D	20	ND	ND	0.2 mg/L	0.011 mg/L
Total Suspended Solids		✔	2	2540D	5000	510000	344666.67	30 mg/L	---
Antimony	✔		2	200.8	4.0	ND	ND	206 µg/L	
Arsenic		✔	2	200.8	1.0	1.43	1.43	104 µg/L	
Cadmium		✔	2	200.8	0.2	.32	.32	10.2 µg/L	
Chromium III	✔		2	200.8	1	ND	ND	323 µg/L	
Chromium VI	✔		2	7196A	1	ND	ND	323 µg/L	
Copper		✔	2	200.8	1.0	21.47	17.28	242 µg/L	
Iron		✔	2	19,200.7	50	3890	2960	5,000 µg/L	1000 ug/L
Lead		✔	2	200.8	1.0	3.97	3.97	160 µg/L	
Mercury	✔		2	245.1	0.2	ND	ND	0.739 µg/L	
Nickel		✔	2	200.8	2	8	6.957	1,450 µg/L	
Selenium	✔		2	200.8	5	ND	ND	235.8 µg/L	
Silver		✔	2	200.8	0.4	6.81	5.57	35.1 µg/L	
Zinc		✔	2	200.8	10	43.27	36.93	420 µg/L	
Cyanide		✔	2	4500CN-C	5	5	5	178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX	✔		2	multiple	NA	ND	ND	100 µg/L	---
Benzene	✔		2	624.1	1	ND	ND	5.0 µg/L	---
1,4 Dioxane	✔		2	624.1-SIM	5	ND	ND	200 µg/L	---
Acetone	✔		2	624.1	10	ND	ND	7.97 mg/L	---
Phenol	✔		2	4420.1	30	ND	ND	1,080 µg/L	

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✔		2	624.1	1	ND	ND	4.4 µg/L	
1,2 Dichlorobenzene	✔		2	624.1	5	ND	ND	600 µg/L	---
1,3 Dichlorobenzene	✔		2	624.1	5	ND	ND	320 µg/L	---
1,4 Dichlorobenzene	✔		2	624.1	5	ND	ND	5.0 µg/L	---
Total dichlorobenzene	✔		2	624.1	15	ND	ND	763 µg/L in NH	---
1,1 Dichloroethane	✔		2	624.1	1.5	ND	ND	70 µg/L	---
1,2 Dichloroethane	✔		2	624.1	1.5	ND	ND	5.0 µg/L	---
1,1 Dichloroethylene	✔		2	624.1	1	ND	ND	3.2 µg/L	---
Ethylene Dibromide	✔		2	504.1	0.01	ND	ND	0.05 µg/L	---
Methylene Chloride	✔		2	624.1	1	ND	ND	4.6 µg/L	---
1,1,1 Trichloroethane	✔		2	624.1	2	ND	ND	200 µg/L	---
1,1,2 Trichloroethane	✔		2	624.1	1.5	ND	ND	5.0 µg/L	---
Trichloroethylene	✔		2	624.1	1	ND	ND	5.0 µg/L	---
Tetrachloroethylene	✔		2	624.1	1	ND	ND	5.0 µg/L	
cis-1,2 Dichloroethylene	✔		2	624.1	1	ND	ND	70 µg/L	---
Vinyl Chloride	✔		2	624.1	1	ND	ND	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✔		2	625.1	27.2	ND	ND	190 µg/L	----
Diethylhexyl phthalate	✔		2	625.1	5	ND	ND	101 µg/L	
Total Group I PAHs	✔		2	625.1	0.7	ND	ND	1.0 µg/L	---
Benzo(a)anthracene	✔		2	625.1	0.1	ND	ND	As Total PAHs	
Benzo(a)pyrene	✔		2	625.1	0.1	ND	ND		
Benzo(b)fluoranthene	✔		2	625.1	0.1	ND	ND		
Benzo(k)fluoranthene	✔		2	625.1	0.1	ND	ND		
Chrysene	✔		2	625.1	0.1	ND	ND		
Dibenzo(a,h)anthracene	✔		2	625.1	0.1	ND	ND		
Indeno(1,2,3-cd)pyrene	✔		2	625.1	0.1	ND	ND		

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	0.8	ND	ND	100 µg/L	---
Naphthalene	✔		2	625.1	0.1	ND	ND	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✔		2	608.3	0.25	ND	ND	0.000064 µg/L	---
Pentachlorophenol	✔		2	625.1	1	ND	ND	1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons	✔		2	1664B	4,000	ND	ND	5.0 mg/L	---
Ethanol	✔		2	1671A	20	ND	ND	Report mg/L	---
Methyl-tert-Butyl Ether	✔		2	624.1	10	ND	ND	70 µg/L	
tert-Butyl Alcohol	✔		2	624.1	100	ND	ND	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✔		2	624.1	20	ND	ND	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	4500H+B	NA	6.8	6.63		
Hardness		✔	2	3005A	660	79900	56900		
Total Chromium		✔	2	200.8	1	4.65	3.46		

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:

pH adjustment may be used to meet effluent requirements

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

Water encountered during construction activities will be pumped into a treatment system prior to discharge into existing catch basin. The first element of the treatment system will be a fractionalization tank where solids will settle out. The water will then pass through the following as necessary: a bag filter and two cation resin vessels plumbed in series. The effluent will be discharged to the existing catch basin.

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: cation resin vessel and/or ion exchange if needed

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:	500
Provide the proposed maximum effluent flow in gpm.	500
Provide the average effluent flow in gpm.	350
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	

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

F. Chemical and additive information

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

☐ Algaecides/biocides ☐ Antifoams ☐ Coagulants ☐ Corrosion/scale inhibitors ☐ Disinfectants ☐ Flocculants ☐ Neutralizing agents ☐ Oxidants ☐ Oxygen ☐ scavengers ■ pH conditioners ☐ Bioremedial agents, including microbes ☐ Chlorine or chemicals containing chlorine ☐ Other; if so, specify:
None anticipated

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

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

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

G. Endangered Species Act eligibility determination

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

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

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

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

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

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

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

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. See Appendix F

☐ **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

See Appendix F

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.

Appendix B includes the Massachusetts Category 5 Waters Listings and Site Assessment Map
Appendix C includes receiving water calculations
Appendix D includes analytical laboratory data
Appendix E includes correspondence from US Fishery and Wildlife Service
Appendix F includes a list of Historic Places in Waltham.

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 BMPP meeting the requirements of this general permit will be developed and implemented upon initiation of discharge.	
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ■ No ☐
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐ NA ☐
Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.	Check one: Yes ■ No ☐ NA ☐
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Check one: Yes ☐ No ☐ NA ■
Signature: 	Date: 3/30/22
Print Name and Title: Michael P. Roche, Commodore Builders LLC, General Counsel	

APPENDIX B

SELECTED MASSACHUSETTS CATEGORY 5 WATERS

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.
Beaver Brook	MA72-28	Headwaters, perennial portion north of Route 2, Lexington to mouth at confluence with the Charles River, Waltham (one culverted portion approximately 2900 feet (0.55mile)).	5.50	Miles	(Flow Regime Modification*)	
					(Non-Native Aquatic Plants*)	
					(Other anthropogenic substrate alterations*)	
					Algae	40317
					Dissolved Oxygen	40317
					Escherichia Coli (E. Coli)	32379
					Organic Enrichment (Sewage) Biological Indicators	40317
					Phosphorus, Total	40317
					Sedimentation/Siltation	
Bulloughs Pond	MA72011	Newton.	7.00	Acres	Algae	
					Nutrient/Eutrophication Biological Indicators	
Cambridge Reservoir	MA72014	Waltham/Lincoln/Lexington.	531.00	Acres	Chloride	
Cambridge Reservoir, Upper Basin	MA72156	Lincoln/Lexington.	44.00	Acres	Aquatic Plants (Macrophytes)	
					Chloride	
					Turbidity	
Chandler Pond	MA72017	Boston.	11.00	Acres	Algae	
					Nutrient/Eutrophication Biological Indicators	
					Phosphorus, Total	
					Transparency / Clarity	
Charles River	MA72-03	From Milford WWTF discharge (NPDES: MA0100579), Hopedale to outlet Box Pond (formerly segment MA72008), Bellingham.	3.40	Miles	Algae	40317
					DDT in Fish Tissue	
					Dissolved Oxygen Supersaturation	40317
					Escherichia Coli (E. Coli)	32365
					Organic Enrichment (Sewage) Biological Indicators	40317
					Phosphorus, Total	40317
Charles River	MA72-04	From outlet Box Pond, Bellingham to inlet Populatic Pond, Norfolk/Medway (one culverted portion approximately 350 feet (0.07mile)).	11.50	Miles	(Flow Regime Modification*)	
					Chlordane in Fish Tissue	
					DDT in Fish Tissue	
					Escherichia Coli (E. Coli)	32366
					Fish Bioassessments	
					Mercury in Fish Tissue	

MassDEP - Bureau of Waste Site Cleanup

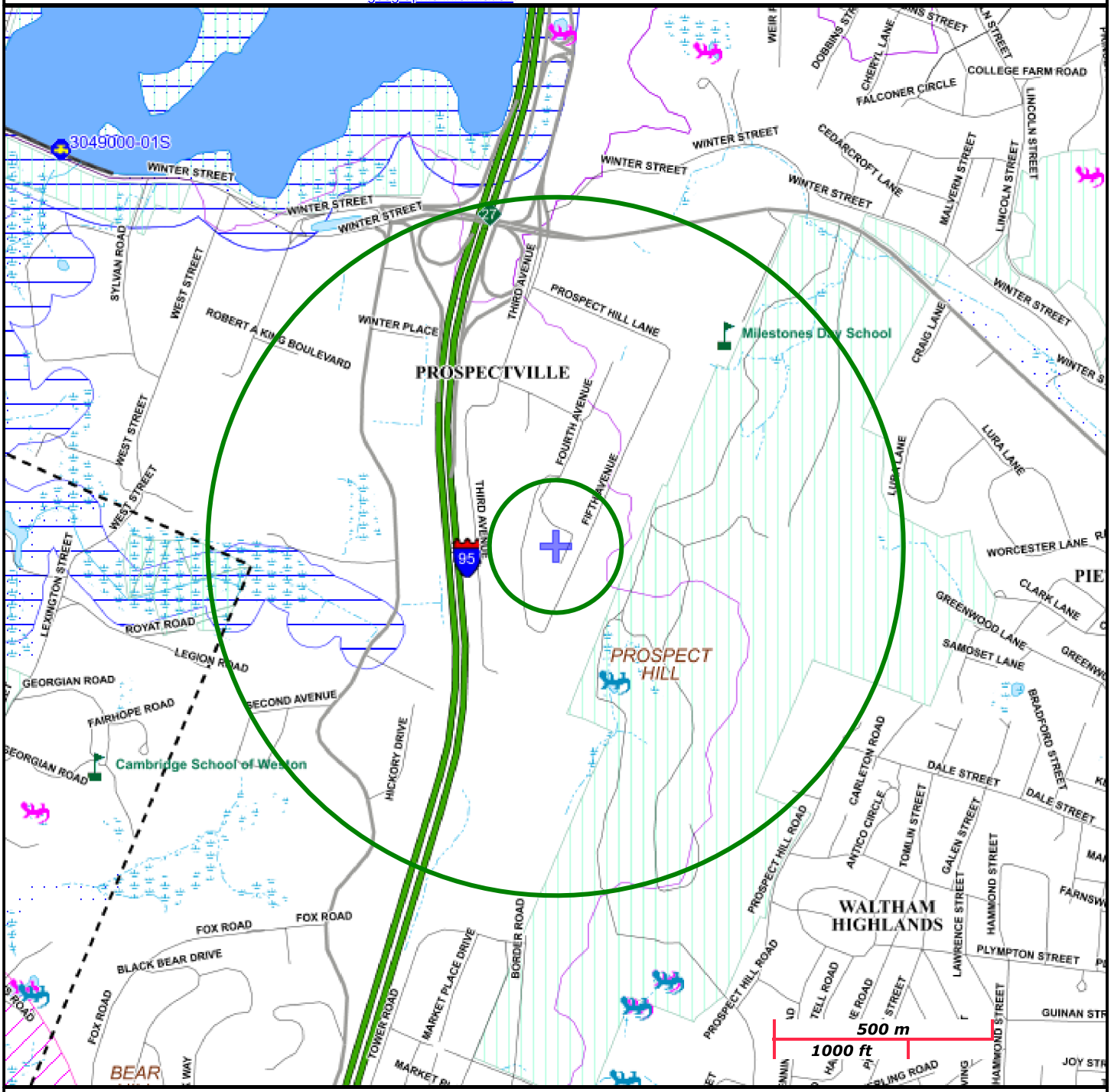
Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Sit Information:
103 FOURTH AVENUE
103 FOURTH AVENUE WALTHAM, MA

NAD83 UTM Meters:
4695608mN , 314036mE (Zone: 19)
February 28, 2022

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

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



Roads: Limited Access, Divided, Other Hwy, Major Road, Minor Road, Track, Trail

Boundaries: Town, County, DEP Region; Train; Powerline; Pipeline; Aqueduct

Basins: Major, PWS; Streams: Perennial, Intermittent, Man Made Shore, Dam

Aquifers: Medium Yield, High Yield, EPA Sole Source

Non Potential Drinking Water Source Area: Medium, High (Yield)

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

Est. Rare Wetland Wildlife Hab; Vernal Pool: Cert., Potential

Solid Waste Landfill; PWS: Com.GW,SW, Emerg., Non-Com.

APPENDIX C

RECEIVING WATER CALCULATIONS

103 Fourth Ave - NPDES RGP

Region ID: MA
Workspace ID: MA20220228182641408000
Clicked Point (Latitude, Longitude): 42.39648, -71.25715
Time: 2022-02-28 13:27:02 -0500

As part of the NPDES RGP NOI, dewatering for the 103 Fourth Ave Project located in Waltham, MA may require discharge to a storm drain which empties to a detention pond located at 20 City Point in Waltham, MA. The detention pond empties to Kendell Brook at an outlet located at approximately 42.39648 Latitude, -71.25715 Longitude.

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.0463	square miles
BSLDEM250	Mean basin slope computed from 1:250K DEM	3.417	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	-100000	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless
ELEV	Mean Basin Elevation	223	feet
LC06STOR	Percentage of water bodies and wetlands determined from the NLCD 2006	0	percent
PCTSNDGRV	Percentage of land surface underlain by sand and gravel deposits	0	percent
FOREST	Percentage of area covered by forest	17.42	percent

Peak-Flow Statistics Parameters [Peak Statewide 2016 5156]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0463	square miles	0.16	512
ELEV	Mean Basin Elevation	223	feet	80.6	1948
LC06STOR	Percent Storage from NLCD2006	0	percent	0	32.3

Peak-Flow Statistics Disclaimers [Peak Statewide 2016 5156]

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

Peak-Flow Statistics Flow Report [Peak Statewide 2016 5156]

Statistic	Value	Unit
50-percent AEP flood	4	ft^3/s
20-percent AEP flood	6.95	ft^3/s
10-percent AEP flood	9.37	ft^3/s
4-percent AEP flood	13	ft^3/s
2-percent AEP flood	16	ft^3/s
1-percent AEP flood	19.3	ft^3/s
0.5-percent AEP flood	23	ft^3/s
0.2-percent AEP flood	28.3	ft^3/s

Peak-Flow Statistics Citations

Zarriello, P.J.,2017, Magnitude of flood flows at selected annual exceedance probabilities for streams in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2016–5156, 99 p. (https://dx.doi.org/10.3133/sir20165156)

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0463	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	3.417	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	-100000	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

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

Statistic	Value	Unit

Low-Flow Statistics Citations

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0463	square miles	1.61	149
DRFTPERSTR	Stratified Drift per Stream Length	-100000	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1
BSLDEM250	Mean Basin Slope from 250K DEM	3.417	percent	0.32	24.6

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

Statistic	Value	Unit

Flow-Duration Statistics Citations

Probability Statistics Parameters [Perennial Flow Probability]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.0463	square miles	0.01	1.99
PCTSNDGRV	Percent Underlain By Sand And Gravel	0	percent	0	100
FOREST	Percent Forest	17.42	percent	0	100
MAREGION	Massachusetts Region	0	dimensionless	0	1

Probability Statistics Flow Report [Perennial Flow Probability]

PIl: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PC
Probability Stream Flowing Perennially	0.347	dim	71

Probability Statistics Citations

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

Application Version: 4.7.0
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2

Note that while this correspondence was related to a different nearby project, the discharge location and flow rates are the same.

From: Ruan, Xiaodan (DEP)
To: Americo Santamaria
Cc: Vakalopoulos, Catherine (DEP); Kevin Stetson; Corinne Disenhof; Anna Campbell
Subject: RE: 180 Third Ave, Waltham, MA
Date: Friday, April 30, 2021 4:43:28 PM

Hi America,

I looked at the GIS, google map, and the imagery layer in the StreamStats, but could not locate the Kendall brook. Is it primarily underground, or is it just a tiny brook?

The StreamStats cannot calculate a 7Q10 for the location with latitude/longitude of 42.39647, -71.25683; also, the report indicates the brook is intermittent; therefore, you were correct that the dilution factor would be 0/1, which is no dilution.

Here is the water quality information you will need to fill out the NOI:

> Waterbody and ID: Beaver River (MA72-28), within Charles River Watershed
> Classification: B
> Outstanding Resource Water?: no
> State's most recent Integrated List is located here: https://www.mass.gov/files/documents/2020/01/07/16ilwplist.pdf, search for "MA72-28" to see the causes of impairments.
> TMDLs: there are two approved TMDLs for pathogens and nutrients for this segment.

Since this is not a current MCP site, in addition to submitting the NOI to EPA, you need to apply with MassDEP and submit a $500 fee using the ePLACE. The instructions are located here: https://www.mass.gov/how-to/wm-15-npdes-general-permit-notice-of-intent. Technical assistance is available on the front page of the ePLACE application webpage.

Please let me know if you have any other questions.

Thanks,
Xiaodan

Xiaodan Ruan
Environmental Engineer
Massachusetts Department of Environmental Protection
One Winter Street, Boston, MA 02108
(617) 654-6517
xiaodan.ruan@mass.gov

From: Americo Santamaria <asantamaria@sanbornhead.com>
Sent: Thursday, April 29, 2021 12:55 PM
To: Ruan, Xiaodan (DEP) <xiaodan.ruan@mass.gov>

Cc: Vakalopoulos, Catherine (DEP) <catherine.vakalopoulos@mass.gov>; Kevin Stetson <kstetson@sanbornhead.com>; Corinne Disenhof <cdisenhof@sanbornhead.com>; Anna Campbell <acampbell@sanbornhead.com>
Subject: 180 Third Ave, Waltham, MA
Importance: High

Good afternoon, Xiaodan and Cathy,

Thank you again for your time yesterday on the call. I've been looking into the NOI and tracking down receiving water information.

As part of the NPDES RGP NOI, dewatering for the 180 Third Ave Project located in Waltham, MA may require discharge to a storm drain which empties to a detention pond located at 20 City Point in Waltham, MA. The detention pond empties to Kendall Brook at an outlet located at approximately 42.39647 Latitude, -71.25683 Longitude.

Our understanding is that Kendall Brook is not listed on the integrated list of waters and a 7Q10 is not directly available. I have provided the StreamStats report showing the basin and peak-flow statistics; however, at this time we are requesting a dilution factor of 1, which I believe does not require formal calculations to be checked. Kendall Brook eventually empties into Beaver Brook which empties into the Charles River. We intend to collect our receiving water sample from surface water immediately downstream of the closest outlet at the location provided above.

Please let me know at your earliest convenience if my assessment provided above is correct.

Thank you.

-Rico

Americo J. Santamaria
Project Manager

SANBORN | HEAD & ASSOCIATES, INC.
D 978.577.1040 | M 603.520.5106 | 1 Technology Park Drive, Westford, MA 01886

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APPENDIX D

ANALYTICAL DATA REPORTS

ANALYTICAL REPORT

Lab Number:	L2204656
Client:	Sanborn, Head & Associates, Inc. 1 Technology Park Drive Westford, MA 01886
ATTN:	Laura Garvey
Phone:	(978) 577-1031
Project Name:	103 4TH AVENUE
Project Number:	4954.00
Report Date:	02/11/22

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

Project Name: 103 4TH AVENUE
Project Number: 4954.00

Lab Number: L2204656
Report Date: 02/11/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2204656-01	SH-105	WATER	WALTHAM, MA	01/27/22 13:59	01/27/22
L2204656-02	SH-106	WATER	WALTHAM, MA	01/27/22 11:39	01/27/22
L2204656-03	SURFACE	WATER	WALTHAM, MA	01/27/22 15:30	01/27/22

Project Name:	103 4TH AVENUE	**Lab Number:**	L2204656
Project Number:	4954.00	**Report Date:**	02/11/22

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: 103 4TH AVENUE **Lab Number:** L2204656
Project Number: 4954.00 **Report Date:** 02/11/22

Case Narrative (continued)

Report Submission

The analysis of Ethanol 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.

Nitrogen, Ammonia

L2204656-01: The sample has an elevated detection limit due to the dilution required by the sample matrix.

Cyanide, Total

The WG1599586-4 MS recovery, performed on L2204656-02, is outside the acceptance criteria for cyanide, total (65%); 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: Caitlin Walukevich

Title: Technical Director/Representative Date: 02/11/22

ORGANICS

VOLATILES

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

SAMPLE RESULTS

Lab ID: L2204656-01
Client ID: SH-105
Sample Location: WALTHAM, MA

Date Collected: 01/27/22 13:59
Date Received: 01/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 01/28/22 11:28
Analyst: MKS

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: 103 4TH AVENUE
Lab Number: L2204656
Project Number: 4954.00
Report Date: 02/11/22

SAMPLE RESULTS

Lab ID: L2204656-01
Client ID: SH-105
Sample Location: WALTHAM, MA
Date Collected: 01/27/22 13:59
Date Received: 01/27/22
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	100		60-140
Fluorobenzene	92		60-140
4-Bromofluorobenzene	113		60-140

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

SAMPLE RESULTS

Lab ID: L2204656-01
Client ID: SH-105
Sample Location: WALTHAM, MA

Date Collected: 01/27/22 13:59
Date Received: 01/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1-SIM
Analytical Date: 01/28/22 11:28
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	98		60-140
4-Bromofluorobenzene	106		60-140

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

SAMPLE RESULTS

Lab ID: L2204656-01
Client ID: SH-105
Sample Location: WALTHAM, MA

Date Collected: 01/27/22 13:59
Date Received: 01/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 01/31/22 14:38
Analyst: AMM

Extraction Method: EPA 504.1
Extraction Date: 01/31/22 12:54

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

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

SAMPLE RESULTS

Lab ID: L2204656-02
Client ID: SH-106
Sample Location: WALTHAM, MA

Date Collected: 01/27/22 11:39
Date Received: 01/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 01/28/22 12:03
Analyst: MKS

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: 103 4TH AVENUE
Lab Number: L2204656
Project Number: 4954.00
Report Date: 02/11/22

SAMPLE RESULTS

Lab ID: L2204656-02
Client ID: SH-106
Sample Location: WALTHAM, MA
Date Collected: 01/27/22 11:39
Date Received: 01/27/22
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	102		60-140
Fluorobenzene	91		60-140
4-Bromofluorobenzene	114		60-140

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

SAMPLE RESULTS

Lab ID: L2204656-02
Client ID: SH-106
Sample Location: WALTHAM, MA

Date Collected: 01/27/22 11:39
Date Received: 01/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1-SIM
Analytical Date: 01/28/22 12:03
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	98		60-140
4-Bromofluorobenzene	107		60-140

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

SAMPLE RESULTS

Lab ID: L2204656-02
Client ID: SH-106
Sample Location: WALTHAM, MA

Date Collected: 01/27/22 11:39
Date Received: 01/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 01/31/22 14:45
Analyst: AMM

Extraction Method: EPA 504.1
Extraction Date: 01/31/22 12:54

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

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1-SIM
Analytical Date: 01/28/22 03:21
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG1599364-4					
1,4-Dioxane	ND		ug/l	5.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	99		60-140
4-Bromofluorobenzene	104		60-140

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 01/28/22 03:21
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1599369-4					
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: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 01/28/22 03:21
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1599369-4					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	102		60-140
Fluorobenzene	93		60-140
4-Bromofluorobenzene	112		60-140

Project Name: 103 4TH AVENUE
Project Number: 4954.00

Lab Number: L2204656
Report Date: 02/11/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 01/31/22 13:52
Analyst: AMM

Extraction Method: EPA 504.1
Extraction Date: 01/31/22 12:54

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westborough Lab for sample(s): 01-02 Batch: WG1599672-1						
1,2-Dibromoethane	ND		ug/l	0.010	--	A
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	--	A
1,2,3-Trichloropropane	ND		ug/l	0.030	--	A

Lab Control Sample Analysis
Batch Quality Control

Project Name: 103 4TH AVENUE
Project Number: 4954.00

Lab Number: L2204656
Report Date: 02/11/22

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: WG1599364-3								
1,4-Dioxane	124		-		60-140	-		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Fluorobenzene	102				60-140
4-Bromofluorobenzene	100				60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: 103 4TH AVENUE

Project Number: 4954.00

Lab Number: L2204656

Report Date: 02/11/22

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: WG1599369-3								
Methylene chloride	95		-		60-140	-		28
1,1-Dichloroethane	95		-		50-150	-		49
Carbon tetrachloride	110		-		70-130	-		41
1,1,2-Trichloroethane	115		-		70-130	-		45
Tetrachloroethene	130		-		70-130	-		39
1,2-Dichloroethane	110		-		70-130	-		49
1,1,1-Trichloroethane	110		-		70-130	-		36
Benzene	105		-		65-135	-		61
Toluene	120		-		70-130	-		41
Ethylbenzene	130		-		60-140	-		63
Vinyl chloride	80		-		5-195	-		66
1,1-Dichloroethene	105		-		50-150	-		32
cis-1,2-Dichloroethene	105		-		60-140	-		30
Trichloroethene	110		-		65-135	-		48
1,2-Dichlorobenzene	130		-		65-135	-		57
1,3-Dichlorobenzene	125		-		70-130	-		43
1,4-Dichlorobenzene	130		-		65-135	-		57
p/m-Xylene	125		-		60-140	-		30
o-xylene	120		-		60-140	-		30
Acetone	82		-		40-160	-		30
Methyl tert butyl ether	85		-		60-140	-		30
Tert-Butyl Alcohol	98		-		60-140	-		30
Tertiary-Amyl Methyl Ether	90		-		60-140	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 103 4TH AVENUE
Project Number: 4954.00

Lab Number: L2204656
Report Date: 02/11/22

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: WG1599369-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	106				60-140
Fluorobenzene	97				60-140
4-Bromofluorobenzene	111				60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: 103 4TH AVENUE

Project Number: 4954.00

Lab Number: L2204656

Report Date: 02/11/22

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: WG1599672-2						
1,2-Dibromoethane	88		-		80-120	-			A
1,2-Dibromo-3-chloropropane	85		-		80-120	-			A
1,2,3-Trichloropropane	105		-		80-120	-			A

Matrix Spike Analysis

Batch Quality Control

Project Name: 103 4TH AVENUE

Project Number: 4954.00

Lab Number: L2204656

Report Date: 02/11/22

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: WG1599672-3 QC Sample: L2204031-01 Client ID: MS Sample													
1,2-Dibromoethane	ND	0.252	0.225	90		-	-		80-120	-		20	A
1,2-Dibromo-3-chloropropane	ND	0.252	0.221	88		-	-		80-120	-		20	A
1,2,3-Trichloropropane	ND	0.252	0.283	113		-	-		80-120	-		20	A

SEMIVOLATILES

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

SAMPLE RESULTS

Lab ID: L2204656-01
Client ID: SH-105
Sample Location: WALTHAM, MA

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 02/03/22 16:09
Analyst: ALS

Date Collected: 01/27/22 13:59
Date Received: 01/27/22
Field Prep: Not Specified

Extraction Method: EPA 625.1
Extraction Date: 02/02/22 17:16

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	72		42-122
2-Fluorobiphenyl	68		46-121
4-Terphenyl-d14	93		47-138

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

SAMPLE RESULTS

Lab ID: L2204656-01
Client ID: SH-105
Sample Location: WALTHAM, MA

Date Collected: 01/27/22 13:59
Date Received: 01/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 02/06/22 18:58
Analyst: JJW

Extraction Method: EPA 625.1
Extraction Date: 02/02/22 17:16

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		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	50		25-87
Phenol-d6	35		16-65
Nitrobenzene-d5	87		42-122
2-Fluorobiphenyl	77		46-121
2,4,6-Tribromophenol	106		45-128
4-Terphenyl-d14	87		47-138

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

SAMPLE RESULTS

Lab ID: L2204656-02
Client ID: SH-106
Sample Location: WALTHAM, MA

Date Collected: 01/27/22 11:39
Date Received: 01/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 02/03/22 17:00
Analyst: ALS

Extraction Method: EPA 625.1
Extraction Date: 02/02/22 17:16

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	75		42-122
2-Fluorobiphenyl	63		46-121
4-Terphenyl-d14	85		47-138

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

SAMPLE RESULTS

Lab ID: L2204656-02
Client ID: SH-106
Sample Location: WALTHAM, MA

Date Collected: 01/27/22 11:39
Date Received: 01/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 02/06/22 19:15
Analyst: JJW

Extraction Method: EPA 625.1
Extraction Date: 02/02/22 17:16

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		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	50		25-87
Phenol-d6	35		16-65
Nitrobenzene-d5	87		42-122
2-Fluorobiphenyl	75		46-121
2,4,6-Tribromophenol	91		45-128
4-Terphenyl-d14	85		47-138

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1
Analytical Date: 02/03/22 10:36
Analyst: WR

Extraction Method: EPA 625.1
Extraction Date: 02/02/22 17:16

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1600782-1					
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	73		42-122
2-Fluorobiphenyl	68		46-121
4-Terphenyl-d14	92		47-138

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1-SIM
Analytical Date: 02/03/22 12:10
Analyst: RP

Extraction Method: EPA 625.1
Extraction Date: 02/02/22 17:16

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG1600783-1					
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	44		25-87
Phenol-d6	31		16-65
Nitrobenzene-d5	83		42-122
2-Fluorobiphenyl	73		46-121
2,4,6-Tribromophenol	93		45-128
4-Terphenyl-d14	98		47-138

Lab Control Sample Analysis
Batch Quality Control

Project Name: 103 4TH AVENUE
Project Number: 4954.00

Lab Number: L2204656
Report Date: 02/11/22

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: WG1600782-2								
Bis(2-ethylhexyl)phthalate	76		-		29-137	-		82
Butyl benzyl phthalate	76		-		1-140	-		60
Di-n-butylphthalate	76		-		8-120	-		47
Di-n-octylphthalate	76		-		19-132	-		69
Diethyl phthalate	72		-		1-120	-		100
Dimethyl phthalate	75		-		1-120	-		183

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	74				42-122
2-Fluorobiphenyl	69				46-121
4-Terphenyl-d14	85				47-138

Lab Control Sample Analysis
Batch Quality Control

Project Name: 103 4TH AVENUE
Project Number: 4954.00

Lab Number: L2204656
Report Date: 02/11/22

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: WG1600783-2								
Acenaphthene	77		-		60-132	-		30
Fluoranthene	86		-		43-121	-		30
Naphthalene	76		-		36-120	-		30
Benzo(a)anthracene	98		-		42-133	-		30
Benzo(a)pyrene	93		-		32-148	-		30
Benzo(b)fluoranthene	92		-		42-140	-		30
Benzo(k)fluoranthene	85		-		25-146	-		30
Chrysene	74		-		44-140	-		30
Acenaphthylene	88		-		54-126	-		30
Anthracene	83		-		43-120	-		30
Benzo(ghi)perylene	91		-		1-195	-		30
Fluorene	83		-		70-120	-		30
Phenanthrene	76		-		65-120	-		30
Dibenzo(a,h)anthracene	101		-		1-200	-		30
Indeno(1,2,3-cd)pyrene	98		-		1-151	-		30
Pyrene	86		-		70-120	-		30
Pentachlorophenol	95		-		38-152	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 103 4TH AVENUE
Project Number: 4954.00

Lab Number: L2204656
Report Date: 02/11/22

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: WG1600783-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	61				25-87
Phenol-d6	42				16-65
Nitrobenzene-d5	95				42-122
2-Fluorobiphenyl	81				46-121
2,4,6-Tribromophenol	106				45-128
4-Terphenyl-d14	89				47-138

PCBS

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

SAMPLE RESULTS

Lab ID: L2204656-01
Client ID: SH-105
Sample Location: WALTHAM, MA

Date Collected: 01/27/22 13:59
Date Received: 01/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 02/11/22 10:13
Analyst: CW

Extraction Method: EPA 608.3
Extraction Date: 02/10/22 16:37
Cleanup Method: EPA 3665A
Cleanup Date: 02/10/22
Cleanup Method: EPA 3660B
Cleanup Date: 02/11/22

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	70		37-123	B
Decachlorobiphenyl	77		38-114	B
2,4,5,6-Tetrachloro-m-xylene	67		37-123	A
Decachlorobiphenyl	70		38-114	A

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

SAMPLE RESULTS

Lab ID: L2204656-02
Client ID: SH-106
Sample Location: WALTHAM, MA

Date Collected: 01/27/22 11:39
Date Received: 01/27/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 02/11/22 10:22
Analyst: CW

Extraction Method: EPA 608.3
Extraction Date: 02/10/22 16:37
Cleanup Method: EPA 3665A
Cleanup Date: 02/10/22
Cleanup Method: EPA 3660B
Cleanup Date: 02/11/22

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	73		37-123	B
Decachlorobiphenyl	87		38-114	B
2,4,5,6-Tetrachloro-m-xylene	71		37-123	A
Decachlorobiphenyl	79		38-114	A

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 127,608.3
Analytical Date: 02/11/22 08:21
Analyst: CW

Extraction Method: EPA 608.3
Extraction Date: 02/10/22 16:10
Cleanup Method: EPA 3665A
Cleanup Date: 02/10/22
Cleanup Method: EPA 3660B
Cleanup Date: 02/11/22

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-02 Batch: WG1603703-1						
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	77		37-123	B
Decachlorobiphenyl	88		38-114	B
2,4,5,6-Tetrachloro-m-xylene	74		37-123	A
Decachlorobiphenyl	81		38-114	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 103 4TH AVENUE

Project Number: 4954.00

Lab Number: L2204656

Report Date: 02/11/22

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: WG1603703-2									
Aroclor 1016	72		-		50-140	-		36	A
Aroclor 1260	63		-		8-140	-		38	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	64				37-123	B
Decachlorobiphenyl	57				38-114	B
2,4,5,6-Tetrachloro-m-xylene	63				37-123	A
Decachlorobiphenyl	52				38-114	A

METALS

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

SAMPLE RESULTS

Lab ID: L2204656-01
Client ID: SH-105
Sample Location: WALTHAM, MA
Date Collected: 01/27/22 13:59
Date Received: 01/27/22
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	02/01/22 12:44	02/01/22 19:36	EPA 3005A	3,200.8	SV
Arsenic, Total	0.00143		mg/l	0.00100	--	1	02/01/22 12:44	02/01/22 19:36	EPA 3005A	3,200.8	SV
Cadmium, Total	ND		mg/l	0.00020	--	1	02/01/22 12:44	02/01/22 19:36	EPA 3005A	3,200.8	SV
Chromium, Total	0.00465		mg/l	0.00100	--	1	02/01/22 12:44	02/01/22 19:36	EPA 3005A	3,200.8	SV
Copper, Total	0.02147		mg/l	0.00100	--	1	02/01/22 12:44	02/01/22 19:36	EPA 3005A	3,200.8	SV
Iron, Total	3.89		mg/l	0.050	--	1	02/01/22 12:44	02/02/22 12:02	EPA 3005A	19,200.7	GD
Lead, Total	0.00397		mg/l	0.00100	--	1	02/01/22 12:44	02/01/22 19:36	EPA 3005A	3,200.8	SV
Mercury, Total	ND		mg/l	0.00020	--	1	02/01/22 13:49	02/03/22 11:33	EPA 245.1	3,245.1	ZK
Nickel, Total	0.00800		mg/l	0.00200	--	1	02/01/22 12:44	02/01/22 19:36	EPA 3005A	3,200.8	SV
Selenium, Total	ND		mg/l	0.00500	--	1	02/01/22 12:44	02/01/22 19:36	EPA 3005A	3,200.8	SV
Silver, Total	0.00681		mg/l	0.00040	--	1	02/01/22 12:44	02/01/22 19:36	EPA 3005A	3,200.8	SV
Zinc, Total	0.04327		mg/l	0.01000	--	1	02/01/22 12:44	02/01/22 19:36	EPA 3005A	3,200.8	SV
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	45.5		mg/l	0.660	NA	1	02/01/22 12:44	02/02/22 12:02	EPA 3005A	19,200.7	GD
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		02/01/22 19:36	NA	107,-	

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

SAMPLE RESULTS

Lab ID: L2204656-02
Client ID: SH-106
Sample Location: WALTHAM, MA
Sample Depth:
Matrix: Water

Date Collected: 01/27/22 11:39
Date Received: 01/27/22
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	02/01/22 12:44	02/01/22 19:52	EPA 3005A	3,200.8	SV
Arsenic, Total	ND		mg/l	0.00100	--	1	02/01/22 12:44	02/01/22 19:52	EPA 3005A	3,200.8	SV
Cadmium, Total	0.00032		mg/l	0.00020	--	1	02/01/22 12:44	02/01/22 19:52	EPA 3005A	3,200.8	SV
Chromium, Total	0.00109		mg/l	0.00100	--	1	02/01/22 12:44	02/01/22 19:52	EPA 3005A	3,200.8	SV
Copper, Total	0.00892		mg/l	0.00100	--	1	02/01/22 12:44	02/01/22 19:52	EPA 3005A	3,200.8	SV
Iron, Total	1.10		mg/l	0.050	--	1	02/01/22 12:44	02/02/22 12:45	EPA 3005A	19,200.7	GD
Lead, Total	ND		mg/l	0.00100	--	1	02/01/22 12:44	02/01/22 19:52	EPA 3005A	3,200.8	SV
Mercury, Total	ND		mg/l	0.00020	--	1	02/01/22 13:49	02/03/22 11:43	EPA 245.1	3,245.1	ZK
Nickel, Total	0.00487		mg/l	0.00200	--	1	02/01/22 12:44	02/01/22 19:52	EPA 3005A	3,200.8	SV
Selenium, Total	ND		mg/l	0.00500	--	1	02/01/22 12:44	02/01/22 19:52	EPA 3005A	3,200.8	SV
Silver, Total	0.00310		mg/l	0.00040	--	1	02/01/22 12:44	02/01/22 19:52	EPA 3005A	3,200.8	SV
Zinc, Total	0.02425		mg/l	0.01000	--	1	02/01/22 12:44	02/01/22 19:52	EPA 3005A	3,200.8	SV
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	79.9		mg/l	0.660	NA	1	02/01/22 12:44	02/02/22 12:45	EPA 3005A	19,200.7	GD
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		02/01/22 19:52	NA	107,-	

Project Name: 103 4TH AVENUE
Lab Number: L2204656
Project Number: 4954.00
Report Date: 02/11/22

SAMPLE RESULTS

Lab ID: L2204656-03
Client ID: SURFACE
Sample Location: WALTHAM, MA
Date Collected: 01/27/22 15:30
Date Received: 01/27/22
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	02/01/22 12:44	02/01/22 19:57	EPA 3005A	3,200.8	SV
Arsenic, Total	ND		mg/l	0.00100	--	1	02/01/22 12:44	02/01/22 19:57	EPA 3005A	3,200.8	SV
Cadmium, Total	ND		mg/l	0.00020	--	1	02/01/22 12:44	02/01/22 19:57	EPA 3005A	3,200.8	SV
Chromium, Total	ND		mg/l	0.00100	--	1	02/01/22 12:44	02/01/22 19:57	EPA 3005A	3,200.8	SV
Copper, Total	0.00202		mg/l	0.00100	--	1	02/01/22 12:44	02/01/22 19:57	EPA 3005A	3,200.8	SV
Iron, Total	0.383		mg/l	0.050	--	1	02/01/22 12:44	02/02/22 13:08	EPA 3005A	19,200.7	GD
Lead, Total	ND		mg/l	0.00100	--	1	02/01/22 12:44	02/01/22 19:57	EPA 3005A	3,200.8	SV
Mercury, Total	ND		mg/l	0.00020	--	1	02/01/22 13:49	02/03/22 11:46	EPA 245.1	3,245.1	ZK
Nickel, Total	ND		mg/l	0.00200	--	1	02/01/22 12:44	02/01/22 19:57	EPA 3005A	3,200.8	SV
Selenium, Total	ND		mg/l	0.00500	--	1	02/01/22 12:44	02/01/22 19:57	EPA 3005A	3,200.8	SV
Silver, Total	ND		mg/l	0.00040	--	1	02/01/22 12:44	02/01/22 19:57	EPA 3005A	3,200.8	SV
Zinc, Total	0.02430		mg/l	0.01000	--	1	02/01/22 12:44	02/01/22 19:57	EPA 3005A	3,200.8	SV
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	291		mg/l	0.660	NA	1	02/01/22 12:44	02/02/22 13:08	EPA 3005A	19,200.7	GD

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

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: WG1599716-1										
Iron, Total	ND		mg/l	0.050	--	1	02/01/22 12:44	02/02/22 11:07	19,200.7	GD

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: WG1599716-1										
Hardness	ND		mg/l	0.660	NA	1	02/01/22 12:44	02/02/22 11:07	19,200.7	GD

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: WG1599720-1										
Antimony, Total	ND		mg/l	0.00400	--	1	02/01/22 12:44	02/01/22 19:03	3,200.8	SV
Arsenic, Total	ND		mg/l	0.00100	--	1	02/01/22 12:44	02/01/22 19:03	3,200.8	SV
Cadmium, Total	ND		mg/l	0.00020	--	1	02/01/22 12:44	02/01/22 19:03	3,200.8	SV
Chromium, Total	ND		mg/l	0.00100	--	1	02/01/22 12:44	02/01/22 19:03	3,200.8	SV
Copper, Total	ND		mg/l	0.00100	--	1	02/01/22 12:44	02/01/22 19:03	3,200.8	SV
Lead, Total	ND		mg/l	0.00100	--	1	02/01/22 12:44	02/01/22 19:03	3,200.8	SV
Nickel, Total	ND		mg/l	0.00200	--	1	02/01/22 12:44	02/01/22 19:03	3,200.8	SV
Selenium, Total	ND		mg/l	0.00500	--	1	02/01/22 12:44	02/01/22 19:03	3,200.8	SV
Silver, Total	ND		mg/l	0.00040	--	1	02/01/22 12:44	02/01/22 19:03	3,200.8	SV
Zinc, Total	ND		mg/l	0.01000	--	1	02/01/22 12:44	02/01/22 19:03	3,200.8	SV

Prep Information

Digestion Method: EPA 3005A

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

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: WG1599722-1										
Mercury, Total	ND		mg/l	0.00020	--	1	02/01/22 13:49	02/03/22 11:05	3,245.1	ZK

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: 103 4TH AVENUE

Project Number: 4954.00

Lab Number: L2204656

Report Date: 02/11/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1599716-2								
Iron, Total	100		-		85-115	-		
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-03 Batch: WG1599716-2								
Hardness	104		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1599720-2								
Antimony, Total	89		-		85-115	-		
Arsenic, Total	100		-		85-115	-		
Cadmium, Total	100		-		85-115	-		
Chromium, Total	93		-		85-115	-		
Copper, Total	95		-		85-115	-		
Lead, Total	102		-		85-115	-		
Nickel, Total	92		-		85-115	-		
Selenium, Total	106		-		85-115	-		
Silver, Total	102		-		85-115	-		
Zinc, Total	98		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-03 Batch: WG1599722-2								
Mercury, Total	109		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 103 4TH AVENUE
Project Number: 4954.00

Lab Number: L2204656
Report Date: 02/11/22

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: WG1599716-3 QC Sample: L2204656-01 Client ID: SH-105												
Iron, Total	3.89	1	4.73	84		-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1599716-3 QC Sample: L2204656-01 Client ID: SH-105												
Hardness	45.5	66.2	107	93		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1599720-3 QC Sample: L2204656-01 Client ID: SH-105												
Antimony, Total	ND	0.5	0.4166	83		-	-		70-130	-		20
Arsenic, Total	0.00143	0.12	0.1222	101		-	-		70-130	-		20
Cadmium, Total	ND	0.053	0.05455	103		-	-		70-130	-		20
Chromium, Total	0.00465	0.2	0.1905	93		-	-		70-130	-		20
Copper, Total	0.02147	0.25	0.2683	99		-	-		70-130	-		20
Lead, Total	0.00397	0.53	0.5450	102		-	-		70-130	-		20
Nickel, Total	0.00800	0.5	0.4749	93		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1236	103		-	-		70-130	-		20
Silver, Total	0.00681	0.05	0.05927	105		-	-		70-130	-		20
Zinc, Total	0.04327	0.5	0.5431	100		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1599722-3 QC Sample: L2204656-01 Client ID: SH-105												
Mercury, Total	ND	0.005	0.00477	96		-	-		70-130	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: 103 4TH AVENUE
Project Number: 4954.00

Lab Number: L2204656
Report Date: 02/11/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1599716-4 QC Sample: L2204656-01 Client ID: SH-105						
Iron, Total	3.89	3.71	mg/l	5		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1599716-4 QC Sample: L2204656-01 Client ID: SH-105						
Hardness	45.5	45.0	mg/l	1		20
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1599720-4 QC Sample: L2204656-01 Client ID: SH-105						
Antimony, Total	ND	0.00499	mg/l	NC		20
Arsenic, Total	0.00143	0.00134	mg/l	7		20
Cadmium, Total	ND	ND	mg/l	NC		20
Chromium, Total	0.00465	0.00413	mg/l	12		20
Copper, Total	0.02147	0.02149	mg/l	0		20
Lead, Total	0.00397	0.00387	mg/l	3		20
Nickel, Total	0.00800	0.00785	mg/l	2		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	0.00681	0.00606	mg/l	12		20
Zinc, Total	0.04327	0.04300	mg/l	1		20
Total Metals - Mansfield Lab Associated sample(s): 01-03 QC Batch ID: WG1599722-4 QC Sample: L2204656-01 Client ID: SH-105						
Mercury, Total	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: 103 4TH AVENUE
Project Number: 4954.00

Lab Number: L2204656
Report Date: 02/11/22

SAMPLE RESULTS

Lab ID: L2204656-01
Client ID: SH-105
Sample Location: WALTHAM, MA

Date Collected: 01/27/22 13:59
Date Received: 01/27/22
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	510		mg/l	20	NA	4	-	02/02/22 19:00	121,2540D	MD
Cyanide, Total	ND		mg/l	0.005	--	1	01/31/22 10:50	02/01/22 09:37	121,4500CN-CE	CS
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	01/27/22 22:22	121,4500CL-D	AS
pH (H)	6.8		SU	-	NA	1	-	01/27/22 23:03	121,4500H+-B	AS
Nitrogen, Ammonia	ND		mg/l	0.750	--	10	01/28/22 02:22	01/28/22 18:02	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.00	--	1	02/01/22 22:00	02/01/22 22:15	140,1664B	TL
Phenolics, Total	ND		mg/l	0.030	--	1	02/04/22 06:47	02/04/22 12:14	4,420.1	KP
Chromium, Hexavalent	ND		mg/l	0.010	--	1	01/28/22 07:15	01/28/22 07:42	1,7196A	KP
Anions by Ion Chromatography - Westborough Lab										
Chloride	328.		mg/l	12.5	--	25	-	02/01/22 22:07	44,300.0	SH

Project Name: 103 4TH AVENUE
Project Number: 4954.00

Lab Number: L2204656
Report Date: 02/11/22

SAMPLE RESULTS

Lab ID: L2204656-02
Client ID: SH-106
Sample Location: WALTHAM, MA

Date Collected: 01/27/22 11:39
Date Received: 01/27/22
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	14.		mg/l	5.0	NA	1	-	02/02/22 19:00	121,2540D	MD
Cyanide, Total	0.005		mg/l	0.005	--	1	01/31/22 10:50	02/01/22 09:39	121,4500CN-CE	CS
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	01/27/22 22:22	121,4500CL-D	AS
pH (H)	6.3		SU	-	NA	1	-	01/27/22 23:03	121,4500H+-B	AS
Nitrogen, Ammonia	0.082		mg/l	0.075	--	1	01/28/22 02:22	01/28/22 18:03	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.00	--	1	02/01/22 22:00	02/01/22 22:15	140,1664B	TL
Phenolics, Total	ND		mg/l	0.030	--	1	02/04/22 06:47	02/04/22 11:53	4,420.1	KP
Chromium, Hexavalent	ND		mg/l	0.010	--	1	01/28/22 07:15	01/28/22 07:43	1,7196A	KP
Anions by Ion Chromatography - Westborough Lab										
Chloride	841.		mg/l	25.0	--	50	-	02/01/22 22:18	44,300.0	SH

Project Name: 103 4TH AVENUE
Project Number: 4954.00

Lab Number: L2204656
Report Date: 02/11/22

SAMPLE RESULTS

Lab ID: L2204656-03
Client ID: SURFACE
Sample Location: WALTHAM, MA

Date Collected: 01/27/22 15:30
Date Received: 01/27/22
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										
pH (H)	7.2		SU	-	NA	1	-	01/27/22 23:03	121,4500H+-B	AS
Nitrogen, Ammonia	1.10		mg/l	0.375	--	5	01/28/22 02:22	01/28/22 18:04	121,4500NH3-BH	AT

Project Name: 103 4TH AVENUE
Project Number: 4954.00
Lab Number: L2204656
Report Date: 02/11/22

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: WG1598987-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	01/27/22 22:22	121,4500CL-D	AS
General Chemistry - Westborough Lab for sample(s): 01-03 Batch: WG1599054-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	01/28/22 02:22	01/28/22 17:43	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1599154-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	01/28/22 07:15	01/28/22 07:39	1,7196A	KP
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1599586-1										
Cyanide, Total	ND		mg/l	0.005	--	1	01/31/22 10:50	02/01/22 09:32	121,4500CN-CE	CS
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1600284-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	02/01/22 22:00	02/01/22 22:15	140,1664B	TL
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-02 Batch: WG1600428-1										
Chloride	ND		mg/l	0.500	--	1	-	02/01/22 17:01	44,300.0	SH
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1600758-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	02/02/22 19:00	121,2540D	MD
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1601417-1										
Phenolics, Total	ND		mg/l	0.030	--	1	02/04/22 06:47	02/04/22 11:51	4,420.1	KP

Lab Control Sample Analysis

Batch Quality Control

Project Name: 103 4TH AVENUE

Project Number: 4954.00

Lab Number: L2204656

Report Date: 02/11/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1598987-2								
Chlorine, Total Residual	92		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1599048-1								
pH	100		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG1599054-2								
Nitrogen, Ammonia	94		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1599154-2								
Chromium, Hexavalent	106		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1599586-2								
Cyanide, Total	108		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1600284-2								
TPH	90		-		64-132	-		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 Batch: WG1600428-2								
Chloride	97		-		90-110	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: 103 4TH AVENUE
Project Number: 4954.00

Lab Number: L2204656
Report Date: 02/11/22

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1600758-2					
Solids, Total Suspended	97	-	80-120	-	
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1601417-2					
Phenolics, Total	91	-	70-130	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: 103 4TH AVENUE
Project Number: 4954.00

Lab Number: L2204656
Report Date: 02/11/22

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: WG1598987-4 QC Sample: L2204656-02 Client ID: SH-106												
Chlorine, Total Residual	ND	0.25	0.24	96		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1599054-4 QC Sample: L2204678-03 Client ID: MS Sample												
Nitrogen, Ammonia	1.19	4	5.21	100		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1599154-4 QC Sample: L2204656-02 Client ID: SH-106												
Chromium, Hexavalent	ND	0.1	0.102	102		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1599586-4 QC Sample: L2204656-02 Client ID: SH-106												
Cyanide, Total	0.005	0.2	0.136	**65**	Q	-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1600284-4 QC Sample: L2200025-13 Client ID: MS Sample												
TPH	ND	19.2	14.5	76		-	-		64-132	-		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1600428-3 QC Sample: L2204976-02 Client ID: MS Sample												
Chloride	ND	4	4.30	108		-	-		90-110	-		18
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1601417-4 QC Sample: L2205323-01 Client ID: MS Sample												
Phenolics, Total	ND	0.4	0.37	92		-	-		70-130	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 103 4TH AVENUE
Project Number: 4954.00

Lab Number: L2204656
Report Date: 02/11/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1598987-3 QC Sample: L2204452-01 Client ID: DUP Sample						
Chlorine, Total Residual	1.2	1.2	mg/l	0		20
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1599048-2 QC Sample: L2204277-03 Client ID: DUP Sample						
pH	7.9	7.9	SU	0		5
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG1599054-3 QC Sample: L2204678-03 Client ID: DUP Sample						
Nitrogen, Ammonia	1.19	1.37	mg/l	14		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1599154-3 QC Sample: L2204656-01 Client ID: SH-105						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1599586-3 QC Sample: L2204656-01 Client ID: SH-105						
Cyanide, Total	ND	ND	mg/l	NC		30
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1600284-3 QC Sample: L2200025-12 Client ID: DUP Sample						
TPH	ND	ND	mg/l	NC		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1600428-4 QC Sample: L2204976-02 Client ID: DUP Sample						
Chloride	ND	ND	mg/l	NC		18
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1600758-3 QC Sample: L2205006-04 Client ID: DUP Sample						
Solids, Total Suspended	360	360	mg/l	0		29
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1601417-3 QC Sample: L2205323-01 Client ID: DUP Sample						
Phenolics, Total	ND	ND	mg/l	NC		20

Project Name: 103 4TH AVENUE
Project Number: 4954.00

Lab Number: L2204656
Report Date: 02/11/22

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
B	Absent
C	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2204656-01A	Vial Na2S2O3 preserved	B	NA		2.4	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2204656-01A1	Vial Na2S2O3 preserved	B	NA		2.4	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2204656-01B	Vial Na2S2O3 preserved	B	NA		2.4	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2204656-01B1	Vial Na2S2O3 preserved	B	NA		2.4	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2204656-01C	Vial Na2S2O3 preserved	B	NA		2.4	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2204656-01C1	Vial Na2S2O3 preserved	B	NA		2.4	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2204656-01D	Vial Na2S2O3 preserved	B	NA		2.4	Y	Absent		504(14)
L2204656-01E	Vial Na2S2O3 preserved	B	NA		2.4	Y	Absent		504(14)
L2204656-01F	Vial unpreserved	B	NA		2.4	Y	Absent		SUB-ETHANOL(14)
L2204656-01G	Vial unpreserved	B	NA		2.4	Y	Absent		SUB-ETHANOL(14)
L2204656-01H	Vial unpreserved	B	NA		2.4	Y	Absent		SUB-ETHANOL(14)
L2204656-01I	Plastic 250ml NaOH preserved	B	>12	>12	2.4	Y	Absent		TCN-4500(14)
L2204656-01J	Plastic 250ml HNO3 preserved	B	<2	<2	2.4	Y	Absent		HOLD-METAL-DISSOLVED(180)
L2204656-01K	Plastic 250ml HNO3 preserved	B	<2	<2	2.4	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),HARDU(180),HG-U(28),SE-2008T(180),AG-2008T(180),AS-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L2204656-01L	Plastic 500ml H2SO4 preserved	B	<2	<2	2.4	Y	Absent		NH3-4500(28)
L2204656-01M	Plastic 950ml unpreserved	B	7	7	2.4	Y	Absent		HEXCR-7196(1),CL-300(28),TRC-4500(1),PH-4500(.01)
L2204656-01N	Plastic 950ml unpreserved	B	7	7	2.4	Y	Absent		TSS-2540(7)
L2204656-01O	Amber 950ml H2SO4 preserved	B	<2	<2	2.4	Y	Absent		TPHENOL-420(28)
L2204656-01P	Amber 1000ml Na2S2O3	B	7	7	2.4	Y	Absent		PCB-608.3(365)

*Values in parentheses indicate holding time in days

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2204656-01Q	Amber 1000ml Na2S2O3	B	7	7	2.4	Y	Absent		PCB-608.3(365)
L2204656-01R	Amber 1000ml Na2S2O3	B	7	7	2.4	Y	Absent		625.1-RGP(7)
L2204656-01S	Amber 1000ml Na2S2O3	B	7	7	2.4	Y	Absent		625.1-RGP(7)
L2204656-01T	Amber 1000ml Na2S2O3	B	7	7	2.4	Y	Absent		625.1-SIM-RGP(7)
L2204656-01U	Amber 1000ml Na2S2O3	B	7	7	2.4	Y	Absent		625.1-SIM-RGP(7)
L2204656-01V	Amber 1000ml HCl preserved	B	NA		2.4	Y	Absent		TPH-1664(28)
L2204656-01W	Amber 1000ml HCl preserved	B	NA		2.4	Y	Absent		TPH-1664(28)
L2204656-02A	Vial Na2S2O3 preserved	C	NA		3.6	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2204656-02A1	Vial Na2S2O3 preserved	C	NA		3.6	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2204656-02B	Vial Na2S2O3 preserved	C	NA		3.6	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2204656-02B1	Vial Na2S2O3 preserved	C	NA		3.6	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2204656-02C	Vial Na2S2O3 preserved	C	NA		3.6	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2204656-02C1	Vial Na2S2O3 preserved	C	NA		3.6	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2204656-02D	Vial Na2S2O3 preserved	C	NA		3.6	Y	Absent		504(14)
L2204656-02E	Vial Na2S2O3 preserved	C	NA		3.6	Y	Absent		504(14)
L2204656-02F	Vial unpreserved	C	NA		3.6	Y	Absent		SUB-ETHANOL(14)
L2204656-02G	Vial unpreserved	C	NA		3.6	Y	Absent		SUB-ETHANOL(14)
L2204656-02H	Vial unpreserved	C	NA		3.6	Y	Absent		SUB-ETHANOL(14)
L2204656-02I	Plastic 250ml NaOH preserved	C	>12	>12	3.6	Y	Absent		TCN-4500(14)
L2204656-02J	Plastic 250ml HNO3 preserved	C	<2	<2	3.6	Y	Absent		HOLD-METAL-DISSOLVED(180)
L2204656-02K	Plastic 250ml HNO3 preserved	C	<2	<2	3.6	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),HARDU(180),CU-2008T(180),FE-UI(180),AG-2008T(180),HG-U(28),SE-2008T(180),AS-2008T(180),PB-2008T(180),CR-2008T(180),SB-2008T(180)
L2204656-02L	Plastic 500ml H2SO4 preserved	C	<2	<2	3.6	Y	Absent		NH3-4500(28)
L2204656-02M	Plastic 950ml unpreserved	C	7	7	3.6	Y	Absent		HEXCR-7196(1),CL-300(28),TRC-4500(1),PH-4500(.01)
L2204656-02N	Plastic 950ml unpreserved	C	7	7	3.6	Y	Absent		TSS-2540(7)
L2204656-02O	Amber 950ml H2SO4 preserved	C	<2	<2	3.6	Y	Absent		TPHENOL-420(28)
L2204656-02P	Amber 1000ml Na2S2O3	C	7	7	3.6	Y	Absent		PCB-608.3(365)

*Values in parentheses indicate holding time in days

Project Name: 103 4TH AVENUE
Project Number: 4954.00

Lab Number: L2204656
Report Date: 02/11/22

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2204656-02Q	Amber 1000ml Na2S2O3	C	7	7	3.6	Y	Absent		PCB-608.3(365)
L2204656-02R	Amber 1000ml Na2S2O3	C	7	7	3.6	Y	Absent		625.1-RGP(7)
L2204656-02S	Amber 1000ml Na2S2O3	C	7	7	3.6	Y	Absent		625.1-RGP(7)
L2204656-02T	Amber 1000ml Na2S2O3	C	7	7	3.6	Y	Absent		625.1-SIM-RGP(7)
L2204656-02U	Amber 1000ml Na2S2O3	C	7	7	3.6	Y	Absent		625.1-SIM-RGP(7)
L2204656-02V	Amber 1000ml HCl preserved	C	NA		3.6	Y	Absent		TPH-1664(28)
L2204656-02W	Amber 1000ml HCl preserved	C	NA		3.6	Y	Absent		TPH-1664(28)
L2204656-03A	Plastic 60ml unpreserved	C	7	7	3.6	Y	Absent		PH-4500(.01)
L2204656-03B	Plastic 250ml HNO3 preserved	C	<2	<2	3.6	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),FE-UI(180),HARDU(180),CU-2008T(180),SE-2008T(180),AS-2008T(180),HG-U(28),AG-2008T(180),SB-2008T(180),CR-2008T(180),PB-2008T(180)
L2204656-03C	Plastic 500ml H2SO4 preserved	C	<2	<2	3.6	Y	Absent		NH3-4500(28)

*Values in parentheses indicate holding time in days

Project Name:	103 4TH AVENUE	**Lab Number:**	L2204656
Project Number:	4954.00	**Report Date:**	02/11/22

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	103 4TH AVENUE	**Lab Number:**	L2204656
Project Number:	4954.00	**Report Date:**	02/11/22

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

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

Report Format: Data Usability Report

Project Name:	103 4TH AVENUE	**Lab Number:**	L2204656
Project Number:	4954.00	**Report Date:**	02/11/22

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.

V - The surrogate associated with this target analyte has a recovery outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Z - The batch matrix spike and/or duplicate associated with this target analyte has a recovery/RPD outside the QC acceptance limits. (Applicable to MassDEP DW Compliance samples only.)

Report Format: Data Usability Report

Project Name:	103 4TH AVENUE	**Lab Number:**	L2204656
Project Number:	4954.00	**Report Date:**	02/11/22

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.

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.

140 Method 1664,Revision B: 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-10-001, February 2010.

LIMITATION OF LIABILITIES

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

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

Certification Information

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

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene, Naphthalene
EPA 625/625.1: alpha-Terpineol
EPA 8260C/8260D: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D/8270E: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine, alpha-Terpineol; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

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

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

Westborough Facility:

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

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.**
EPA 624.1: Volatile Halocarbons & Aromatics,
EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625.1: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603, SM9222D.**

Mansfield Facility:

Drinking Water
EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.
EPA 522, EPA 537.1.

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

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

Serial_No:02112213:21

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL

8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Date Rec'd in Lab: 1/27/22

ALPHA Job #: L2204656

Client Information

- Client: Sanborn Head + Associates Inc.
- Address: 1 Technology Park Drive, Westford, MA 01886
- Phone: 978-496-2109
- Email: LGarvey@sanbornhead.com

Project Information

- Project Name: 103 4th Avenue
- Project Location: Waltham, MA
- Project #: 4954.00
- Project Manager: Laura Garvey
- ALPHA Quote #:

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 ______

Turn-Around Time

- ☒ Standard
- ☐ RUSH (only confirmed if pre-approved!)

Date Due:

Additional Project Information:

SH-106 Dissolved metals label is on bottle incorrectly. Use capped designation "FF" and "NFF" for field filtered + not field filtered.
"O" Preservatives = HCl, H_2SO_4, $Na_2S_2O_3$, HNO_3, NaOH

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

SAMPLE INFO

Filtration: ☒ Field ☐ Lab to do

Preservation: ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC	SVOC	METALS (MCP)	METALS (RCRA)	EPH	VPH	PCB/PEST	TPH	NPDES RGP Package	Hardness	pH	Dissolved NPDES RGP Metals	Ammonia Nitrogen	NPDES Metals	Sample Comments	Total # Bottles
04656-01	SH-105	1/27/22	13:59	GW	PTL									X	X	X	H	X		Hold = H	
-02	SH-106	1/27/22	11:39	GW	PTL									X	X	X	H	X		Hold = H	
-03	Surface	1/27/22	15:30	SW	PTL										X	X		X	X		

	VOC	SVOC	METALS (MCP)	METALS (RCRA)	EPH	VPH	PCB/PEST	TPH	NPDES RGP Package	Hardness	pH	Dissolved NPDES RGP Metals	Ammonia Nitrogen	NPDES Metals
Container Type									P/A/V	P	P	P		
Preservative									O	A	A	C		

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
[signature]	1/27/22 15:52	[signature] AAL	1/27/22 15:52
[signature] AAL	1/27/22 1700	[signature]	1/27/22 17:00

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

ALPHA ANALYTICAL
World Class Chemistry

Subcontract Chain of Custody

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

Alpha Job Number
L2204656

Client Information	Project Information	Regulatory Requirements/Report Limits
Client: Alpha Analytical Labs Address: Eight Walkup Drive Westborough, MA 01581-1019 Phone: 508.439.5176 Email: senright@alphalab.com	Project Location: MA Project Manager: Scott Enright **Turnaround & Deliverables Information** Due Date: Deliverables:	State/Federal Program: Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L2204656

Report to include Method Blank, LCS/LCSD:

Additional Comments: Send all results/reports to subreports@alphalab.com

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	SH-105	01-27-22 13:59	WATER	Ethanol by EPA 1671 Revision A	
	SH-106	01-27-22 11:39	WATER	Ethanol by EPA 1671 Revision A	

	Relinquished By:	Date/Time:	Received By:	Date/Time:
		1/31/22		
Form No: AL_subcoc				

February 08, 2022

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

Scott Enright
Alpha Analytical
145 Flanders Road
Westborough, MA 01581
TEL: (508) 439-5176
FAX:

RE: L2204656 **WorkOrder:** 22020024

Dear Scott Enright:

TEKLAB, INC received 2 samples on 2/1/2022 9:57:00 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,

Marvin L. Darling
Project Manager
(618)344-1004 ex 41
mdarling@teklabinc.com

Report Contents

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 22020024
Client Project: L2204656
Report Date: 08-Feb-22

This reporting package includes the following:

Definitions

http://www.teklabinc.com/

Client: Alpha Analytical **Work Order:** 22020024

Client Project: L2204656 **Report Date:** 08-Feb-22

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

http://www.teklabinc.com/

Client: Alpha Analytical **Work Order:** 22020024

Client Project: L2204656 **Report Date:** 08-Feb-22

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

Case Narrative

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 22020024
Client Project: L2204656
Report Date: 08-Feb-22

Cooler Receipt Temp: 4.6 °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

Accreditations

http://www.teklabinc.com/

Client: Alpha Analytical **Work Order:** 22020024

Client Project: L2204656 **Report Date:** 08-Feb-22

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2023	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2022	Collinsville
Louisiana	LDEQ	05002	NELAP	6/30/2022	Collinsville
Louisiana	LDEQ	05003	NELAP	6/30/2022	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2022	Collinsville
Arkansas	ADEQ	88-0966		3/14/2022	Collinsville
Illinois	IDPH	17584		5/31/2023	Collinsville
Kentucky	UST	0073		1/31/2023	Collinsville
Missouri	MDNR	00930		5/31/2023	Collinsville
Missouri	MDNR	930		1/31/2025	Collinsville

Laboratory Results

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 22020024
Client Project: L2204656
Report Date: 08-Feb-22
Lab ID: 22020024-001
Client Sample ID: SH-105
Matrix: AQUEOUS
Collection Date: 01/27/2022 13:59

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	02/04/2022 12:48	R306736

Laboratory Results

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 22020024
Client Project: L2204656
Report Date: 08-Feb-22
Lab ID: 22020024-002
Client Sample ID: SH-106
Matrix: AQUEOUS
Collection Date: 01/27/2022 11:39

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	02/04/2022 13:24	R306736

Quality Control Results

http://www.teklabinc.com/

Client: Alpha Analytical **Work Order:** 22020024

Client Project: L2204656 **Report Date:** 08-Feb-22

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

Batch R306736 **SampType:** MBLK Units **mg/L**

SampID: MBLK-020422

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		**ND**						02/04/2022

Batch R306736 **SampType:** LCS Units **mg/L**

SampID: LCS-020422

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		**290**	250.0	0	115.8	70	132	02/04/2022

Batch R306736 **SampType:** MS Units **mg/L**

SampID: 22020024-002AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		**300**	250.0	0	118.8	70	132	02/04/2022

Batch R306736 **SampType:** MSD Units **mg/L** RPD Limit: **30**

SampID: 22020024-002AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Ethanol	*	20		**320**	250.0	0	126.4	297.0	6.16	02/04/2022

Receiving Check List

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 22020024
Client Project: L2204656
Report Date: 08-Feb-22

Carrier: UPS
Received By: PWR

Completed by: Mary E. Kemp
On: 01-Feb-22

Reviewed by: Elizabeth A. Hurley
On: 01-Feb-22

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

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 4.6
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.

22020024

ALPHA ANALYTICAL
World Class Chemistry

Subcontract Chain of Custody

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

Alpha Job Number
L2204656

Client Information	Project Information	Regulatory Requirements/Report Limits
Client: Alpha Analytical Labs Address: Eight Walkup Drive Westborough, MA 01581-1019 Phone: 508.439.5176 Email: senright@alphalab.com	Project Location: MA Project Manager: Scott Enright **Turnaround & Deliverables Information** Due Date: Deliverables:	State/Federal Program: Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L2204656

Report to include Method Blank, LCS/LCSD:

Additional Comments: Send all results/reports to subreports@alphalab.com

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
22020024-001 ↓ 002	SH-105 SH-106	01-27-22 13:59 01-27-22 11:39	WATER WATER	Ethanol by EPA 1671 Revision A Ethanol by EPA 1671 Revision A	

ICE 4.6°C LTGS
HS ok 1/3 SH-106
PR 2/1/22

	Relinquished By:	Date/Time:	Received By:	Date/Time:
		1/31/22	(MS)	2/1/22 0957
Form No: AL_subcoc				

PR 2/1/22

APPENDIX E

NOAA AND US FISHERY AND WILDLIFE SERVICES

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:
Project Code: 2022-0011086
Project Name: 103 Fourth Avenue

February 22, 2022

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

To Whom It May Concern:

Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.

About Official Species Lists

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. Federal and non-Federal project proponents have responsibilities under the Act to consider effects on listed species.

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 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. 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 by returning to an existing project's page in IPaC.

Endangered Species Act Project Review

Please visit the "**New England Field Office Endangered Species Project Review and Consultation**" website for step-by-step instructions on how to consider effects on listed

species and prepare and submit a project review package if necessary:

https://www.fws.gov/newengland/endangeredspecies/project-review/index.html

NOTE Please do not use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

Additional Info About Section 7 of the Act
Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines 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 Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. 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

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) 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. Please contact NEFO if you would like more information.

Candidate species that appear on the enclosed species list have no current protections under the ESA. The species' occurrence on an official species list does not convey a requirement to consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

Migratory Birds

In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see:

https://www.fws.gov/birds/policies-and-regulations.php

Please feel free to contact us at **newengland@fws.gov** with your **Project Code** in the subject line if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Attachment(s): Official Species List

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

Project Code: 2022-0011086
Event Code: None
Project Name: 103 Fourth Avenue
Project Type: Mixed-Use Construction
Project Description: The location is 103 Fourth Avenue, Waltham, MA 02451. The property is approximately 7 acres. Lat: 42.3905654, Long: -71.2593011. The proposed construction is the development of a mixed-use manufacturing, laboratory, and office building.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.38965755,-71.25963631222062,14z

Counties: Middlesex County, Massachusetts

Endangered Species Act Species

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

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

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

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

---

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

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

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

IPaC User Contact Information

Name: Lindsey Aborn
Address: 98 North Washington Street
City: Boston
State: MA
Zip: 02114
Email laborn@sanbornhead.com
Phone: 7812485730

Drawn Action Area & Overlapping S7 Consultation Areas

Area of Interest (AOI) Information

Area : 2,317.18 acres

Feb 28 2022 19:16:12 Eastern Standard Time

Summary

Name	Count	Area(acres)	Length(mi)
Atlantic Sturgeon	0	0	N/A
Shortnose Sturgeon	0	0	N/A
Atlantic Salmon	0	0	N/A
Sea Turtles	0	0	N/A
Atlantic Large Whales	0	0	N/A
In or Near Critical Habitat	0	0	N/A

APPENDIX F

NATIONAL REGISTER OF HISTORICAL PLACES, WALTHAM, MASSACHUSETTS

NRHP
Historic Buildings
Demolished
Historic
Historic Districts
Parcels
Parking Lots
Paved Area
Unpaved Area

1" = 556 ft

Ref#	Property Name	State	County	City	Street & Number	Restricted Address	Listed Date
89001501	American Waltham Watch Company Historic District	MASSACHUSETTS	Middlesex	Waltham	185--241 Crescent St.	FALSE	9/28/1989
89001574	American Watch Tool Company	MASSACHUSETTS	Middlesex	Waltham	169 Elm St.	FALSE	9/28/1989
89001554	Andrews, Joseph, House	MASSACHUSETTS	Middlesex	Waltham	258 Linden St.	FALSE	9/28/1989
89001484	Baker, Charles, House	MASSACHUSETTS	Middlesex	Waltham	107 Adams St.	FALSE	9/28/1989
89001485	Baker, Charles, Property	MASSACHUSETTS	Middlesex	Waltham	119--121 Adams St.	FALSE	9/28/1989
89001488	Banks, E. Sybbill, House	MASSACHUSETTS	Middlesex	Waltham	27 Appleton St.	FALSE	9/28/1989
89001529	Beard, Josiah, House	MASSACHUSETTS	Middlesex	Waltham	70 School St.	FALSE	9/28/1989
89001544	Beth Eden Baptist Church	MASSACHUSETTS	Middlesex	Waltham	82 Maple St.	FALSE	9/28/1989
77001412	Boston Manufacturing Company	MASSACHUSETTS	Middlesex	Waltham	144 Moody St.	FALSE	12/22/1977
89001534	Boston Manufacturing Company Housing	MASSACHUSETTS	Middlesex	Waltham	380--410 River St.	FALSE	9/28/1989
89001535	Boston Manufacturing Company Housing	MASSACHUSETTS	Middlesex	Waltham	153--165 River St.	FALSE	9/28/1989
89001551	Brigham House	MASSACHUSETTS	Middlesex	Waltham	235 Main St.	FALSE	9/28/1989
89001493	Building at 202--204 Charles Street	MASSACHUSETTS	Middlesex	Waltham	202--204 Charles St.	FALSE	9/28/1989
89001566	Buttrick, Francis, House	MASSACHUSETTS	Middlesex	Waltham	44 Harvard St.	FALSE	9/28/1989
89001547	Buttrick, Francis, Library	MASSACHUSETTS	Middlesex	Waltham	741 Main St.	FALSE	9/28/1989
89001576	Byam, Charles, House	MASSACHUSETTS	Middlesex	Waltham	337 Crescent St.	FALSE	9/28/1989
79000359	Castle, The	MASSACHUSETTS	Middlesex	Waltham	415 South St.	FALSE	4/9/1979
89001526	Central Square Historic District	MASSACHUSETTS	Middlesex	Waltham	Roughly bounded by Church, Carter, Moody, M	FALSE	9/28/1989
89001503	Charles Street Workers' Housing Historic District	MASSACHUSETTS	Middlesex	Waltham	128--144 Charles St.	FALSE	9/28/1989
89001546	Christ Episcopal Church	MASSACHUSETTS	Middlesex	Waltham	750 Main St.	FALSE	9/28/1989
89001536	Clough, Benjamin F., House	MASSACHUSETTS	Middlesex	Waltham	42 Prospect St.	FALSE	9/28/1989
89001578	Colburn, Gilbert, House	MASSACHUSETTS	Middlesex	Waltham	110--112 Crescent St.	FALSE	9/28/1989
89001571	Company F State Armory	MASSACHUSETTS	Middlesex	Waltham	Curtis and Sharon Sts.	FALSE	9/28/1989
89001487	Dow, Lenoir, House	MASSACHUSETTS	Middlesex	Waltham	215 Adams St.	FALSE	9/28/1989
89001517	Dunbar--Stearns House	MASSACHUSETTS	Middlesex	Waltham	209 Linden St.	FALSE	3/9/1990
89001498	East Main Street Historic District	MASSACHUSETTS	Middlesex	Waltham	Roughly E. Main St. from Townsend St. to Cham	FALSE	9/28/1989
89001516	Eastern Middlesex County Second District Court	MASSACHUSETTS	Middlesex	Waltham	34 Linden St.	FALSE	9/28/1989
93001487	Fernald, Walter E., State School	MASSACHUSETTS	Middlesex	Waltham	200 Trapelo Rd.	FALSE	1/21/1994
89001548	First Congregational Church	MASSACHUSETTS	Middlesex	Waltham	730 Main St.	FALSE	9/28/1989
89001507	First Parish Church	MASSACHUSETTS	Middlesex	Waltham	87 School St.	FALSE	9/28/1989
89001577	Fisher, Henry N., House	MASSACHUSETTS	Middlesex	Waltham	120 Crescent St.	FALSE	9/28/1989
89001514	Fiske, Elijah, House	MASSACHUSETTS	Middlesex	Waltham	457 Lincoln St.	FALSE	9/28/1989
89001489	Fitch, Ezra, School	MASSACHUSETTS	Middlesex	Waltham	10 Ash St.	FALSE	9/28/1989
89001573	Flagg, Frederick, House	MASSACHUSETTS	Middlesex	Waltham	65 Fairmont Ave.	FALSE	9/28/1989
89001581	French, Daniel, School	MASSACHUSETTS	Middlesex	Waltham	38--40 Common St.	FALSE	9/28/1989
89001495	Fuller--Bemis House	MASSACHUSETTS	Middlesex	Waltham	119 Adams St.	FALSE	3/9/1990
89001545	Gale--Banks House	MASSACHUSETTS	Middlesex	Waltham	935 Main St.	FALSE	3/9/1990
89001561	Gibbs, William, House	MASSACHUSETTS	Middlesex	Waltham	14 Liberty St.	FALSE	9/28/1989
89001550	Gilbrae Inn	MASSACHUSETTS	Middlesex	Waltham	403 River St.	FALSE	9/28/1989
70000542	Gore Place	MASSACHUSETTS	Middlesex	Waltham	52 Gore St.	FALSE	12/30/1970
89001549	Grove Hill Cemetery	MASSACHUSETTS	Middlesex	Waltham	290 Main St.	FALSE	9/28/1989
89001532	Hagar--Smith--Livermore--Sanderson House	MASSACHUSETTS	Middlesex	Waltham	51 Sanders Ln.	FALSE	9/28/1989
89001572	Hager--Mead House	MASSACHUSETTS	Middlesex	Waltham	411 Main St.	FALSE	9/28/1989
89001579	Hall, Henry C., House	MASSACHUSETTS	Middlesex	Waltham	107 Crescent St.	FALSE	9/28/1989

Ref#	Property Name	State	County	City	Street & Number	Restricted Address	Listed Date
89001490	Hammond, Ephraim, House	MASSACHUSETTS	Middlesex	Waltham	265 Beaver St.	FALSE	9/28/1989
89001491	Hammond, Jonathan, House	MASSACHUSETTS	Middlesex	Waltham	311 Beaver St.	FALSE	9/28/1989
89001562	Hardy, Nahum, House	MASSACHUSETTS	Middlesex	Waltham	724 Lexington St.	FALSE	9/28/1989
89001543	Harrington Block	MASSACHUSETTS	Middlesex	Waltham	376--390 Moody St.	FALSE	9/28/1989
89001508	Harrington, Samuel, House	MASSACHUSETTS	Middlesex	Waltham	475 South St.	FALSE	9/28/1989
89001528	Hill, Rev. Thomas, House	MASSACHUSETTS	Middlesex	Waltham	132 Church St.	FALSE	9/28/1989
89001524	Hobbs Brook Basin Gate House	MASSACHUSETTS	Middlesex	Waltham	Off Winter St. at mouth of Hobbs Brook	FALSE	9/28/1989
89001565	Holbrook, Richard, Houses	MASSACHUSETTS	Middlesex	Waltham	27 Heard St.	FALSE	9/28/1989
89001522	Johnson, Edwin C., House	MASSACHUSETTS	Middlesex	Waltham	8 Caldwell Rd.	FALSE	9/28/1989
89001564	Johnson, Newell D., House	MASSACHUSETTS	Middlesex	Waltham	428 Lexington St.	FALSE	9/28/1989
87001397	Lawrence, Phineas, House	MASSACHUSETTS	Middlesex	Waltham	257 Trapelo Rd.	FALSE	8/20/1987
89001504	Lawton Place Historic District	MASSACHUSETTS	Middlesex	Waltham	Lawton Pl. between Amory Rd. and Jackson St.	FALSE	9/28/1989
89001521	Libby, Nelson F., House	MASSACHUSETTS	Middlesex	Waltham	147--149 Weston St.	FALSE	9/28/1989
89001515	Linden Street Bridge	MASSACHUSETTS	Middlesex	Waltham	Boston & Maine Railroad over Linden St.	FALSE	9/28/1989
89001567	Lord's Castle	MASSACHUSETTS	Middlesex	Waltham	211 Hammond St.	FALSE	9/28/1989
89001505	Lyman Street Historic District	MASSACHUSETTS	Middlesex	Waltham	Roughly Lyman St. from Church to Main Sts.	FALSE	9/28/1989
89001540	Martin, Aaron, House	MASSACHUSETTS	Middlesex	Waltham	786 Moody St.	FALSE	9/28/1989
89001486	Martin, Aaron, Houses	MASSACHUSETTS	Middlesex	Waltham	188--194 Adams St.	FALSE	9/28/1989
93001482	Metropolitan State Hospital	MASSACHUSETTS	Middlesex	Waltham	475 Trapelo Rd.	FALSE	1/21/1994
89001541	Moody Street Fire Station	MASSACHUSETTS	Middlesex	Waltham	533 Moody St.	FALSE	9/28/1989
89001502	Moody Street Historic District	MASSACHUSETTS	Middlesex	Waltham	Moody and Crescent Sts.	FALSE	3/9/1990
89001497	Mount Feake Cemetery	MASSACHUSETTS	Middlesex	Waltham	203 Prospect St.	FALSE	9/28/1989
89001525	Mt. Prospect School for Boys	MASSACHUSETTS	Middlesex	Waltham	90 Worcester Ln.	FALSE	3/9/1990
89001580	Murray, Robert, House	MASSACHUSETTS	Middlesex	Waltham	85 Crescent St.	FALSE	9/28/1989
89001539	Newton Street Bridge	MASSACHUSETTS	Middlesex	Waltham	Newton St. at River St. over the Charles River	FALSE	9/28/1989
89001500	North Lexington Street Historic District	MASSACHUSETTS	Middlesex	Waltham	508--536 N. Lexington St.	FALSE	9/28/1989
89001533	O'Hara Waltham Dial Company	MASSACHUSETTS	Middlesex	Waltham	74 Rumford Ave.	FALSE	9/28/1989
89001492	Olcott, John E., House	MASSACHUSETTS	Middlesex	Waltham	35--37 Central St.	FALSE	9/28/1989
89001483	Oxford, The	MASSACHUSETTS	Middlesex	Waltham	4 Adams St.	FALSE	9/28/1989
75000291	Paine, Robert Treat, Jr., House	MASSACHUSETTS	Middlesex	Waltham	577 Beaver St.	FALSE	10/7/1975
89001559	Peck, John M., House	MASSACHUSETTS	Middlesex	Waltham	27 Liberty St.	FALSE	9/28/1989
89001499	Piety Corner Historic District	MASSACHUSETTS	Middlesex	Waltham	Roughly Bacon and Lexington Sts.	FALSE	3/9/1990
89001538	Potter--O'Brian House	MASSACHUSETTS	Middlesex	Waltham	206 Newton St.	FALSE	9/28/1989
89001568	Prospect House	MASSACHUSETTS	Middlesex	Waltham	11 Hammond St.	FALSE	9/28/1989
89001496	Robbins, Royal E., School	MASSACHUSETTS	Middlesex	Waltham	58 Chestnut St.	FALSE	9/28/1989
89001563	Sanderson, John, House	MASSACHUSETTS	Middlesex	Waltham	562 Lexington St.	FALSE	9/28/1989
89001556	Sanderson, Nathan, I, House	MASSACHUSETTS	Middlesex	Waltham	107 Lincoln St.	FALSE	9/28/1989
89001513	Sanderson, Nathan, II, House	MASSACHUSETTS	Middlesex	Waltham	111 Lincoln St.	FALSE	9/28/1989
89001557	Sanderson--Clark Farmhouse	MASSACHUSETTS	Middlesex	Waltham	75 Lincoln/26 Lincoln Ter.	FALSE	9/28/1989
89001560	Smith, Marshall, House	MASSACHUSETTS	Middlesex	Waltham	26 Liberty St.	FALSE	9/28/1989
89001558	Smith, Perez, House	MASSACHUSETTS	Middlesex	Waltham	46 Lincoln St.	FALSE	9/28/1989
89001569	St. Charles Borromeo Church	MASSACHUSETTS	Middlesex	Waltham	Hall and Cushing Sts.	FALSE	9/28/1989
89001527	St. Mary's Roman Catholic Church Complex	MASSACHUSETTS	Middlesex	Waltham	133 School St.	FALSE	9/28/1989
89001509	Stanley, Leonard W., House	MASSACHUSETTS	Middlesex	Waltham	23--25 Taylor St.	FALSE	9/28/1989

Ref#	Property Name	State	County	City	Street & Number	Restricted Address	Listed Date
89001542	Stark Building	MASSACHUSETTS	Middlesex	Waltham	414 Moody St.	FALSE	9/28/1989
89001552	Stark, Robert M., House	MASSACHUSETTS	Middlesex	Waltham	176 Main St.	FALSE	9/28/1989
89001518	Stearns, Amos, House	MASSACHUSETTS	Middlesex	Waltham	1079 Trapelo Rd.	FALSE	9/28/1989
89001553	Stewart, Henry, House	MASSACHUSETTS	Middlesex	Waltham	294 Linden St.	FALSE	9/28/1989
89001530	Swasey, James, House	MASSACHUSETTS	Middlesex	Waltham	30 Common St.	FALSE	9/28/1989
89001555	Tyler, Frank J., House	MASSACHUSETTS	Middlesex	Waltham	238 Linden St.	FALSE	9/28/1989
89001494	United States Watch Company	MASSACHUSETTS	Middlesex	Waltham	260 Charles St.	FALSE	9/28/1989
86001248	US Post Office--Waltham Main	MASSACHUSETTS	Middlesex	Waltham	774 Main St.	FALSE	5/30/1986
70000737	Vale, The	MASSACHUSETTS	Middlesex	Waltham	Lyman and Beaver Sts.	FALSE	12/30/1970
89001537	Waltham Gas and Electric Company Generating Plan	MASSACHUSETTS	Middlesex	Waltham	96 Pine St.	FALSE	9/28/1989
89001506	Waltham Gas Light Company	MASSACHUSETTS	Middlesex	Waltham	2 Cooper St.	FALSE	9/28/1989
89001531	Waltham High School	MASSACHUSETTS	Middlesex	Waltham	55 School St.	FALSE	9/28/1989
89001570	Waltham Water Works Shop	MASSACHUSETTS	Middlesex	Waltham	92 Felton St.	FALSE	9/28/1989
89001520	Warren, Nathan, House	MASSACHUSETTS	Middlesex	Waltham	50 Weston St.	FALSE	3/9/1990
89001523	Wellington, Benjamin, House	MASSACHUSETTS	Middlesex	Waltham	56 Whittier St.	FALSE	9/28/1989
89001512	Wellington, William, House	MASSACHUSETTS	Middlesex	Waltham	775 Trapelo Rd.	FALSE	9/28/1989
89001511	Wellington--Castner House	MASSACHUSETTS	Middlesex	Waltham	685 Trapelo Rd.	FALSE	9/28/1989
89001575	Wetherbee House	MASSACHUSETTS	Middlesex	Waltham	357 Crescent St.	FALSE	9/28/1989
89001519	White, Warren, House	MASSACHUSETTS	Middlesex	Waltham	192 Warren St.	FALSE	9/28/1989
89001510	Whitney--Farrington--Cook House	MASSACHUSETTS	Middlesex	Waltham	385 Trapelo Rd.	FALSE	9/28/1989
99001126	Wilson's Diner	MASSACHUSETTS	Middlesex	Waltham	507 Main St.	FALSE	9/22/1999