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 31, 2022
File No. 4055.01

Re: Notice of Intent for the Remediation General Permit
Temporary Construction Dewatering
1185 Washington Street
Newton, Massachusetts

Dear Sir/Madam:

On behalf Mark Kempton, LLC (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 the Dunstan East Project in Newton, 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. Callahan, Inc. is the construction manager for the project and will have responsibility for the subcontractors performing the dewatering activities at the Site. Subcontractors working for Callahan, Inc. 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 three residential building with commercial spaces on the first floor with below grade parking. The work is anticipated to be completed within 24 months, with dewatering occurring for less than 12 months. The location of the Site and the discharge location into Cheese Cake Brook via private on-Site storm water catch basins are shown on Figure 1 and Figure 2.

The proposed Dunstan East development is approximately three acres and encompasses the properties of 1149-1151, 1169, 1171-1173, 1179, and 1185 Washington Street, 12, 18, and 24-25 Kempton Place, and 32-34 Dunstan Street in Newton, Massachusetts. The site is bordered by Cheese Cake Brook and residential properties to the north, Washington Street to the south, Dunstan Street to the west, and commercial properties to the east.

The existing twelve parcels predominantly consist of commercial development and limited residential use. Existing site grades generally slope down to the north toward Cheese Cake Brook and range from approximately elevation (El.) 52 to El. 53 near Washington Street to

El. 34 to El. 36 along the northern property boundary. We understand that the existing buildings and structures occupying the site will be demolished as part of the project.

The proposed development consists of the construction of three buildings extending from Dunstan Street to the western side of Kempton Place and north of Washington Street. The proposed buildings range from five to six stories with one or two levels of below-grade parking.

Groundwater is anticipated to be encountered between approximately 3.0 and 21.5 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 February 15 and 16, 2022, Sanborn Head, the project's environmental consultant, collected four 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-301, SH-5W, and SH-218 on Figure 2. The receiving water sample was collected from the surface water immediately downstream of the closest outlet, which empties into Cheese Cake 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 on-Site private storm water catch basins, which discharge into Cheese Cake 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, chlorine, and SVOCs 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. A skimmer will be used in the weir tanks to remove any oil that may be present. 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 Cheese Cake 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.

An odor control suppressant is proposed for use on various excavated soils throughout the project. If necessary, a foam neutralization system for the application of Foamtrol 100 (foam neutralizer) will be installed at the weir tank to counteract the effects of any odor control suppressant that will be used on excavated soils during the project. Suspended solids/particles do not effectively settle when the odor suppressant is in the water; therefore, the Foamtrol 100 (foam neutralizer) will be added to aid in sediment settling. The addition of the Foamtrol 100 will not add any pollutant in concentrations which exceed permit effluent limitations, will not exceed any applicable water quality standard, and will not add any pollutants that would justify the application of permit conditions that are different from or absent in this permit. Safety Data Sheets for sulfuric acid and for Foamtrol 100 are included in Appendix E.

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 F. 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 G.

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 – Site 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 – Additive Information
Appendix F – NOAA and US Fishery and Wildlife Services
Appendix G – National Register of Historic Places – Newton, MA

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

TABLES

Table 1
Groundwater Analytical Data
Dunstan East
Newton, Massachusetts

LOCATION	Units	SH-301	SH-5W	SH-218
SAMPLING DATE		2/15/2022	2/15/2022	2/16/2022
SAMPLE TYPE		WATER	WATER	WATER
General Chemistry				
Chromium, Trivalent	µg/L	**271**	<10	**45**
Solids, Total Suspended	mg/L	**19,000**	**17,000**	**2,100**
Cyanide, Total	µg/L	<5	<5	**8**
Chlorine, Total Residual	µg/L	<20	<20	<20
pH (H)	SU	**6.7**	**6.5**	**6.2**
Nitrogen, Ammonia	µg/L	<375	**212**	<75
TPH, SGT-HEM	mg/L	<4	**178**	<4
Phenolics, Total	µg/L	<30	<30	<30
Chromium, Hexavalent	µg/L	<10	<10	<10
Hardness	mg/L	**272**	**165**	**300**
Chloride	mg/L	**222**	**13.6**	**1,860**
Ethanol	mg/L	<20	<20	<20
Total Metals				
Antimony, Total	µg/L	<4	<4	<4
Arsenic, Total	µg/L	**18.58**	**37.9**	**5.58**
Cadmium, Total	µg/L	**0.85**	**0.27**	**0.58**
Chromium, Total	µg/L	**271.4**	**6.49**	**45.4**
Copper, Total	µg/L	**215.8**	**19**	**53.7**
Iron, Total	µg/L	**96,900**	**13,000**	**17,600**
Lead, Total	µg/L	**72.74**	**23.42**	**29.4**
Mercury, Total	µg/L	<0.2	<0.2	<0.2
Nickel, Total	µg/L	**118.1**	**6.46**	**25.42**
Selenium, Total	µg/L	**10.22**	<5	**6.33**
Silver, Total	µg/L	**1.13**	<0.4	<0.4
Zinc, Total	µg/L	**280**	**93.28**	**72.6**
Microextractables				
1,2-Dibromoethane	µg/L	<0.01	<0.01	<0.01
1,2-Dibromo-3-chloropropane	µg/L	<0.01	<0.01	<0.01
1,2,3-Trichloropropane	µg/L	<0.03	<0.03	<0.03
Polychlorinated Biphenyls				
Aroclor 1016	µg/L	<0.25	<0.25	<0.25
Aroclor 1221	µg/L	<0.25	<0.25	<0.25
Aroclor 1232	µg/L	<0.25	<0.25	<0.25
Aroclor 1242	µg/L	<0.25	<0.25	<0.25
Aroclor 1248	µg/L	<0.25	<0.25	<0.25
Aroclor 1254	µg/L	<0.25	<0.25	<0.25
Aroclor 1260	µg/L	<0.2	<0.2	<0.2

Table 1
Groundwater Analytical Data
Dunstan East
Newton, Massachusetts

LOCATION	Units	SH-301	SH-5W	SH-218
SAMPLING DATE		2/15/2022	2/15/2022	2/16/2022
SAMPLE TYPE		WATER	WATER	WATER
Semivolatile Organic Compounds				
Bis(2-ethylhexyl)phthalate	µg/L	**20.0**	**22.7**	<2.2
Butyl benzyl phthalate	µg/L	<5	<50	<5
Di-n-butylphthalate	µg/L	<5	<50	<5
Di-n-octylphthalate	µg/L	<5	<50	<5
Diethyl phthalate	µg/L	<5	<50	<5
Dimethyl phthalate	µg/L	<5	<50	<5
Acenaphthene	µg/L	<5	**30.8**	<0.1
Fluoranthene	µg/L	<5	**4.87**	<0.1
Naphthalene	µg/L	**273**	**76.4**	<0.1
Benzo(a)anthracene	µg/L	<5	**1.83**	<0.1
Benzo(a)pyrene	µg/L	<5	<1	<0.1
Benzo(b)fluoranthene	µg/L	<5	<1	<0.1
Benzo(k)fluoranthene	µg/L	<5	<1	<0.1
Chrysene	µg/L	<5	**1.84**	<0.1
Acenaphthylene	µg/L	<5	<1	<0.1
Anthracene	µg/L	<5	<1	<0.1
Benzo(ghi)perylene	µg/L	<5	<1	<0.1
Fluorene	µg/L	<5	<1	<0.1
Phenanthrene	µg/L	<5	**164**	<0.1
Dibenzo(a,h)anthracene	µg/L	<5	<1	<0.1
Indeno(1,2,3-cd)pyrene	µg/L	<5	<1	<0.1
Pyrene	µg/L	<5	**19.4**	<0.1
Pentachlorophenol	µg/L	<50	<10	<1
Volatile Organic Compounds				
Methylene chloride	µg/L	<20	<2	<1
1,1-Dichloroethane	µg/L	<30	<3	<1.5
Carbon tetrachloride	µg/L	<20	<2	<1
1,1,2-Trichloroethane	µg/L	<30	<3	<1.5
Tetrachloroethene	µg/L	<20	<2	<1
1,2-Dichloroethane	µg/L	<30	<3	<1.5
1,1,1-Trichloroethane	µg/L	<40	<4	<2
Benzene	µg/L	<20	**18**	<1
Toluene	µg/L	**590**	**2.1**	<1
Ethylbenzene	µg/L	**1,400**	**20**	<1
Vinyl chloride	µg/L	<20	<2	<1
1,1-Dichloroethene	µg/L	<20	<2	<1
cis-1,2-Dichloroethene	µg/L	<20	<2	<1
Trichloroethene	µg/L	<20	<2	<1
1,2-Dichlorobenzene	µg/L	<100	<10	<5
1,3-Dichlorobenzene	µg/L	<100	<10	<5
1,4-Dichlorobenzene	µg/L	<100	<10	<5
p/m-Xylene	µg/L	**4,300**	**27**	<2
o-xylene	µg/L	**1,600**	**6.7**	<1
Xylenes, Total	µg/L	**5,900**	**34**	<1
Acetone	µg/L	<200	**86**	<10
Methyl tert butyl ether	µg/L	<200	<20	<10
Tert-Butyl Alcohol	µg/L	<2,000	<200	<100
Tertiary-Amyl Methyl Ether	µg/L	<400	<40	<20
1,4-Dioxane	µg/L	<100	<10	<5

Table 1
Groundwater Analytical Data
Dunstan East
Newton, Massachusetts

NOTES:

1. Groundwater samples were collected by Sanborn, Head & Associates, Inc. (Sanborn Head) on the indicated dates and were analyzed by Alpha Analytical, Inc. of Westborough, MA.

2. Detections above laboratory reporting limits are bolded.

3. Abbreviations:
TPH = Total Petroleum Hydrocarbons
SGT-HEM = Silica Gel Treated Hexane Extractable Material
PCB = Polychlorinated Biphenyls
GW = Groundwater
< = the analyte was not detected above the following laboratory reporting limit
SU = Standard Units
mg/L = milligrams per liter
µg/L = microgram per liter

Table 2
Surface Water Analytical Data
Dunstan East
Newton, Massachusetts

LOCATION	Units	CHEESE CAKE BROOK - SPOT 2
SAMPLING DATE		**2/16/2022**
LAB SAMPLE ID		**L2208205-03**
SAMPLE TYPE		**SW**
General Chemistry		
pH (H)	SU	**7.0**
Nitrogen, Ammonia	µg/L	**301**
Hardness	mg/L	**87.6**
Total Metals		
Antimony, Total	µg/L	<4
Arsenic, Total	µg/L	**1.33**
Cadmium, Total	µg/L	<0.2
Chromium, Total	µg/L	<1
Copper, Total	µg/L	**4.99**
Iron, Total	µg/L	**678**
Lead, Total	µg/L	**9.15**
Mercury, Total	µg/L	<0.2
Nickel, Total	µg/L	<2
Selenium, Total	µg/L	<5
Silver, Total	µg/L	<0.4
Zinc, Total	µg/L	**39.46**

NOTES:

1. Sample CHEESE CAKE BROOK - SPOT 2 was collected by Sanborn, Head & Associates, Inc. (Sanborn Head) on the indicated date and analyzed by Alpha Analytical, Inc. of Westborough, MA.

2. Detections above laboratory reporting limits are bolded.

3. Abbreviations:
TPH = Total Petroleum Hydrocarbons
SGT-HEM = Silica Gel Treated Hexane Extractable Material
PCB = Polychlorinated Biphenyls
SW = Surface Water
< = the analyte was not detected above the following laboratory reporting limit
SU = Standard Units
mg/L = milligrams per liter
µg/L = microgram per liter

FIGURES

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: Chelsea, Massachusetts, REV: 1985

Drawn By: L. Zuchowski
Designed By: R. Henderson
Reviewed By: R. Henderson
Project No: 4055.01
Date: March 2022

SCALE: 1:500

SANBORN HEAD

Figure 1

Locus Plan

NPDES Remediation General Permit

Washington St
West Newton, Massachusetts

NOTES:

1. THE BASE MAP WAS DRAWN FROM A PLAN ENTITLED, "ALTA/NSPS LAND TITLE SURVEY", PREPARED BY CONTROL POINT ASSOCIATES, INC. OF SOUTHBOROUGH, MA, RECEIVED MAY 8, 2019 WITH AN ORIGINAL SCALE OF 1" = 40'.
2. APPROXIMATE LOCATIONS OF EXPLORATIONS ARE BASED ON TAPE MEASUREMENTS MADE IN THE FIELD RELATIVE TO PROMINENT SITE FEATURES. THIS DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.

LEGEND:

- APPROXIMATE PROPERTY BOUNDARIES
- APPROXIMATE SITE AREA
- SH-301 — APPROXIMATE LOCATION AND DESIGNATION OF PROPOSED TEST BORING INSTALLED AS MONITORING WELL FOR PLUME EVALUATION
- SH-213 — APPROXIMATE LOCATION AND DESIGNATION OF MONITORING WELL OBSERVED BY SANBORN HEAD (MAY/JUNE 2019)
- SH-1W — APPROXIMATE LOCATION AND DESIGNATION OF PREVIOUSLY INSTALLED MONITORING WELL OBSERVED BY SANBORN HEAD
- EFFLUENT SAMPLE — APPROXIMATE LOCATION OF SURFACE WATER COLLECTED BY SANBORN HEAD ON FEBRUARY 16, 2022

SANBORN | HEAD

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

NO.	DATE	DESCRIPTION	BY

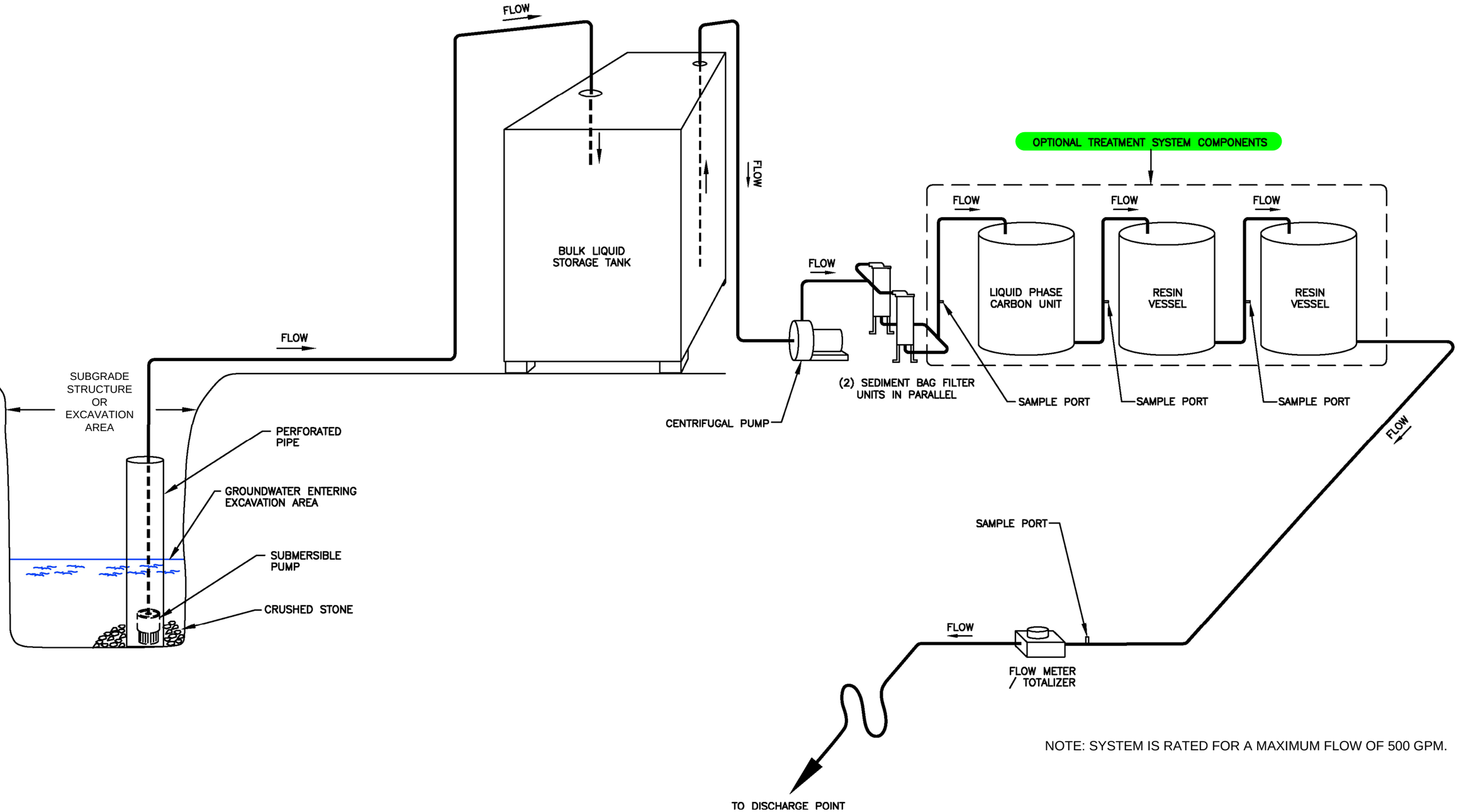
DRAWN BY:	M.REVERE
DESIGNED BY:	L.ABORN
REVIEWED BY:	K.STETSON
PROJECT MGR:	L.GARVEY
PIC:	M.HEIL
DATE:	MARCH 2022

NPDES REMEDIATION GENERAL PERMIT
DUNSTAN EAST
WASHINGTON STREET, WEST NEWTON, MASSACHUSETTS

EXPLORATION LOCATION PLAN

PROJECT NUMBER: 4055.01

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: M. HEIL
DATE: MARCH 2022

NPDES REMEDIATION GENERAL PERMIT
DUNSTAN EAST
WEST NEWTON, MASSACHUSETTS

PROJECT NUMBER: 4055.01

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:
Dunstan East</td><td colspan="3">Site address: 1185
Street: Washington Street</td></tr>
<tr><td>City: Newton</td><td>State: MA</td><td>Zip: 02465</td></tr>
<tr><td rowspan="4">2. Site owner
Mark Kempton, LLC

Owner is (check one): ☐ Federal ☐ State/Tribal ■ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: Scott Lombardi</td></tr>
<tr><td colspan="2">Telephone: (781) 573-3629</td><td>Email: slombardi@markdevllc.com</td></tr>
<tr><td colspan="3">Mailing address: 257 Grove Street, Suite 2-150
Street:</td></tr>
<tr><td>City: Newton</td><td>State: MA</td><td>Zip: 02466</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
Callahan, Inc.</td><td colspan="3">Contact Person: Robert Sanda</td></tr>
<tr><td colspan="2">Telephone: 508-279-0012</td><td>Email: rsanda@callahan-inc.com</td></tr>
<tr><td colspan="3">Mailing address:
Street: 80 First Street</td></tr>
<tr><td>City: Bridgewater</td><td>State: MA</td><td>Zip: 02324</td></tr>
<tr><td>4. NPDES permit number assigned by EPA:
NA

NPDES permit is (check all that apply: ☐ RGP ☐ DGP ■ CGP
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td><td colspan="3">5. Other regulatory program(s) that apply to the site (check all that apply):
■ MA Chapter 21e; list RTN(s): 3-37336
☐ 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):
Cheese Cake Brook	MA72-29	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.	10.3 - 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.	10.24 - 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:

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, SVOCs, VOCs, LNAPL	
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): Cheese Cake Brook	Outfall location(s): (Latitude, Longitude) Lat: 42.350462, Long: -71.220876
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): 4/2022 - 3/2023 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="5">☐ I – Petroleum-Related Site Remediation
☐ II – Non-Petroleum-Related Site Remediation
■ III – Contaminated Site Dewatering
☐ IV – Dewatering of Pipelines and Tanks
☐ V – Aquifer Pump Testing
☐ VI – Well Development/Rehabilitation
☐ VII – Collection Structure Dewatering/Remediation
☐ VIII – Dredge-Related Dewatering</td><td colspan="2">a. If Activity Category I or II: (check all that apply)

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

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

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✔	3	4500NH3-	375	212	212	Report mg/L	---
Chloride		✔	3	300.0	500	1860000	698530	Report µg/l	---
Total Residual Chlorine	✔		3	4500CL-D	20	ND	ND	0.2 mg/L	0.011 mg/L
Total Suspended Solids		✔	3	2540D	100000	19000000	12700000	30 mg/L	---
Antimony	✔		3	200.8	4.0	ND	ND	206 µg/L	
Arsenic		✔	3	200.8	1.0	37.9	20.68	104 µg/L	
Cadmium		✔	3	200.8	0.2	.85	.567	10.2 µg/L	
Chromium III		✔	3	200.8	1	271	ND	323 µg/L	
Chromium VI	✔		3	7196A	1	ND	ND	323 µg/L	
Copper		✔	3	200.8	1.0	215.8	96.167	242 µg/L	
Iron		✔	3	19,200.7	50	96900	42500	5,000 µg/L	1000 ug/L
Lead		✔	3	200.8	1.0	72.74	41.85	160 µg/L	
Mercury	✔		3	245.1	0.2	ND	ND	0.739 µg/L	
Nickel		✔	3	200.8	2	118.1	49.99	1,450 µg/L	
Selenium		✔	3	200.8	5	10.22	8.275	235.8 µg/L	
Silver		✔	3	200.8	0.4	1.13	1.13	35.1 µg/L	
Zinc		✔	3	200.8	10	280	148.62	420 µg/L	
Cyanide		✔	3	4500CN-C	5	8	8	178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX		✔	3	multiple	NA	7890	3982.05	100 µg/L	---
Benzene		✔	3	624.1	2	18	18	5.0 µg/L	---
1,4 Dioxane	✔		3	624.1-SIM	10	ND	ND	200 µg/L	---
Acetone		✔	3	624.1	10	86	86	7.97 mg/L	---
Phenol	✔		3	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	✔		3	624.1	1	ND	ND	4.4 µg/L	
1,2 Dichlorobenzene	✔		3	624.1	5	ND	ND	600 µg/L	---
1,3 Dichlorobenzene	✔		3	624.1	5	ND	ND	320 µg/L	---
1,4 Dichlorobenzene	✔		3	624.1	5	ND	ND	5.0 µg/L	---
Total dichlorobenzene	✔		3	624.1	15	ND	ND	763 µg/L in NH	---
1,1 Dichloroethane	✔		3	624.1	1.5	ND	ND	70 µg/L	---
1,2 Dichloroethane	✔		3	624.1	1.5	ND	ND	5.0 µg/L	---
1,1 Dichloroethylene	✔		3	624.1	1	ND	ND	3.2 µg/L	---
Ethylene Dibromide	✔		3	504.1	0.01	ND	ND	0.05 µg/L	---
Methylene Chloride	✔		3	624.1	1	ND	ND	4.6 µg/L	---
1,1,1 Trichloroethane	✔		3	624.1	2	ND	ND	200 µg/L	---
1,1,2 Trichloroethane	✔		3	624.1	1.5	ND	ND	5.0 µg/L	---
Trichloroethylene	✔		3	624.1	1	ND	ND	5.0 µg/L	---
Tetrachloroethylene	✔		3	624.1	1	ND	ND	5.0 µg/L	
cis-1,2 Dichloroethylene	✔		3	624.1	1	ND	ND	70 µg/L	---
Vinyl Chloride	✔		3	624.1	1	ND	ND	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates		✔	3	625.1	2.2	22.7	21.35	190 µg/L	----
Diethylhexyl phthalate	✔		3	625.1	5	ND	ND	101 µg/L	
Total Group I PAHs		✔	3	625.1	0.7	3.67	3.67	1.0 µg/L	---
Benzo(a)anthracene		✔	3	625.1	0.1	1.83	1.83	As Total PAHs	
Benzo(a)pyrene	✔		3	625.1	0.1	ND	ND		
Benzo(b)fluoranthene	✔		3	625.1	0.1	ND	ND		
Benzo(k)fluoranthene	✔		3	625.1	0.1	ND	ND		
Chrysene		✔	3	625.1	0.1	1.84	1.84		
Dibenzo(a,h)anthracene	✔		3	625.1	0.1	ND	ND		
Indeno(1,2,3-cd)pyrene	✔		3	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		✔	3	625.1	0.8	219.07	219.07	100 µg/L	---
Naphthalene		✔	3	625.1	1	273	174.7	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✔		3	608.3	0.25	ND	ND	0.000064 µg/L	---
Pentachlorophenol	✔		3	625.1	1	ND	ND	1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons		✔	3	140	4000	178000	178000	5.0 mg/L	---
Ethanol	✔		3	1671A	20	ND	ND	Report mg/L	---
Methyl-tert-Butyl Ether	✔		3	624.1	10	ND	ND	70 µg/L	
tert-Butyl Alcohol	✔		3	624.1	100	ND	ND	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✔		3	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		✔	3	4500H+B	NA	6.7	6.46		
Hardness		✔	3	3005A	660	300000	245666		
Total Chromium		✔	3	200.8	1	271.4	107.76		

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:

Treatment will consist of oil/water separation, settling and filtration. Treatment will be supplemented as needed to meet effluent discharge requirements using the methods indicated above.

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 and a skimmer will be used to remove oil, if present. 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:	NA

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

F. Chemical and additive information

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

☐ Algaecides/biocides ■ Antifoams ☐ Coagulants ☐ Corrosion/scale inhibitors ☐ Disinfectants ☐ Flocculants ☐ Neutralizing agents ☐ Oxidants ☐ Oxygen ☐ scavengers ■ pH conditioners ☐ Bioremedial agents, including microbes ☐ Chlorine or chemicals containing chlorine ☐ Other; if so, specify:

2. Provide the following information for each chemical/additive, using attachments, if necessary:
Refer to cover letter
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 F

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 G

☐ **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 G

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 Safety Data Sheets
Appendix F includes correspondence from US Fishery and Wildlife Service
Appendix G includes a list of Historic Places in Newton

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: 3/31/22
Print Name and Title: Robert Sanda, Callahan, Inc.	

APPENDIX B

MASSACHUSETTS CATEGORY 5 WATERS AND SITE ASSESSMENT MAP

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

Waterbody	AU_ID	Description	Size	Units	Impairment	ATTAINS Action ID
					Harmful Algal Blooms	33826
					Nutrient/Eutrophication Biological Indicators	33826
					Odor	33826
					Oil and Grease	
					PCBs in Fish Tissue	
					Phosphorus, Total	33826
					Salinity	
					Temperature	
					Transparency / Clarity	33826
Cheese Cake Brook	MA72-29	Emerges south of Route 16, Newton to mouth at confluence with the Charles River, Newton.	1.40	Miles	(Alteration in stream-side or littoral vegetative covers*)	
					(Other anthropogenic substrate alterations*)	
					Algae	40317
					Dissolved Oxygen Supersaturation	40317
					Escherichia Coli (E. Coli)	32380
					Fish Bioassessments	
					Phosphorus, Total	40317
Chicken Brook	MA72-34	Source, outlet Waseeka Sanctuary Pond, Holliston to mouth at confluence with the Charles River, Medway.	7.40	Miles	Escherichia Coli (E. Coli)	
Crystal Lake	MA72030	Newton.	27.00	Acres	Harmful Algal Blooms	
Fuller Brook	MA72-18	Headwater south of Route 135, Needham to mouth at confluence with Waban Brook, Wellesley (one culverted portion approximately 360 feet (0.07mile)).	4.30	Miles	(Physical substrate habitat alterations*)	
					Escherichia Coli (E. Coli)	32374
					Nutrient/Eutrophication Biological Indicators	40317
					Sedimentation/Siltation	
Hobbs Brook	MA72-45	Headwaters west of Bedford Road, Lincoln to inlet Cambridge Reservoir, Upper Basin, Lincoln	2.40	Miles	Chloride	
Hobbs Brook	MA72-46	From outlet Cambridge Reservoir, Waltham to mouth at confluence with Stony Brook, Weston.	1.80	Miles	Chloride	
Hopping Brook	MA72-35	Source in Cedar Swamp, Holliston to mouth at confluence with the Charles River, Bellingham/Medway.	4.90	Miles	Escherichia Coli (E. Coli)	
Jamaica Pond	MA72052	Boston.	67.00	Acres	(Eurasian Water Milfoil, Myriophyllum Spicatum*)	
					Dissolved Oxygen	
					Phosphorus, Total	

MassDEP - Bureau of Waste Site Cleanup

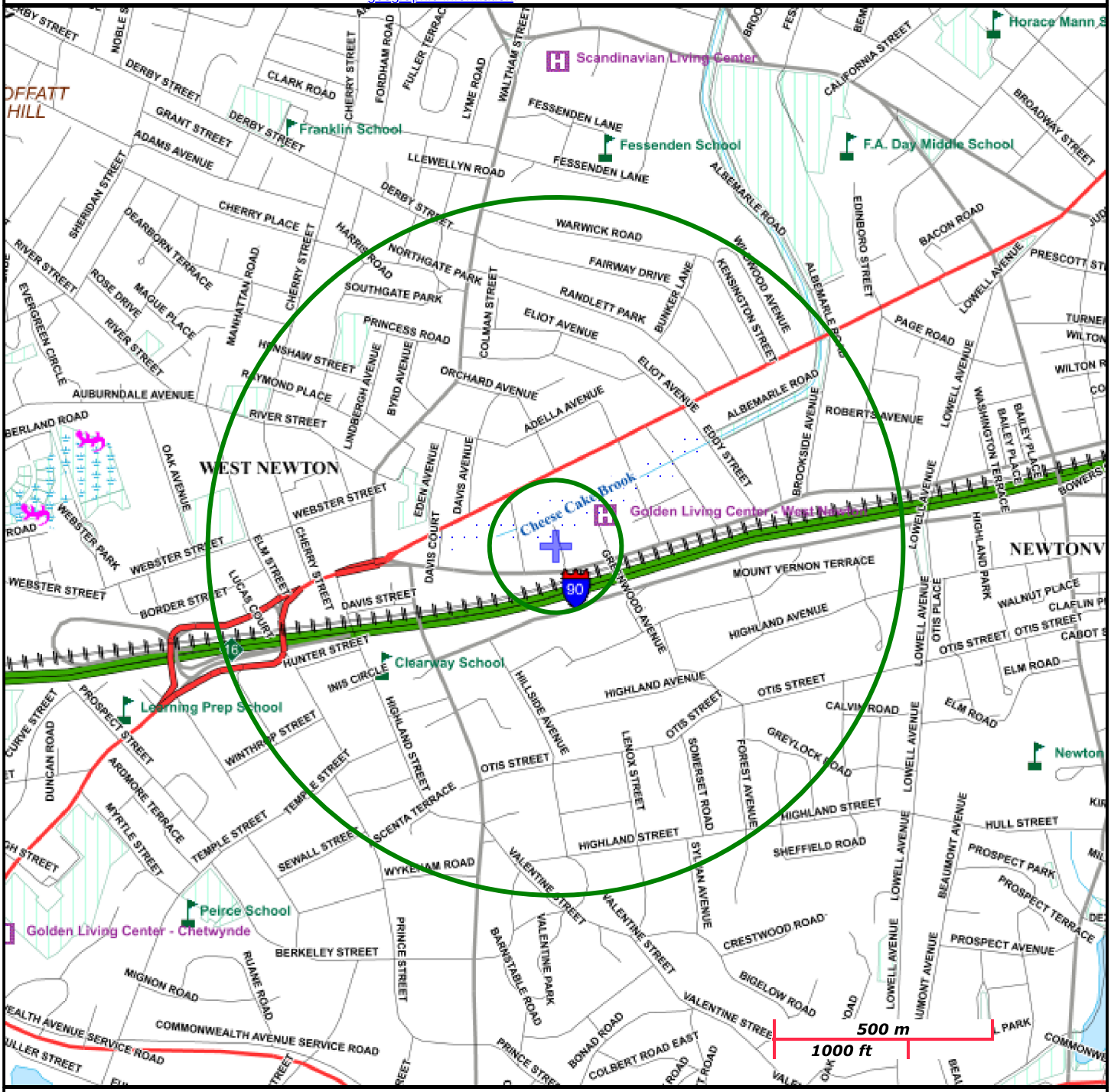
Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:
DUNSTAN EAST
1185 WASHINGTON STREET NEWTON, MA
3-000037336

NAD83 UTM Meters:
4690998mN , 317045mE (Zone: 19)
March 8, 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

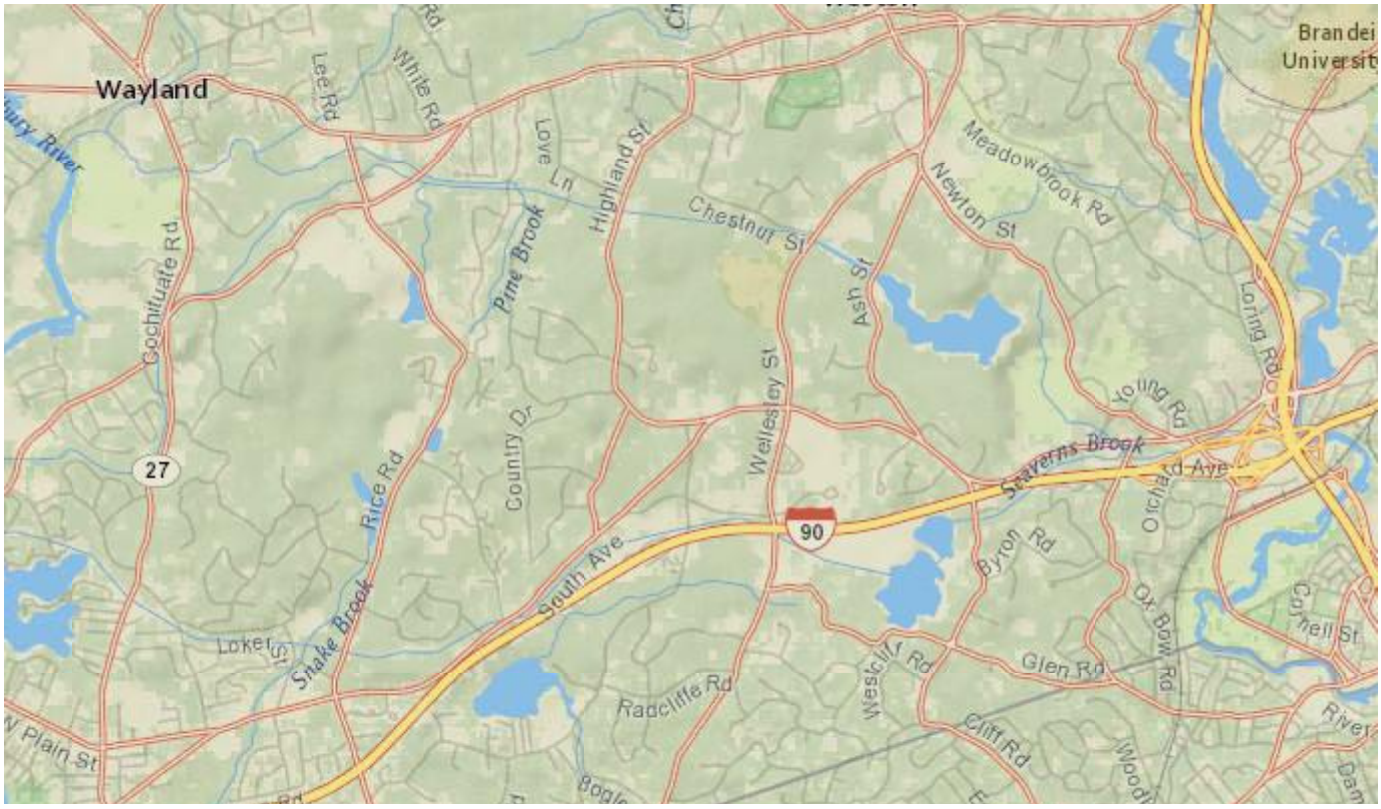
Solid Waste Landfill; PWS: Com.GW,SW, Emerg., Non-Com.

APPENDIX C

RECEIVING WATER CALCULATIONS

Dunstan East - NPDES RGP

Region ID: MA
Workspace ID: MA20220308192157332000
Clicked Point (Latitude, Longitude): 42.35033, -71.22136
Time: 2022-03-08 14:22:16 -0500



As part of the NPDES RGP NOI, dewatering for the Dunstan East project located in Newton, MA may require discharge to a storm drain which empties to Cheese Cake Brook.

Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	2.32	square miles
ELEV	Mean Basin Elevation	104	feet
LC06STOR	Percentage of water bodies and wetlands determined from the NLCD 2006	0.19	percent
BSLDEM250	Mean basin slope computed from 1:250K DEM	2.383	percent

Parameter Code	Parameter Description	Value	Unit
DRFTPERSTR	Area of stratified drift per unit of stream length	18.1	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless
PCTSNDGRV	Percentage of land surface underlain by sand and gravel deposits	68.49	percent
FOREST	Percentage of area covered by forest	2.42	percent

Peak-Flow Statistics Parameters [Peak Statewide 2016 5156]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.32	square miles	0.16	512
ELEV	Mean Basin Elevation	104	feet	80.6	1948
LC06STOR	Percent Storage from NLCD2006	0.19	percent	0	32.3

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

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

Statistic	Value	Unit	PII	PIu	ASEp
50-percent AEP flood	87.1	ft^3/s	44.1	172	42.3
20-percent AEP flood	144	ft^3/s	71.9	288	43.4
10-percent AEP flood	188	ft^3/s	91.6	386	44.7
4-percent AEP flood	252	ft^3/s	119	536	47.1
2-percent AEP flood	306	ft^3/s	139	672	49.4
1-percent AEP flood	362	ft^3/s	160	821	51.8
0.5-percent AEP flood	425	ft^3/s	182	994	54.1
0.2-percent AEP flood	513	ft^3/s	209	1260	57.6

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	2.32	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	2.383	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	18.1	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

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

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

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

Statistic	Value	Unit
7 Day 2 Year Low Flow	6.84	ft^3/s
7 Day 10 Year Low Flow	10.3	ft^3/s

Low-Flow Statistics Citations

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

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.32	square miles	1.61	149

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRFTPERSTR	Stratified Drift per Stream Length	18.1	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1
BSLDEM250	Mean Basin Slope from 250K DEM	2.383	percent	0.32	24.6

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

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

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

Statistic	Value	Unit
50 Percent Duration	2.25	ft^3/s
60 Percent Duration	2.64	ft^3/s
70 Percent Duration	4.21	ft^3/s
75 Percent Duration	4.42	ft^3/s
80 Percent Duration	10.9	ft^3/s
85 Percent Duration	9.84	ft^3/s
90 Percent Duration	20.1	ft^3/s
95 Percent Duration	11.8	ft^3/s
98 Percent Duration	8.53	ft^3/s
99 Percent Duration	6.64	ft^3/s

Flow-Duration Statistics Citations

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

Probability Statistics Parameters [Perennial Flow Probability]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	2.32	square miles	0.01	1.99
PCTSNDGRV	Percent Underlain By Sand And Gravel	68.49	percent	0	100
FOREST	Percent Forest	2.42	percent	0	100
MAREGION	Massachusetts Region	0	dimensionless	0	1

Probability Statistics Disclaimers [Perennial Flow Probability]

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

Probability Statistics Flow Report [Perennial Flow Probability]

Statistic	Value	Unit
Probability Stream Flowing Perennially	0.987	dim

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

Lindsey Aborn

From: Ruan, Xiaodan (DEP) <xiaodan.ruan@state.ma.us>
Sent: Friday, March 25, 2022 1:42 PM
To: Lindsey Aborn
Cc: Coniaris, Catherine (DEP); Laura Garvey
Subject: RE: 1185 Washington Street, West Newton, MA

Hi Lindsey,

Thank you very much for the reminder, and sorry for the delay on this one.

I also ran the StreamStats and can confirm that the 7Q10 flow of 10.3 cfs for the Cheese Cake Brook and the dilution factor of 10.24 for the proposed discharge with a design flow of 500 gpm from the project site at 1185 Washington Street, West Newton were correct.

Here is water quality information to assist you with filling out the NOI:

> Waterbody and ID: Cheese Cake Brook (MA72-29) within Charles River Watershed
> Classification: B
> Outstanding Resource Water?: No
> State's most recent Integrated List is located here: https://www.mass.gov/doc/final-massachusetts-integrated-list-of-waters-for-the-clean-water-act-20182020-reporting-cycle/download, search for "MA 72-29" to see the causes of impairments.
> TMDLs: There are two approved TMDLs (pathogens and phosphorus) for this segment.

If this is not a *current* MCP site, then in addition to submitting the NOI to EPA, you need to apply with MassDEP and submit a $500 fee (unless fee exempt, e.g., municipality). For MassDEP's application, please use ePLACE, an online application submittal process where you will set up a user ID and be able to submit NOIs for various projects as well as pay by credit card. The instructions are located on this page: https://www.mass.gov/how-to/wm-15-npdes-general-permit-notice-of-intent. Technical assistant information is available on the front page of the ePLACE application webpage.

Please let me know if you have any questions.

Thanks,
Xiaodan

Xiaodan Ruan
Environmental Engineer
Massachusetts Department of Environmental Protection
One Winter Street, Boston, MA 02108
(857)-256-4172
xiaodan.ruan@mass.gov

From: Lindsey Aborn <laborn@sanbornhead.com>
Sent: Friday, March 11, 2022 10:36 AM
To: Coniaris, Catherine (DEP) <Catherine.Coniaris@mass.gov>; Ruan, Xiaodan (DEP) <xiaodan.ruan@mass.gov>
Subject: 1185 Washington Street, West Newton, MA

Hello Catherine and Xiaodan,

I would like to confirm the following 7Q10 value for an upcoming RGP project located in West Newton, MA. The StreamStats data for the Cheese Cake Brook is attached.

Site address: 1185 Washington Street, West Newton, MA (Dunstan East Project)
Type of discharge: construction dewatering via private on site catch basin to outlet in the Cheese Cake Brook.
Approximate discharge outfall coordinates:
Latitude: 42.350487 Longitude: -71.22812
Approximate basin delineation point selected:
Latitude: 42.35033 Longitude: -71.22136
Design discharge flow: 500 gpm (.72 MGD)
StreamStats generated 7Q10: 10.3 cfs (6.657 MGD)
Dilution factor: 10.24

Please let me know if this is correct for this location, or if there is any additional information I can provide for this request.

Thank you.

Lindsey

Lindsey Aborn
Senior Project Geologist
Not professionally licensed

SANBORN | HEAD & ASSOCIATES, INC.
D 857.327.9742 | M 781.248.5730 | 98 N. Washington Street, Suite 101, Boston, MA 02114

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APPENDIX D

ANALYTICAL DATA REPORTS

ANALYTICAL REPORT

Lab Number:	L2207957
Client:	Sanborn, Head & Associates, Inc. 1 Technology Park Drive Westford, MA 01886
ATTN:	Laura Garvey
Phone:	(978) 577-1031
Project Name:	DUNSTAN EAST
Project Number:	4055.01
Report Date:	03/02/22

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: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2207957
Report Date: 03/02/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2207957-01	SH-301	WATER	NEWTON, MA	02/15/22 14:00	02/15/22

Project Name:	DUNSTAN EAST	**Lab Number:**	L2207957
Project Number:	4055.01	**Report Date:**	03/02/22

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:	DUNSTAN EAST	**Lab Number:**	L2207957
Project Number:	4055.01	**Report Date:**	03/02/22

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.

Sample Receipt

The analyses performed were specified by the client.

The samples were field filtered for Dissolved Metals.

Volatile Organics by Method 624

L2207957-01D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of non-target compounds in the sample.

Volatile Organics by SIM

L2207957-01D: The sample has an elevated detection limit due to the dilution required by the elevated concentrations of non-target compounds in the sample.

The WG1607881-3 LCS recovery, associated with L2207957-01D, is above the acceptance criteria for 1,4-dioxane (160%); however, the associated sample is non-detect to the RL for this target analyte. The results of the original analysis are reported.

Semivolatile Organics by SIM

L2207957-01D: The sample has elevated detection limits due to the dilution required by the sample matrix.

L2207957-01D: The surrogate recoveries are below the acceptance criteria for 2-fluorophenol (0%), phenol-d6 (0%), nitrobenzene-d5 (0%), 2-fluorobiphenyl (0%), 2,4,6-tribromophenol (0%) and 4-terphenyl-d14 (0%) due to the dilution required to quantitate the sample. Re-extraction was not required; therefore, the results of the original analysis are reported.

Nitrogen, Ammonia

Project Name:	DUNSTAN EAST	**Lab Number:**	L2207957
Project Number:	4055.01	**Report Date:**	03/02/22

Case Narrative (continued)

L2207957-01: The sample has an elevated detection limit due to the dilution required by the sample matrix.

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: Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative Date: 03/02/22

ORGANICS

VOLATILES

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2207957
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2207957-01
Client ID: SH-301
Sample Location: NEWTON, MA

Date Collected: 02/15/22 14:00
Date Received: 02/15/22
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 02/22/22 14:57
Analyst: AMM

Extraction Method: EPA 504.1
Extraction Date: 02/22/22 13:22

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: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2207957
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2207957-01 D
Client ID: SH-301
Sample Location: NEWTON, MA
Date Collected: 02/15/22 14:00
Date Received: 02/15/22
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 02/22/22 12:29
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	20	--	20
1,1-Dichloroethane	ND		ug/l	30	--	20
Carbon tetrachloride	ND		ug/l	20	--	20
1,1,2-Trichloroethane	ND		ug/l	30	--	20
Tetrachloroethene	ND		ug/l	20	--	20
1,2-Dichloroethane	ND		ug/l	30	--	20
1,1,1-Trichloroethane	ND		ug/l	40	--	20
Benzene	ND		ug/l	20	--	20
Toluene	590		ug/l	20	--	20
Ethylbenzene	1400		ug/l	20	--	20
Vinyl chloride	ND		ug/l	20	--	20
1,1-Dichloroethene	ND		ug/l	20	--	20
cis-1,2-Dichloroethene	ND		ug/l	20	--	20
Trichloroethene	ND		ug/l	20	--	20
1,2-Dichlorobenzene	ND		ug/l	100	--	20
1,3-Dichlorobenzene	ND		ug/l	100	--	20
1,4-Dichlorobenzene	ND		ug/l	100	--	20
p/m-Xylene	4300		ug/l	40	--	20
o-xylene	1600		ug/l	20	--	20
Xylenes, Total	5900		ug/l	20	--	20
Acetone	ND		ug/l	200	--	20
Methyl tert butyl ether	ND		ug/l	200	--	20
Tert-Butyl Alcohol	ND		ug/l	2000	--	20
Tertiary-Amyl Methyl Ether	ND		ug/l	400	--	20

Project Name: DUNSTAN EAST
Lab Number: L2207957
Project Number: 4055.01
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2207957-01 D
Client ID: SH-301
Sample Location: NEWTON, MA

Date Collected: 02/15/22 14:00
Date Received: 02/15/22
Field Prep: Refer to COC

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	107		60-140
Fluorobenzene	109		60-140
4-Bromofluorobenzene	98		60-140

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2207957
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2207957-01 D
Client ID: SH-301
Sample Location: NEWTON, MA

Date Collected: 02/15/22 14:00
Date Received: 02/15/22
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1-SIM
Analytical Date: 02/22/22 12:29
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	100	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	118		60-140
4-Bromofluorobenzene	86		60-140

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2207957
Report Date: 03/02/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 02/22/22 14:17
Analyst: AMM

Extraction Method: EPA 504.1
Extraction Date: 02/22/22 13:22

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westborough Lab for sample(s): 01 Batch: WG1607688-1						
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

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2207957
Report Date: 03/02/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 02/22/22 08:30
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1607877-4					
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: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2207957
Report Date: 03/02/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 02/22/22 08:30
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1607877-4					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	99		60-140
Fluorobenzene	104		60-140
4-Bromofluorobenzene	103		60-140

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2207957
Report Date: 03/02/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1-SIM
Analytical Date: 02/22/22 08:30
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1607881-4					
1,4-Dioxane	ND		ug/l	5.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	114		60-140
4-Bromofluorobenzene	88		60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2207957

Report Date: 03/02/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab Associated sample(s): 01 Batch: WG1607688-2									
1,2-Dibromoethane	90		-		80-120	-			A
1,2-Dibromo-3-chloropropane	99		-		80-120	-			A
1,2,3-Trichloropropane	91		-		80-120	-			A

Lab Control Sample Analysis
Batch Quality Control

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2207957
Report Date: 03/02/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1607877-3								
Methylene chloride	135		-		60-140	-		28
1,1-Dichloroethane	125		-		50-150	-		49
Carbon tetrachloride	110		-		70-130	-		41
1,1,2-Trichloroethane	115		-		70-130	-		45
Tetrachloroethene	115		-		70-130	-		39
1,2-Dichloroethane	105		-		70-130	-		49
1,1,1-Trichloroethane	110		-		70-130	-		36
Benzene	135		-		65-135	-		61
Toluene	120		-		70-130	-		41
Ethylbenzene	135		-		60-140	-		63
Vinyl chloride	110		-		5-195	-		66
1,1-Dichloroethene	140		-		50-150	-		32
cis-1,2-Dichloroethene	130		-		60-140	-		30
Trichloroethene	125		-		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	120		-		60-140	-		30
o-xylene	120		-		60-140	-		30
Acetone	82		-		40-160	-		30
Methyl tert butyl ether	105		-		60-140	-		30
Tert-Butyl Alcohol	94		-		60-140	-		30
Tertiary-Amyl Methyl Ether	110		-		60-140	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2207957

Report Date: 03/02/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1607877-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	102				60-140
Fluorobenzene	103				60-140
4-Bromofluorobenzene	100				60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2207957

Report Date: 03/02/22

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 Batch: WG1607881-3								
1,4-Dioxane	**160**	Q	-		60-140	-		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Fluorobenzene	113				60-140
4-Bromofluorobenzene	90				60-140

Matrix Spike Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2207957

Report Date: 03/02/22

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 QC Batch ID: WG1607688-3 QC Sample: L2207923-01 Client ID: MS Sample													
1,2-Dibromoethane	ND	0.254	0.242	95		-	-		80-120	-		20	A
1,2-Dibromo-3-chloropropane	ND	0.254	0.268	105		-	-		80-120	-		20	A
1,2,3-Trichloropropane	ND	0.254	0.237	93		-	-		80-120	-		20	A

SEMIVOLATILES

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2207957
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2207957-01
Client ID: SH-301
Sample Location: NEWTON, MA

Date Collected: 02/15/22 14:00
Date Received: 02/15/22
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 02/18/22 11:54
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 02/15/22 21:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-ethylhexyl)phthalate	20.0		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	76		42-122
2-Fluorobiphenyl	76		46-121
4-Terphenyl-d14	82		47-138

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2207957
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2207957-01 D
Client ID: SH-301
Sample Location: NEWTON, MA

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 03/02/22 12:17
Analyst: JJW

Date Collected: 02/15/22 14:00
Date Received: 02/15/22
Field Prep: Refer to COC

Extraction Method: EPA 625.1
Extraction Date: 02/15/22 21:09

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	5.00	--	50
Fluoranthene	ND		ug/l	5.00	--	50
Naphthalene	273		ug/l	5.00	--	50
Benzo(a)anthracene	ND		ug/l	5.00	--	50
Benzo(a)pyrene	ND		ug/l	5.00	--	50
Benzo(b)fluoranthene	ND		ug/l	5.00	--	50
Benzo(k)fluoranthene	ND		ug/l	5.00	--	50
Chrysene	ND		ug/l	5.00	--	50
Acenaphthylene	ND		ug/l	5.00	--	50
Anthracene	ND		ug/l	5.00	--	50
Benzo(ghi)perylene	ND		ug/l	5.00	--	50
Fluorene	ND		ug/l	5.00	--	50
Phenanthrene	ND		ug/l	5.00	--	50
Dibenzo(a,h)anthracene	ND		ug/l	5.00	--	50
Indeno(1,2,3-cd)pyrene	ND		ug/l	5.00	--	50
Pyrene	ND		ug/l	5.00	--	50
Pentachlorophenol	ND		ug/l	50.0	--	50

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	**0**	Q	25-87
Phenol-d6	**0**	Q	16-65
Nitrobenzene-d5	**0**	Q	42-122
2-Fluorobiphenyl	**0**	Q	46-121
2,4,6-Tribromophenol	**0**	Q	45-128
4-Terphenyl-d14	**0**	Q	47-138

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2207957
Report Date: 03/02/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1
Analytical Date: 02/17/22 10:18
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 02/15/22 21:08

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1605322-1					
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	64		42-122
2-Fluorobiphenyl	64		46-121
4-Terphenyl-d14	74		47-138

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2207957
Report Date: 03/02/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1-SIM
Analytical Date: 02/17/22 09:33
Analyst: DV

Extraction Method: EPA 625.1
Extraction Date: 02/15/22 21:09

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1605323-1					
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	47		25-87
Phenol-d6	34		16-65
Nitrobenzene-d5	83		42-122
2-Fluorobiphenyl	88		46-121
2,4,6-Tribromophenol	74		45-128
4-Terphenyl-d14	102		47-138

Lab Control Sample Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2207957

Report Date: 03/02/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1605322-2								
Bis(2-ethylhexyl)phthalate	90		-		29-137	-		82
Butyl benzyl phthalate	87		-		1-140	-		60
Di-n-butylphthalate	87		-		8-120	-		47
Di-n-octylphthalate	89		-		19-132	-		69
Diethyl phthalate	79		-		1-120	-		100
Dimethyl phthalate	77		-		1-120	-		183

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	76				42-122
2-Fluorobiphenyl	75				46-121
4-Terphenyl-d14	80				47-138

Lab Control Sample Analysis
Batch Quality Control

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2207957
Report Date: 03/02/22

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 Batch: WG1605323-2								
Acenaphthene	81		-		60-132	-		30
Fluoranthene	86		-		43-121	-		30
Naphthalene	78		-		36-120	-		30
Benzo(a)anthracene	83		-		42-133	-		30
Benzo(a)pyrene	94		-		32-148	-		30
Benzo(b)fluoranthene	83		-		42-140	-		30
Benzo(k)fluoranthene	94		-		25-146	-		30
Chrysene	83		-		44-140	-		30
Acenaphthylene	93		-		54-126	-		30
Anthracene	85		-		43-120	-		30
Benzo(ghi)perylene	84		-		1-195	-		30
Fluorene	82		-		70-120	-		30
Phenanthrene	83		-		65-120	-		30
Dibenzo(a,h)anthracene	87		-		1-200	-		30
Indeno(1,2,3-cd)pyrene	84		-		1-151	-		30
Pyrene	86		-		70-120	-		30
Pentachlorophenol	55		-		38-152	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2207957

Report Date: 03/02/22

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 Batch: WG1605323-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	51				25-87
Phenol-d6	37				16-65
Nitrobenzene-d5	82				42-122
2-Fluorobiphenyl	84				46-121
2,4,6-Tribromophenol	78				45-128
4-Terphenyl-d14	88				47-138

PCBS

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2207957
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2207957-01
Client ID: SH-301
Sample Location: NEWTON, MA

Date Collected: 02/15/22 14:00
Date Received: 02/15/22
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 03/02/22 10:18
Analyst: JM

Extraction Method: EPA 608.3
Extraction Date: 03/01/22 23:18
Cleanup Method: EPA 3665A
Cleanup Date: 03/02/22
Cleanup Method: EPA 3660B
Cleanup Date: 03/02/22

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	69		37-123	B
Decachlorobiphenyl	81		38-114	B
2,4,5,6-Tetrachloro-m-xylene	67		37-123	A
Decachlorobiphenyl	70		38-114	A

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2207957
Report Date: 03/02/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 127,608.3
Analytical Date: 03/02/22 08:41
Analyst: JM

Extraction Method: EPA 608.3
Extraction Date: 03/01/22 23:18
Cleanup Method: EPA 3665A
Cleanup Date: 03/02/22
Cleanup Method: EPA 3660B
Cleanup Date: 03/02/22

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG1610493-1						
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	80		37-123	B
Decachlorobiphenyl	87		38-114	B
2,4,5,6-Tetrachloro-m-xylene	77		37-123	A
Decachlorobiphenyl	84		38-114	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2207957

Report Date: 03/02/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG1610493-2									
Aroclor 1016	89		-		50-140	-		36	A
Aroclor 1260	90		-		8-140	-		38	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	80				37-123	B
Decachlorobiphenyl	93				38-114	B
2,4,5,6-Tetrachloro-m-xylene	79				37-123	A
Decachlorobiphenyl	85				38-114	A

METALS

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2207957
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2207957-01
Client ID: SH-301
Sample Location: NEWTON, MA
Sample Depth:
Matrix: Water

Date Collected: 02/15/22 14:00
Date Received: 02/15/22
Field Prep: Refer to COC

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	02/21/22 14:29	02/21/22 21:21	EPA 3005A	3,200.8	CD
Arsenic, Total	0.01858		mg/l	0.00100	--	1	02/21/22 14:29	02/21/22 21:21	EPA 3005A	3,200.8	CD
Cadmium, Total	0.00085		mg/l	0.00020	--	1	02/21/22 14:29	02/21/22 21:21	EPA 3005A	3,200.8	CD
Chromium, Total	0.2714		mg/l	0.00100	--	1	02/21/22 14:29	02/21/22 21:21	EPA 3005A	3,200.8	CD
Copper, Total	0.2158		mg/l	0.00100	--	1	02/21/22 14:29	02/21/22 21:21	EPA 3005A	3,200.8	CD
Iron, Total	96.9		mg/l	0.050	--	1	02/21/22 14:29	02/22/22 20:16	EPA 3005A	19,200.7	MC
Lead, Total	0.07274		mg/l	0.00100	--	1	02/21/22 14:29	02/21/22 21:21	EPA 3005A	3,200.8	CD
Mercury, Total	ND		mg/l	0.00020	--	1	02/21/22 15:49	02/22/22 11:25	EPA 245.1	3,245.1	AC
Nickel, Total	0.1181		mg/l	0.00200	--	1	02/21/22 14:29	02/21/22 21:21	EPA 3005A	3,200.8	CD
Selenium, Total	0.01022		mg/l	0.00500	--	1	02/21/22 14:29	02/21/22 21:21	EPA 3005A	3,200.8	CD
Silver, Total	0.00113		mg/l	0.00040	--	1	02/21/22 14:29	02/21/22 21:21	EPA 3005A	3,200.8	CD
Zinc, Total	0.2800		mg/l	0.01000	--	1	02/21/22 14:29	02/21/22 21:21	EPA 3005A	3,200.8	CD
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	272		mg/l	0.660	NA	1	02/21/22 14:29	02/22/22 20:16	EPA 3005A	19,200.7	MC
General Chemistry - Mansfield Lab											
Chromium, Trivalent	0.271		mg/l	0.010	--	1		02/21/22 21:21	NA	107,-	
Dissolved Metals - Mansfield Lab											
Antimony, Dissolved	ND		mg/l	0.0040	--	1	02/17/22 08:44	02/17/22 16:53	EPA 3005A	3,200.8	SV
Arsenic, Dissolved	0.0052		mg/l	0.0010	--	1	02/17/22 08:44	02/17/22 16:53	EPA 3005A	3,200.8	SV
Cadmium, Dissolved	ND		mg/l	0.0002	--	1	02/17/22 08:44	02/17/22 16:53	EPA 3005A	3,200.8	SV
Chromium, Dissolved	0.0198		mg/l	0.0010	--	1	02/17/22 08:44	02/17/22 16:53	EPA 3005A	3,200.8	SV
Copper, Dissolved	0.0171		mg/l	0.0010	--	1	02/17/22 08:44	02/17/22 16:53	EPA 3005A	3,200.8	SV
Iron, Dissolved	10.2		mg/l	0.050	--	1	02/17/22 08:44	02/27/22 17:23	EPA 3005A	19,200.7	EW
Lead, Dissolved	0.0051		mg/l	0.0010	--	1	02/17/22 08:44	02/17/22 16:53	EPA 3005A	3,200.8	SV
Mercury, Dissolved	ND		mg/l	0.00020	--	1	02/17/22 09:45	02/24/22 10:40	EPA 245.1	3,245.1	AC

Project Name: DUNSTAN EAST
Lab Number: L2207957
Project Number: 4055.01
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2207957-01
Client ID: SH-301
Sample Location: NEWTON, MA
Date Collected: 02/15/22 14:00
Date Received: 02/15/22
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Nickel, Dissolved	0.0113		mg/l	0.0020	--	1	02/17/22 08:44	02/17/22 16:53	EPA 3005A	3,200.8	SV
Selenium, Dissolved	ND		mg/l	0.0050	--	1	02/17/22 08:44	02/17/22 16:53	EPA 3005A	3,200.8	SV
Silver, Dissolved	ND		mg/l	0.0004	--	1	02/17/22 08:44	02/17/22 16:53	EPA 3005A	3,200.8	SV
Zinc, Dissolved	0.0259		mg/l	0.0100	--	1	02/17/22 08:44	02/17/22 16:53	EPA 3005A	3,200.8	SV

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2207957
Report Date: 03/02/22

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 01 Batch: WG1605691-1										
Iron, Dissolved	ND		mg/l	0.050	--	1	02/17/22 08:44	02/27/22 17:41	19,200.7	EW

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 01 Batch: WG1605693-1										
Antimony, Dissolved	ND		mg/l	0.0040	--	1	02/17/22 08:44	02/17/22 15:10	3,200.8	SV
Arsenic, Dissolved	ND		mg/l	0.0010	--	1	02/17/22 08:44	02/17/22 15:10	3,200.8	SV
Cadmium, Dissolved	ND		mg/l	0.0002	--	1	02/17/22 08:44	02/17/22 15:10	3,200.8	SV
Chromium, Dissolved	ND		mg/l	0.0010	--	1	02/17/22 08:44	02/17/22 15:10	3,200.8	SV
Copper, Dissolved	ND		mg/l	0.0010	--	1	02/17/22 08:44	02/17/22 15:10	3,200.8	SV
Lead, Dissolved	ND		mg/l	0.0010	--	1	02/17/22 08:44	02/17/22 15:10	3,200.8	SV
Nickel, Dissolved	ND		mg/l	0.0020	--	1	02/17/22 08:44	02/17/22 15:10	3,200.8	SV
Selenium, Dissolved	ND		mg/l	0.0050	--	1	02/17/22 08:44	02/17/22 15:10	3,200.8	SV
Silver, Dissolved	ND		mg/l	0.0004	--	1	02/17/22 08:44	02/17/22 15:10	3,200.8	SV
Zinc, Dissolved	ND		mg/l	0.0100	--	1	02/17/22 08:44	02/17/22 15:10	3,200.8	SV

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 01 Batch: WG1605696-1										
Mercury, Dissolved	ND		mg/l	0.00020	--	1	02/17/22 09:45	02/24/22 10:23	3,245.1	AC

Prep Information

Digestion Method: EPA 245.1

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2207957
Report Date: 03/02/22

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 Batch: WG1606169-1										
Iron, Total	ND		mg/l	0.050	--	1	02/21/22 14:29	02/22/22 13:33	19,200.7	EW

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 Batch: WG1606169-1										
Hardness	ND		mg/l	0.660	NA	1	02/21/22 14:29	02/22/22 13:33	19,200.7	EW

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 Batch: WG1606170-1										
Antimony, Total	ND		mg/l	0.00400	--	1	02/21/22 14:29	02/21/22 20:43	3,200.8	CD
Arsenic, Total	ND		mg/l	0.00100	--	1	02/21/22 14:29	02/21/22 20:43	3,200.8	CD
Cadmium, Total	ND		mg/l	0.00020	--	1	02/21/22 14:29	02/21/22 20:43	3,200.8	CD
Chromium, Total	ND		mg/l	0.00100	--	1	02/21/22 14:29	02/21/22 20:43	3,200.8	CD
Copper, Total	ND		mg/l	0.00100	--	1	02/21/22 14:29	02/21/22 20:43	3,200.8	CD
Lead, Total	ND		mg/l	0.00100	--	1	02/21/22 14:29	02/21/22 20:43	3,200.8	CD
Nickel, Total	ND		mg/l	0.00200	--	1	02/21/22 14:29	02/21/22 20:43	3,200.8	CD
Selenium, Total	ND		mg/l	0.00500	--	1	02/21/22 14:29	02/21/22 20:43	3,200.8	CD
Silver, Total	ND		mg/l	0.00040	--	1	02/21/22 14:29	02/21/22 20:43	3,200.8	CD
Zinc, Total	ND		mg/l	0.01000	--	1	02/21/22 14:29	02/21/22 20:43	3,200.8	CD

Prep Information

Digestion Method: EPA 3005A

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2207957
Report Date: 03/02/22

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 Batch: WG1606173-1										
Mercury, Total	ND		mg/l	0.00020	--	1	02/21/22 15:49	02/22/22 10:06	3,245.1	AC

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2207957

Report Date: 03/02/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1605691-2								
Iron, Dissolved	100		-		85-115	-		
Dissolved Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1605693-2								
Antimony, Dissolved	85		-		85-115	-		
Arsenic, Dissolved	96		-		85-115	-		
Cadmium, Dissolved	95		-		85-115	-		
Chromium, Dissolved	88		-		85-115	-		
Copper, Dissolved	92		-		85-115	-		
Lead, Dissolved	92		-		85-115	-		
Nickel, Dissolved	88		-		85-115	-		
Selenium, Dissolved	97		-		85-115	-		
Silver, Dissolved	101		-		85-115	-		
Zinc, Dissolved	92		-		85-115	-		
Dissolved Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1605696-2								
Mercury, Dissolved	100		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1606169-2								
Iron, Total	102		-		85-115	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2207957

Report Date: 03/02/22

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 Batch: WG1606169-2					
Hardness	105	-	85-115	-	
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1606170-2					
Antimony, Total	85	-	85-115	-	
Arsenic, Total	100	-	85-115	-	
Cadmium, Total	99	-	85-115	-	
Chromium, Total	94	-	85-115	-	
Copper, Total	95	-	85-115	-	
Lead, Total	96	-	85-115	-	
Nickel, Total	93	-	85-115	-	
Selenium, Total	98	-	85-115	-	
Silver, Total	100	-	85-115	-	
Zinc, Total	94	-	85-115	-	
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1606173-2					
Mercury, Total	97	-	85-115	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2207957
Report Date: 03/02/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1605691-3 QC Sample: L2207311-01 Client ID: MS Sample												
Iron, Dissolved	0.728	1	1.75	102		-	-		75-125	-		20
Dissolved Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1605693-3 QC Sample: L2207311-01 Client ID: MS Sample												
Antimony, Dissolved	0.0074	0.5	0.4383	86		-	-		70-130	-		20
Arsenic, Dissolved	0.0052	0.12	0.1238	99		-	-		70-130	-		20
Cadmium, Dissolved	0.0003	0.053	0.0511	96		-	-		70-130	-		20
Chromium, Dissolved	ND	0.2	0.1846	92		-	-		70-130	-		20
Copper, Dissolved	0.0134	0.25	0.2490	94		-	-		70-130	-		20
Lead, Dissolved	0.0457	0.53	0.5408	93		-	-		70-130	-		20
Nickel, Dissolved	0.0026	0.5	0.4448	88		-	-		70-130	-		20
Selenium, Dissolved	ND	0.12	0.1190	99		-	-		70-130	-		20
Silver, Dissolved	ND	0.05	0.0510	102		-	-		70-130	-		20
Zinc, Dissolved	0.2974	0.5	0.7890	98		-	-		70-130	-		20
Dissolved Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1605696-3 QC Sample: L2207957-01 Client ID: SH-301												
Mercury, Dissolved	ND	0.005	0.00477	95		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1606169-3 QC Sample: L2208327-01 Client ID: MS Sample												
Iron, Total	0.970	1	1.90	93		-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1606169-3 QC Sample: L2208327-01 Client ID: MS Sample												
Hardness	408	66.2	454	**70**	Q	-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1606169-7 QC Sample: L2208327-02 Client ID: MS Sample												
Iron, Total	0.193	1	1.20	101		-	-		75-125	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2207957
Report Date: 03/02/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1606169-7 QC Sample: L2208327-02 Client ID: MS Sample									
Hardness	453	66.2	503	76	-	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1606170-3 QC Sample: L2208327-01 Client ID: MS Sample									
Antimony, Total	ND	0.5	0.5630	113	-	-	70-130	-	20
Arsenic, Total	0.00104	0.12	0.1273	105	-	-	70-130	-	20
Cadmium, Total	ND	0.053	0.05352	101	-	-	70-130	-	20
Chromium, Total	ND	0.2	0.1940	97	-	-	70-130	-	20
Copper, Total	0.00323	0.25	0.2495	98	-	-	70-130	-	20
Lead, Total	0.00218	0.53	0.5425	102	-	-	70-130	-	20
Nickel, Total	0.00369	0.5	0.4920	98	-	-	70-130	-	20
Selenium, Total	ND	0.12	0.1187	99	-	-	70-130	-	20
Silver, Total	ND	0.05	0.05171	103	-	-	70-130	-	20
Zinc, Total	0.05230	0.5	0.5479	99	-	-	70-130	-	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1606173-3 QC Sample: L2207110-01 Client ID: MS Sample									
Mercury, Total	ND	0.005	0.00497	100	-	-	70-130	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2207957
Report Date: 03/02/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1605691-4 QC Sample: L2207311-01 Client ID: DUP Sample						
Iron, Dissolved	0.728	0.776	mg/l	6		20
Dissolved Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1605693-4 QC Sample: L2207311-01 Client ID: DUP Sample						
Antimony, Dissolved	0.0074	0.0101	mg/l	**31**	Q	20
Arsenic, Dissolved	0.0052	0.0053	mg/l	0		20
Cadmium, Dissolved	0.0003	0.0003	mg/l	4		20
Chromium, Dissolved	ND	ND	mg/l	NC		20
Copper, Dissolved	0.0134	0.0143	mg/l	7		20
Lead, Dissolved	0.0457	0.0459	mg/l	0		20
Nickel, Dissolved	0.0026	0.0027	mg/l	6		20
Selenium, Dissolved	ND	ND	mg/l	NC		20
Silver, Dissolved	ND	ND	mg/l	NC		20
Zinc, Dissolved	0.2974	0.3006	mg/l	1		20
Dissolved Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1605696-4 QC Sample: L2207957-01 Client ID: SH-301						
Mercury, Dissolved	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1606169-4 QC Sample: L2208327-01 Client ID: DUP Sample						
Iron, Total	0.970	0.920	mg/l	5		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1606169-8 QC Sample: L2208327-02 Client ID: DUP Sample						
Iron, Total	0.193	0.194	mg/l	1		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2207957
Report Date: 03/02/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1606170-4 QC Sample: L2208327-01 Client ID: DUP Sample					
Antimony, Total	ND	ND	mg/l	NC	20
Arsenic, Total	0.00104	0.00104	mg/l	0	20
Cadmium, Total	ND	ND	mg/l	NC	20
Chromium, Total	ND	ND	mg/l	NC	20
Copper, Total	0.00323	0.00289	mg/l	11	20
Lead, Total	0.00218	0.00224	mg/l	3	20
Nickel, Total	0.00369	0.00356	mg/l	4	20
Selenium, Total	ND	ND	mg/l	NC	20
Silver, Total	ND	ND	mg/l	NC	20
Zinc, Total	0.05230	0.05119	mg/l	2	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1606173-4 QC Sample: L2207110-01 Client ID: DUP Sample					
Mercury, Total	ND	ND	mg/l	NC	20

INORGANICS
&
MISCELLANEOUS

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2207957
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2207957-01
Client ID: SH-301
Sample Location: NEWTON, MA
Sample Depth:
Matrix: Water

Date Collected: 02/15/22 14:00
Date Received: 02/15/22
Field Prep: Refer to COC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	19000		mg/l	100	NA	20	-	02/18/22 19:30	121,2540D	JW
Cyanide, Total	ND		mg/l	0.005	--	1	02/17/22 04:45	02/17/22 09:45	121,4500CN-CE	CS
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	02/15/22 23:02	121,4500CL-D	AS
pH (H)	6.7		SU	-	NA	1	-	02/16/22 18:54	121,4500H+-B	AS
Nitrogen, Ammonia	ND		mg/l	0.375	--	5	02/17/22 12:05	02/18/22 21:32	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.00	--	1	02/16/22 12:45	02/16/22 13:15	140,1664B	NP
Phenolics, Total	ND		mg/l	0.030	--	1	02/23/22 06:38	02/23/22 11:19	4,420.1	CL
Chromium, Hexavalent	ND		mg/l	0.010	--	1	02/16/22 04:00	02/16/22 04:13	1,7196A	KA
Anions by Ion Chromatography - Westborough Lab										
Chloride	222.		mg/l	5.00	--	10	-	02/18/22 19:29	44,300.0	SH

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2207957
Report Date: 03/02/22

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 Batch: WG1605334-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	02/15/22 23:02	121,4500CL-D	AS
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1605382-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	02/16/22 04:00	02/16/22 04:11	1,7196A	KA
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1605552-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	02/16/22 12:45	02/16/22 13:15	140,1664B	NP
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1605883-1										
Cyanide, Total	ND		mg/l	0.005	--	1	02/17/22 04:45	02/17/22 09:40	121,4500CN-CE	CS
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1606012-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	02/17/22 12:05	02/18/22 21:01	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1606753-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	02/18/22 19:30	121,2540D	JW
Anions by Ion Chromatography - Westborough Lab for sample(s): 01 Batch: WG1606784-1										
Chloride	ND		mg/l	0.500	--	1	-	02/18/22 17:07	44,300.0	SH
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1608121-1										
Phenolics, Total	ND		mg/l	0.030	--	1	02/23/22 06:38	02/23/22 09:52	4,420.1	CL

Lab Control Sample Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2207957

Report Date: 03/02/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1605334-2								
Chlorine, Total Residual	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1605382-2								
Chromium, Hexavalent	106		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1605552-2								
TPH	67		-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1605798-1								
pH	100		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1605883-2								
Cyanide, Total	93		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1606012-2								
Nitrogen, Ammonia	104		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1606753-2								
Solids, Total Suspended	112		-		80-120	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2207957

Report Date: 03/02/22

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 Batch: WG1606784-2					
Chloride	101	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1608121-2					
Phenolics, Total	119	-	70-130	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2207957
Report Date: 03/02/22

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 QC Batch ID: WG1605334-4 QC Sample: L2207993-01 Client ID: MS Sample												
Chlorine, Total Residual	ND	0.25	0.23	92		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1605382-4 QC Sample: L2207957-01 Client ID: SH-301												
Chromium, Hexavalent	ND	0.1	0.102	102		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1605552-4 QC Sample: L2207993-01 Client ID: MS Sample												
TPH	ND	18.9	9.06	**48**	Q	-	-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1605883-4 QC Sample: L2208307-01 Client ID: MS Sample												
Cyanide, Total	0.007	0.2	0.214	103		-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1606012-4 QC Sample: L2207869-02 Client ID: MS Sample												
Nitrogen, Ammonia	ND	4	ND	**0**	Q	-	-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1606784-3 QC Sample: L2207909-01 Client ID: MS Sample												
Chloride	3.42	4	7.34	98		-	-		90-110	-		18
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1608121-4 QC Sample: L2208843-01 Client ID: MS Sample												
Phenolics, Total	ND	0.4	0.44	109		-	-		70-130	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2207957
Report Date: 03/02/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1605334-3 QC Sample: L2207856-01 Client ID: DUP Sample						
Chlorine, Total Residual	2.0	2.1	mg/l	5		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1605382-3 QC Sample: L2207957-01 Client ID: SH-301						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1605552-3 QC Sample: L2200026-31 Client ID: DUP Sample						
TPH	ND	ND	mg/l	NC		34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1605798-2 QC Sample: L2207957-01 Client ID: SH-301						
pH (H)	6.7	6.6	SU	2		5
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1605883-3 QC Sample: L2208205-04 Client ID: DUP Sample						
Cyanide, Total	0.008	0.009	mg/l	17		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1606012-3 QC Sample: L2207869-02 Client ID: DUP Sample						
Nitrogen, Ammonia	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1606753-3 QC Sample: L2207957-01 Client ID: SH-301						
Solids, Total Suspended	19000	18000	mg/l	5		29
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1606784-4 QC Sample: L2207909-01 Client ID: DUP Sample						
Chloride	3.42	3.40	mg/l	1		18
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1608121-3 QC Sample: L2208843-01 Client ID: DUP Sample						
Phenolics, Total	ND	ND	mg/l	NC		20

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2207957
Report Date: 03/02/22

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2207957-01A	Vial Na2S2O3 preserved	A	NA		4.0	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2207957-01A1	Vial Na2S2O3 preserved	A	NA		4.0	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2207957-01B	Vial Na2S2O3 preserved	A	NA		4.0	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2207957-01B1	Vial Na2S2O3 preserved	A	NA		4.0	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2207957-01C	Vial Na2S2O3 preserved	A	NA		4.0	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2207957-01C1	Vial Na2S2O3 preserved	A	NA		4.0	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2207957-01D	Vial Na2S2O3 preserved	A	NA		4.0	Y	Absent		504(14)
L2207957-01E	Vial Na2S2O3 preserved	A	NA		4.0	Y	Absent		504(14)
L2207957-01F	Vial unpreserved	A	NA		4.0	Y	Absent		SUB-ETHANOL(14)
L2207957-01G	Vial unpreserved	A	NA		4.0	Y	Absent		SUB-ETHANOL(14)
L2207957-01H	Vial unpreserved	A	NA		4.0	Y	Absent		SUB-ETHANOL(14)
L2207957-01I	Plastic 250ml HNO3 preserved	A	<2	<2	4.0	Y	Absent		CR-2008S(180),AG-2008S(180),FE-RI(180),ZN-2008S(180),PB-2008S(180),AS-2008S(180),NI-2008S(180),SE-2008S(180),CU-2008S(180),SB-2008S(180),CD-2008S(180),HG-R(28)
L2207957-01J	Plastic 250ml HNO3 preserved	A	<2	<2	4.0	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),HARDU(180),AG-2008T(180),HG-U(28),SE-2008T(180),AS-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L2207957-01K	Plastic 250ml NaOH preserved	A	>12	>12	4.0	Y	Absent		TCN-4500(14)
L2207957-01L	Plastic 500ml H2SO4 preserved	A	<2	<2	4.0	Y	Absent		NH3-4500(28)
L2207957-01M	Plastic 950ml unpreserved	A	7	7	4.0	Y	Absent		CL-300(28),HEXCR-7196(1),TRC-4500(1),PH-4500(.01)
L2207957-01N	Plastic 950ml unpreserved	A	7	7	4.0	Y	Absent		TSS-2540(7)
L2207957-01O	Amber 950ml H2SO4 preserved	A	<2	<2	4.0	Y	Absent		TPHENOL-420(28)
L2207957-01P	Amber 1000ml Na2S2O3	A	7	7	4.0	Y	Absent		PCB-608.3(365)

*Values in parentheses indicate holding time in days

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2207957
Report Date: 03/02/22

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2207957-01Q	Amber 1000ml Na2S2O3	A	7	7	4.0	Y	Absent		PCB-608.3(365)
L2207957-01R	Amber 1000ml Na2S2O3	A	7	7	4.0	Y	Absent		625.1-RGP(7)
L2207957-01S	Amber 1000ml Na2S2O3	A	7	7	4.0	Y	Absent		625.1-RGP(7)
L2207957-01T	Amber 1000ml Na2S2O3	A	7	7	4.0	Y	Absent		625.1-SIM-RGP(7)
L2207957-01U	Amber 1000ml Na2S2O3	A	7	7	4.0	Y	Absent		625.1-SIM-RGP(7)
L2207957-01V	Amber 1000ml HCl preserved	A	NA		4.0	Y	Absent		TPH-1664(28)
L2207957-01W	Amber 1000ml HCl preserved	A	NA		4.0	Y	Absent		TPH-1664(28)

*Values in parentheses indicate holding time in days

Project Name:	DUNSTAN EAST	**Lab Number:**	L2207957
Project Number:	4055.01	**Report Date:**	03/02/22

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:	DUNSTAN EAST	**Lab Number:**	L2207957
Project Number:	4055.01	**Report Date:**	03/02/22

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:	DUNSTAN EAST	**Lab Number:**	L2207957
Project Number:	4055.01	**Report Date:**	03/02/22

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:	DUNSTAN EAST	**Lab Number:**	L2207957
Project Number:	4055.01	**Report Date:**	03/02/22

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.

CHAIN OF CUSTODY

PAGE _____ OF _____

Date Rec'd in Lab: 2/15/22

ALPHA Job #: L2207957

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

Client Information

Client: Sanborn Head & Assoc.

Address: 1 Technology Park Dr
Westford, MA

Phone: 978-577-1000

Email: kerner, lgarvey @ sanbornhead.com

Additional Project Information:

Project Information

Project Name: Dunstan East

Project Location: Newton MA

Project #: 4055.01

Project Manager: L. Garvey

ALPHA Quote #:

Turn-Around Time

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

Date Due:

Report Information - Data Deliverables

☒ ADEx ☒ EMAIL

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	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	NPDES RGP	SAMPLE INFO: Filtration ☐ Field ☐ Lab to do; Preservation ☐ Lab to do	Sample Comments	TOTAL # BOTTLES
07857-01	SH-301	2/15/22	1400	GW	KAG									X		one bottle F.F.	20

Container Type	Preservative
P= Plastic	A= None
A= Amber glass	B= HCl
V= Vial	C= HNO_3
G= Glass	D= H_2SO_4
B= Bacteria cup	E= NaOH
C= Cube	F= MeOH
O= Other	G= $NaHSO_4$
E= Encore	H= $Na_2S_2O_3$
D= BOD Bottle	I= Ascorbic Acid
	J= NH_4Cl
	K= Zn Acetate
	O= Other

Container Type																	
Preservative																	

Relinquished By:	Date/Time	Received By:	Date/Time
	2/15/22 1507	Plus ADx	2/15/22 1507
	2/15/22 1635		2/15/22 1635

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

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

Subcontract Chain of Custody

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

Alpha Job Number
L2207957

Client Information

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

Phone: 508.439.5176
Email: senright@alphalab.com

Project Information

Project Location: MA
Project Manager: Scott Enright

Turnaround & Deliverables Information

Due Date:
Deliverables:

Regulatory Requirements/Report Limits

State/Federal Program:

Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L2207957

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-301	02-15-22 14:00	WATER	Ethanol by EPA 1671 Revision A	

	Relinquished By:	Date/Time:	Received By:	Date/Time:
		2/16/22		
Form No: AL_subcoc				

Teklab, Inc.
Environmental Laboratory

http://www.teklabinc.com/

February 21, 2022

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

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

RE: L2207957 **WorkOrder:** 22020994

Dear Scott Enright:

TEKLAB, INC received 1 sample on 2/17/2022 10:18:00 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 II

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

Teklab, Inc.
Environmental Laboratory

Report Contents

http://www.teklabinc.com/

Client: Alpha Analytical
Client Project: L2207957

Work Order: 22020994
Report Date: 21-Feb-22

This reporting package includes the following:

Cover Letter	1
Report Contents	2
Definitions	3
Case Narrative	5
Accreditations	6
Laboratory Results	7
Quality Control Results	8
Receiving Check List	9
Chain of Custody	Appended

Teklab, Inc. Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: Alpha Analytical **Work Order:** 22020994

Client Project: L2207957 **Report Date:** 21-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)

Teklab, Inc. Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: Alpha Analytical

Work Order: 22020994

Client Project: L2207957

Report Date: 21-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		

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: Alpha Analytical
Client Project: L2207957

Work Order: 22020994
Report Date: 21-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

Teklab, Inc. Environmental Laboratory

Accreditations

http://www.teklabinc.com/

Client: Alpha Analytical

Client Project: L2207957

Work Order: 22020994

Report Date: 21-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

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 22020994
Client Project: L2207957
Report Date: 21-Feb-22
Lab ID: 22020994-001
Client Sample ID: SH-301
Matrix: AQUEOUS
Collection Date: 02/15/2022 14:00

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 600 1671A, PHARMACEUTICAL MANUFACTURING INDUSTRY NON-PURGEABLE VOLATILE ORGANICS								
Ethanol	*	20		**ND**	mg/L	1	02/18/2022 10:43	R307263

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Alpha Analytical

Client Project: L2207957

Work Order: 22020994

Report Date: 21-Feb-22

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

Batch R307263 **SampType:** MBLK Units **mg/L**
SampID: MBLK-021822

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		**ND**						02/18/2022

Batch R307263 **SampType:** LCS Units **mg/L**
SampID: LCS-021822

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		**280**	250.0	0	110.3	70	132	02/18/2022

Batch R307263 **SampType:** MS Units **mg/L**
SampID: 22020994-001AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		**290**	250.0	0	117.6	70	132	02/18/2022

Batch R307263 **SampType:** MSD Units **mg/L** RPD Limit: **30**
SampID: 22020994-001AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Ethanol	*	20		**300**	250.0	0	119.8	293.9	1.89	02/18/2022

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: Alpha Analytical
Client Project: L2207957

Work Order: 22020994
Report Date: 21-Feb-22

Carrier: UPS

Received By: PWR

Completed by: Mary E. Kemp
On: 17-Feb-22
Mary E. Kemp

Reviewed by: Elizabeth A. Hurley
On: 17-Feb-22
Elizabeth A. Hurley

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.

2202994

Subcontract Chain of Custody

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

Alpha Job Number
L2207957

Client Information

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

Phone: 508.439.5176
Email: senright@alphalab.com

Project Information

Project Location: MA
Project Manager: Scott Enright

Turnaround & Deliverables Information

Due Date:
Deliverables:

Regulatory Requirements/Report Limits

State/Federal Program:
Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L2207957

Report to include Method Blank, LCS/LCSD:

Additional Comments: Send all results/reports to subreports@alphalab.com 4.6°C LTG 3 COCs. RNT 2/16/22

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
2202994-001	SH-301	02-15-22 14:00	WATER	Ethanol by EPA 1671 Revision A	

	Relinquished By:	Date/Time:	Received By:	Date/Time:
		2/16/22	(UPS)	2/17/22 1018
Form No: AL_subcoc				

2/17/22

ANALYTICAL REPORT

Lab Number:	L2208205
Client:	Sanborn, Head & Associates, Inc. 1 Technology Park Drive Westford, MA 01886
ATTN:	Laura Garvey
Phone:	(978) 577-1031
Project Name:	DUNSTAN EAST
Project Number:	4055.01
Report Date:	03/02/22

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: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2208205
Report Date: 03/02/22

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2208205-01	SH-5W	WATER	NEWTON, MA	02/15/22 11:35	02/16/22
L2208205-02	SH-5W	WATER	NEWTON, MA	02/16/22 08:35	02/16/22
L2208205-03	CHEESE CAKE BROOK - SPOT 2	WATER	NEWTON, MA	02/16/22 11:40	02/16/22
L2208205-04	SH-218	WATER	NEWTON, MA	02/16/22 13:30	02/16/22

Project Name:	DUNSTAN EAST	**Lab Number:**	L2208205
Project Number:	4055.01	**Report Date:**	03/02/22

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:	DUNSTAN EAST	**Lab Number:**	L2208205
Project Number:	4055.01	**Report Date:**	03/02/22

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.

Sample Receipt

The analyses performed were specified by the client.

Volatile Organics by Method 624

L2208205-01D: The sample has elevated detection limits due to the dilution required by the sample matrix (sheen).

Volatile Organics by SIM

L2208205-01D: The sample has elevated detection limits due to the dilution required by the sample matrix (sheen).

Semivolatile Organics by Method 625

L2208205-01D: The sample has elevated detection limits due to the dilution required by the sample matrix.

Semivolatile Organics by SIM

L2208205-01D: The sample has elevated detection limits due to the dilution required by the sample matrix.

L2208205-01D: The surrogate recovery for nitrobenzene-d5 (124%) is outside the acceptance criteria; however, since the sample was non-detect for all target analytes associated with this surrogate, re-analysis was not required.

WG1607901-1: The surrogate recovery is above the acceptance criteria for 2,4,6-tribromophenol (131%). Since the blank was non-detect for all target analytes, re-analysis was not required.

Total Metals

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

Case Narrative (continued)

The WG1606575-3 MS recovery for iron (0%), performed on L2208205-01, does not apply because the sample concentration is greater than four times the spike amount added.
The WG1606585-4 Laboratory Duplicate RPDs for chromium (39%) and lead (22%), performed on L2208205-01, are outside the acceptance criteria. The elevated RPDs have been attributed to the non-homogeneous nature of the native samples.
The WG1606585-4 Laboratory Duplicate RPD for nickel (25%), performed on L2208205-01, is above the acceptance criteria; however, the sample and duplicate results are less than five times the reporting limit. Therefore, the RPD is valid.

Dissolved Metals
L2208205-04: The sample has elevated detection limits for lead due to the dilution required by the sample matrix.

Anions by Ion Chromatography
The WG1607489-3 MS recovery, performed on L2208205-02, is outside the acceptance criteria for chloride (85%); 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: Sebastian Corbin

Title: Technical Director/Representative Date: 03/02/22

ORGANICS

VOLATILES

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-01
Client ID: SH-5W
Sample Location: NEWTON, MA

Date Collected: 02/15/22 11:35
Date Received: 02/16/22
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 02/24/22 15:18
Analyst: AMM

Extraction Method: EPA 504.1
Extraction Date: 02/24/22 13:38

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: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-01 D
Client ID: SH-5W
Sample Location: NEWTON, MA

Date Collected: 02/15/22 11:35
Date Received: 02/16/22
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 02/21/22 17:01
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	2
1,1-Dichloroethane	ND		ug/l	3.0	--	2
Carbon tetrachloride	ND		ug/l	2.0	--	2
1,1,2-Trichloroethane	ND		ug/l	3.0	--	2
Tetrachloroethene	ND		ug/l	2.0	--	2
1,2-Dichloroethane	ND		ug/l	3.0	--	2
1,1,1-Trichloroethane	ND		ug/l	4.0	--	2
Benzene	18		ug/l	2.0	--	2
Toluene	2.1		ug/l	2.0	--	2
Ethylbenzene	20		ug/l	2.0	--	2
Vinyl chloride	ND		ug/l	2.0	--	2
1,1-Dichloroethene	ND		ug/l	2.0	--	2
cis-1,2-Dichloroethene	ND		ug/l	2.0	--	2
Trichloroethene	ND		ug/l	2.0	--	2
1,2-Dichlorobenzene	ND		ug/l	10	--	2
1,3-Dichlorobenzene	ND		ug/l	10	--	2
1,4-Dichlorobenzene	ND		ug/l	10	--	2
p/m-Xylene	27		ug/l	4.0	--	2
o-xylene	6.7		ug/l	2.0	--	2
Xylenes, Total	34		ug/l	2.0	--	2
Acetone	86		ug/l	20	--	2
Methyl tert butyl ether	ND		ug/l	20	--	2
Tert-Butyl Alcohol	ND		ug/l	200	--	2
Tertiary-Amyl Methyl Ether	ND		ug/l	40	--	2

Project Name: DUNSTAN EAST
Lab Number: L2208205
Project Number: 4055.01
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-01 D
Client ID: SH-5W
Sample Location: NEWTON, MA

Date Collected: 02/15/22 11:35
Date Received: 02/16/22
Field Prep: Refer to COC

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	110		60-140
Fluorobenzene	98		60-140
4-Bromofluorobenzene	105		60-140

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-01 D
Client ID: SH-5W
Sample Location: NEWTON, MA

Date Collected: 02/15/22 11:35
Date Received: 02/16/22
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1-SIM
Analytical Date: 02/21/22 17:01
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	10	--	2

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	105		60-140
4-Bromofluorobenzene	107		60-140

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-04
Client ID: SH-218
Sample Location: NEWTON, MA

Date Collected: 02/16/22 13:30
Date Received: 02/16/22
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 02/21/22 15:17
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: DUNSTAN EAST
Lab Number: L2208205
Project Number: 4055.01
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-04
Client ID: SH-218
Sample Location: NEWTON, MA

Date Collected: 02/16/22 13:30
Date Received: 02/16/22
Field Prep: Refer to COC

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	101		60-140
Fluorobenzene	93		60-140
4-Bromofluorobenzene	103		60-140

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-04
Client ID: SH-218
Sample Location: NEWTON, MA

Date Collected: 02/16/22 13:30
Date Received: 02/16/22
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1-SIM
Analytical Date: 02/21/22 15:17
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	99		60-140
4-Bromofluorobenzene	103		60-140

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-04
Client ID: SH-218
Sample Location: NEWTON, MA

Date Collected: 02/16/22 13:30
Date Received: 02/16/22
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 02/24/22 15:25
Analyst: AMM

Extraction Method: EPA 504.1
Extraction Date: 02/24/22 13:38

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: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 02/21/22 10:54
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01,04 Batch: WG1607893-4					
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: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 02/21/22 10:54
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01,04 Batch: WG1607893-4					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	102		60-140
Fluorobenzene	95		60-140
4-Bromofluorobenzene	102		60-140

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1-SIM
Analytical Date: 02/21/22 10:54
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01,04 Batch: WG1607897-4					
1,4-Dioxane	ND		ug/l	5.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	100		60-140
4-Bromofluorobenzene	109		60-140

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2208205
Report Date: 03/02/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 02/24/22 14:46
Analyst: AMM

Extraction Method: EPA 504.1
Extraction Date: 02/24/22 13:38

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westborough Lab for sample(s): 01,04 Batch: WG1608889-1						
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: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2208205

Report Date: 03/02/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,04 Batch: WG1607893-3								
Methylene chloride	95		-		60-140	-		28
1,1-Dichloroethane	100		-		50-150	-		49
Carbon tetrachloride	100		-		70-130	-		41
1,1,2-Trichloroethane	95		-		70-130	-		45
Tetrachloroethene	100		-		70-130	-		39
1,2-Dichloroethane	100		-		70-130	-		49
1,1,1-Trichloroethane	105		-		70-130	-		36
Benzene	95		-		65-135	-		61
Toluene	95		-		70-130	-		41
Ethylbenzene	95		-		60-140	-		63
Vinyl chloride	90		-		5-195	-		66
1,1-Dichloroethene	105		-		50-150	-		32
cis-1,2-Dichloroethene	95		-		60-140	-		30
Trichloroethene	95		-		65-135	-		48
1,2-Dichlorobenzene	105		-		65-135	-		57
1,3-Dichlorobenzene	100		-		70-130	-		43
1,4-Dichlorobenzene	105		-		65-135	-		57
p/m-Xylene	90		-		60-140	-		30
o-xylene	85		-		60-140	-		30
Acetone	98		-		40-160	-		30
Methyl tert butyl ether	90		-		60-140	-		30
Tert-Butyl Alcohol	120		-		60-140	-		30
Tertiary-Amyl Methyl Ether	85		-		60-140	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2208205

Report Date: 03/02/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,04 Batch: WG1607893-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	104				60-140
Fluorobenzene	97				60-140
4-Bromofluorobenzene	102				60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2208205

Report Date: 03/02/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01,04 Batch: WG1607897-3								
1,4-Dioxane	126		-		60-140	-		20

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

Lab Control Sample Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2208205

Report Date: 03/02/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab	Associated sample(s): 01,04		Batch: WG1608889-2						
1,2-Dibromoethane	92		-		80-120	-			A
1,2-Dibromo-3-chloropropane	105		-		80-120	-			A
1,2,3-Trichloropropane	90		-		80-120	-			A

Matrix Spike Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2208205

Report Date: 03/02/22

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): 01,04 QC Batch ID: WG1608889-3 QC Sample: L2209364-01 Client ID: MS Sample													
1,2-Dibromoethane	ND	0.251	0.287	114		-	-		80-120	-		20	A
1,2-Dibromo-3-chloropropane	ND	0.251	0.297	118		-	-		80-120	-		20	A
1,2,3-Trichloropropane	ND	0.251	0.267	106		-	-		80-120	-		20	A

SEMIVOLATILES

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-01 D
Client ID: SH-5W
Sample Location: NEWTON, MA

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 02/28/22 20:58
Analyst: SZ

Date Collected: 02/15/22 11:35
Date Received: 02/16/22
Field Prep: Refer to COC

Extraction Method: EPA 625.1
Extraction Date: 02/22/22 14:47

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-ethylhexyl)phthalate	22.7		ug/l	22.0	--	10
Butyl benzyl phthalate	ND		ug/l	50.0	--	10
Di-n-butylphthalate	ND		ug/l	50.0	--	10
Di-n-octylphthalate	ND		ug/l	50.0	--	10
Diethyl phthalate	ND		ug/l	50.0	--	10
Dimethyl phthalate	ND		ug/l	50.0	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	85		42-122
2-Fluorobiphenyl	95		46-121
4-Terphenyl-d14	97		47-138

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-01 D
Client ID: SH-5W
Sample Location: NEWTON, MA

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 03/02/22 11:11
Analyst: JJW

Date Collected: 02/15/22 11:35
Date Received: 02/16/22
Field Prep: Refer to COC

Extraction Method: EPA 625.1
Extraction Date: 02/22/22 14:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	30.8		ug/l	1.00	--	10
Fluoranthene	4.87		ug/l	1.00	--	10
Naphthalene	76.4		ug/l	1.00	--	10
Benzo(a)anthracene	1.83		ug/l	1.00	--	10
Benzo(a)pyrene	ND		ug/l	1.00	--	10
Benzo(b)fluoranthene	ND		ug/l	1.00	--	10
Benzo(k)fluoranthene	ND		ug/l	1.00	--	10
Chrysene	1.84		ug/l	1.00	--	10
Acenaphthylene	ND		ug/l	1.00	--	10
Anthracene	ND		ug/l	1.00	--	10
Benzo(ghi)perylene	ND		ug/l	1.00	--	10
Fluorene	ND		ug/l	1.00	--	10
Phenanthrene	164		ug/l	1.00	--	10
Dibenzo(a,h)anthracene	ND		ug/l	1.00	--	10
Indeno(1,2,3-cd)pyrene	ND		ug/l	1.00	--	10
Pyrene	19.4		ug/l	1.00	--	10
Pentachlorophenol	ND		ug/l	10.0	--	10

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	41		25-87
Phenol-d6	35		16-65
Nitrobenzene-d5	**124**	Q	42-122
2-Fluorobiphenyl	65		46-121
2,4,6-Tribromophenol	64		45-128
4-Terphenyl-d14	73		47-138

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-04
Client ID: SH-218
Sample Location: NEWTON, MA

Date Collected: 02/16/22 13:30
Date Received: 02/16/22
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 02/23/22 16:47
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 02/22/22 14:47

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	65		42-122
2-Fluorobiphenyl	60		46-121
4-Terphenyl-d14	56		47-138

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-04
Client ID: SH-218
Sample Location: NEWTON, MA

Date Collected: 02/16/22 13:30
Date Received: 02/16/22
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 02/23/22 13:47
Analyst: RP

Extraction Method: EPA 625.1
Extraction Date: 02/22/22 14:55

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	46		25-87
Phenol-d6	33		16-65
Nitrobenzene-d5	74		42-122
2-Fluorobiphenyl	66		46-121
2,4,6-Tribromophenol	83		45-128
4-Terphenyl-d14	72		47-138

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1
Analytical Date: 02/23/22 10:18
Analyst: JG

Extraction Method: EPA 625.1
Extraction Date: 02/22/22 14:47

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01,04 Batch: WG1607895-1					
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	87		42-122
2-Fluorobiphenyl	87		46-121
4-Terphenyl-d14	98		47-138

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1-SIM
Analytical Date: 02/23/22 12:24
Analyst: JJW

Extraction Method: EPA 625.1
Extraction Date: 02/22/22 14:55

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01,04 Batch: WG1607901-1					
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	70		25-87
Phenol-d6	47		16-65
Nitrobenzene-d5	107		42-122
2-Fluorobiphenyl	95		46-121
2,4,6-Tribromophenol	**131**	Q	45-128
4-Terphenyl-d14	119		47-138

Lab Control Sample Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2208205

Report Date: 03/02/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01,04 Batch: WG1607895-3								
Bis(2-ethylhexyl)phthalate	115		-		29-137	-		82
Butyl benzyl phthalate	106		-		1-140	-		60
Di-n-butylphthalate	104		-		8-120	-		47
Di-n-octylphthalate	112		-		19-132	-		69
Diethyl phthalate	96		-		1-120	-		100
Dimethyl phthalate	94		-		1-120	-		183

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	95				42-122
2-Fluorobiphenyl	95				46-121
4-Terphenyl-d14	99				47-138

Lab Control Sample Analysis
Batch Quality Control

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2208205
Report Date: 03/02/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01,04 Batch: WG1607901-3								
Acenaphthene	79		-		60-132	-		30
Fluoranthene	91		-		43-121	-		30
Naphthalene	74		-		36-120	-		30
Benzo(a)anthracene	95		-		42-133	-		30
Benzo(a)pyrene	95		-		32-148	-		30
Benzo(b)fluoranthene	91		-		42-140	-		30
Benzo(k)fluoranthene	92		-		25-146	-		30
Chrysene	77		-		44-140	-		30
Acenaphthylene	88		-		54-126	-		30
Anthracene	86		-		43-120	-		30
Benzo(ghi)perylene	93		-		1-195	-		30
Fluorene	86		-		70-120	-		30
Phenanthrene	81		-		65-120	-		30
Dibenzo(a,h)anthracene	102		-		1-200	-		30
Indeno(1,2,3-cd)pyrene	98		-		1-151	-		30
Pyrene	92		-		70-120	-		30
Pentachlorophenol	85		-		38-152	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2208205

Report Date: 03/02/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01,04 Batch: WG1607901-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	59				25-87
Phenol-d6	40				16-65
Nitrobenzene-d5	86				42-122
2-Fluorobiphenyl	80				46-121
2,4,6-Tribromophenol	109				45-128
4-Terphenyl-d14	99				47-138

PCBS

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-02
Client ID: SH-5W
Sample Location: NEWTON, MA

Date Collected: 02/16/22 08:35
Date Received: 02/16/22
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 03/02/22 10:10
Analyst: JM

Extraction Method: EPA 608.3
Extraction Date: 03/01/22 23:18
Cleanup Method: EPA 3665A
Cleanup Date: 03/02/22
Cleanup Method: EPA 3660B
Cleanup Date: 03/02/22

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	61		37-123	B
Decachlorobiphenyl	57		38-114	B
2,4,5,6-Tetrachloro-m-xylene	58		37-123	A
Decachlorobiphenyl	49		38-114	A

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-04
Client ID: SH-218
Sample Location: NEWTON, MA

Date Collected: 02/16/22 13:30
Date Received: 02/16/22
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 03/02/22 10:34
Analyst: JM

Extraction Method: EPA 608.3
Extraction Date: 03/01/22 23:18
Cleanup Method: EPA 3665A
Cleanup Date: 03/02/22
Cleanup Method: EPA 3660B
Cleanup Date: 03/02/22

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	77		37-123	B
Decachlorobiphenyl	85		38-114	B
2,4,5,6-Tetrachloro-m-xylene	76		37-123	A
Decachlorobiphenyl	78		38-114	A

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

Method Blank Analysis
Batch Quality Control

Analytical Method: 127,608.3
Analytical Date: 03/02/22 08:41
Analyst: JM

Extraction Method: EPA 608.3
Extraction Date: 03/01/22 23:18
Cleanup Method: EPA 3665A
Cleanup Date: 03/02/22
Cleanup Method: EPA 3660B
Cleanup Date: 03/02/22

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 02,04 Batch: WG1610493-1						
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	80		37-123	B
Decachlorobiphenyl	87		38-114	B
2,4,5,6-Tetrachloro-m-xylene	77		37-123	A
Decachlorobiphenyl	84		38-114	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2208205

Report Date: 03/02/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 02,04 Batch: WG1610493-2									
Aroclor 1016	89		-		50-140	-		36	A
Aroclor 1260	90		-		8-140	-		38	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	80				37-123	B
Decachlorobiphenyl	93				38-114	B
2,4,5,6-Tetrachloro-m-xylene	79				37-123	A
Decachlorobiphenyl	85				38-114	A

METALS

Project Name: DUNSTAN EAST
Lab Number: L2208205
Project Number: 4055.01
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-01
Client ID: SH-5W
Sample Location: NEWTON, MA
Date Collected: 02/15/22 11:35
Date Received: 02/16/22
Field Prep: Refer to COC

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	02/20/22 17:29	02/21/22 20:00	EPA 3005A	3,200.8	CD
Arsenic, Total	0.03790		mg/l	0.00100	--	1	02/20/22 17:29	02/21/22 20:00	EPA 3005A	3,200.8	CD
Cadmium, Total	0.00027		mg/l	0.00020	--	1	02/20/22 17:29	02/21/22 20:00	EPA 3005A	3,200.8	CD
Chromium, Total	0.00649		mg/l	0.00100	--	1	02/20/22 17:29	02/21/22 20:00	EPA 3005A	3,200.8	CD
Copper, Total	0.01900		mg/l	0.00100	--	1	02/20/22 17:29	02/21/22 20:00	EPA 3005A	3,200.8	CD
Iron, Total	13.0		mg/l	0.050	--	1	02/20/22 17:29	02/25/22 00:51	EPA 3005A	19,200.7	MC
Lead, Total	0.02342		mg/l	0.00100	--	1	02/20/22 17:29	02/21/22 20:00	EPA 3005A	3,200.8	CD
Mercury, Total	ND		mg/l	0.00020	--	1	02/20/22 18:22	02/24/22 08:10	EPA 245.1	3,245.1	AC
Nickel, Total	0.00646		mg/l	0.00200	--	1	02/20/22 17:29	02/21/22 20:00	EPA 3005A	3,200.8	CD
Selenium, Total	ND		mg/l	0.00500	--	1	02/20/22 17:29	02/21/22 20:00	EPA 3005A	3,200.8	CD
Silver, Total	ND		mg/l	0.00040	--	1	02/20/22 17:29	02/21/22 20:00	EPA 3005A	3,200.8	CD
Zinc, Total	0.09328		mg/l	0.01000	--	1	02/20/22 17:29	02/21/22 20:00	EPA 3005A	3,200.8	CD
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	165		mg/l	0.660	NA	1	02/20/22 17:29	02/25/22 00:51	EPA 3005A	19,200.7	MC
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		02/21/22 20:00	NA	107,-	
Dissolved Metals - Mansfield Lab											
Antimony, Dissolved	ND		mg/l	0.0040	--	1	02/22/22 08:50	02/22/22 16:48	EPA 3005A	3,200.8	SV
Arsenic, Dissolved	0.0164		mg/l	0.0010	--	1	02/22/22 08:50	02/22/22 16:48	EPA 3005A	3,200.8	SV
Cadmium, Dissolved	ND		mg/l	0.0002	--	1	02/22/22 08:50	02/22/22 16:48	EPA 3005A	3,200.8	SV
Chromium, Dissolved	ND		mg/l	0.0010	--	1	02/22/22 08:50	02/22/22 16:48	EPA 3005A	3,200.8	SV
Copper, Dissolved	0.0026		mg/l	0.0010	--	1	02/22/22 08:50	02/22/22 16:48	EPA 3005A	3,200.8	SV
Iron, Dissolved	3.45		mg/l	0.050	--	1	02/22/22 08:50	02/28/22 10:26	EPA 3005A	19,200.7	EW
Lead, Dissolved	0.0030		mg/l	0.0010	--	1	02/22/22 08:50	02/22/22 16:48	EPA 3005A	3,200.8	SV
Mercury, Dissolved	ND		mg/l	0.00020	--	1	02/22/22 09:57	03/02/22 10:34	EPA 245.1	3,245.1	AC

Project Name: DUNSTAN EAST
Lab Number: L2208205
Project Number: 4055.01
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-01
Client ID: SH-5W
Sample Location: NEWTON, MA
Date Collected: 02/15/22 11:35
Date Received: 02/16/22
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Nickel, Dissolved	0.0021		mg/l	0.0020	--	1	02/22/22 08:50	02/22/22 16:48	EPA 3005A	3,200.8	SV
Selenium, Dissolved	ND		mg/l	0.0050	--	1	02/22/22 08:50	02/22/22 16:48	EPA 3005A	3,200.8	SV
Silver, Dissolved	ND		mg/l	0.0004	--	1	02/22/22 08:50	02/22/22 16:48	EPA 3005A	3,200.8	SV
Zinc, Dissolved	0.0296		mg/l	0.0100	--	1	02/22/22 08:50	02/22/22 16:48	EPA 3005A	3,200.8	SV

Project Name: DUNSTAN EAST
Lab Number: L2208205
Project Number: 4055.01
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-03
Client ID: CHEESE CAKE BROOK - SPOT 2
Sample Location: NEWTON, MA
Date Collected: 02/16/22 11:40
Date Received: 02/16/22
Field Prep: None

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	02/20/22 17:29	02/21/22 20:26	EPA 3005A	3,200.8	CD
Arsenic, Total	0.00133		mg/l	0.00100	--	1	02/20/22 17:29	02/21/22 20:26	EPA 3005A	3,200.8	CD
Cadmium, Total	ND		mg/l	0.00020	--	1	02/20/22 17:29	02/21/22 20:26	EPA 3005A	3,200.8	CD
Chromium, Total	ND		mg/l	0.00100	--	1	02/20/22 17:29	02/21/22 20:26	EPA 3005A	3,200.8	CD
Copper, Total	0.00499		mg/l	0.00100	--	1	02/20/22 17:29	02/21/22 20:26	EPA 3005A	3,200.8	CD
Iron, Total	0.678		mg/l	0.050	--	1	02/20/22 17:29	02/25/22 01:12	EPA 3005A	19,200.7	MC
Lead, Total	0.00915		mg/l	0.00100	--	1	02/20/22 17:29	02/21/22 20:26	EPA 3005A	3,200.8	CD
Mercury, Total	ND		mg/l	0.00020	--	1	02/20/22 18:22	02/24/22 08:13	EPA 245.1	3,245.1	AC
Nickel, Total	ND		mg/l	0.00200	--	1	02/20/22 17:29	02/21/22 20:26	EPA 3005A	3,200.8	CD
Selenium, Total	ND		mg/l	0.00500	--	1	02/20/22 17:29	02/21/22 20:26	EPA 3005A	3,200.8	CD
Silver, Total	ND		mg/l	0.00040	--	1	02/20/22 17:29	02/21/22 20:26	EPA 3005A	3,200.8	CD
Zinc, Total	0.03946		mg/l	0.01000	--	1	02/20/22 17:29	02/21/22 20:26	EPA 3005A	3,200.8	CD
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	87.6		mg/l	0.660	NA	1	02/20/22 17:29	02/25/22 01:12	EPA 3005A	19,200.7	MC

Project Name: DUNSTAN EAST
Lab Number: L2208205
Project Number: 4055.01
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-04
Client ID: SH-218
Sample Location: NEWTON, MA
Date Collected: 02/16/22 13:30
Date Received: 02/16/22
Field Prep: Refer to COC

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	02/20/22 17:29	02/21/22 21:16	EPA 3005A	3,200.8	CD
Arsenic, Total	0.00558		mg/l	0.00100	--	1	02/20/22 17:29	02/21/22 21:16	EPA 3005A	3,200.8	CD
Cadmium, Total	0.00058		mg/l	0.00020	--	1	02/20/22 17:29	02/21/22 21:16	EPA 3005A	3,200.8	CD
Chromium, Total	0.04540		mg/l	0.00100	--	1	02/20/22 17:29	02/21/22 21:16	EPA 3005A	3,200.8	CD
Copper, Total	0.05370		mg/l	0.00100	--	1	02/20/22 17:29	02/21/22 21:16	EPA 3005A	3,200.8	CD
Iron, Total	17.6		mg/l	0.050	--	1	02/20/22 17:29	02/25/22 02:10	EPA 3005A	19,200.7	MC
Lead, Total	0.02940		mg/l	0.00100	--	1	02/20/22 17:29	02/21/22 21:16	EPA 3005A	3,200.8	CD
Mercury, Total	ND		mg/l	0.00020	--	1	02/20/22 18:22	02/24/22 08:16	EPA 245.1	3,245.1	AC
Nickel, Total	0.02542		mg/l	0.00200	--	1	02/20/22 17:29	02/21/22 21:16	EPA 3005A	3,200.8	CD
Selenium, Total	0.00633		mg/l	0.00500	--	1	02/20/22 17:29	02/21/22 21:16	EPA 3005A	3,200.8	CD
Silver, Total	ND		mg/l	0.00040	--	1	02/20/22 17:29	02/21/22 21:16	EPA 3005A	3,200.8	CD
Zinc, Total	0.07260		mg/l	0.01000	--	1	02/20/22 17:29	02/21/22 21:16	EPA 3005A	3,200.8	CD
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	300		mg/l	0.660	NA	1	02/20/22 17:29	02/25/22 02:10	EPA 3005A	19,200.7	MC
General Chemistry - Mansfield Lab											
Chromium, Trivalent	0.045		mg/l	0.010	--	1		02/21/22 21:16	NA	107,-	
Dissolved Metals - Mansfield Lab											
Antimony, Dissolved	ND		mg/l	0.0040	--	1	02/22/22 08:50	02/22/22 18:11	EPA 3005A	3,200.8	SV
Arsenic, Dissolved	ND		mg/l	0.0010	--	1	02/22/22 08:50	02/22/22 18:11	EPA 3005A	3,200.8	SV
Cadmium, Dissolved	0.0003		mg/l	0.0002	--	1	02/22/22 08:50	02/22/22 18:11	EPA 3005A	3,200.8	SV
Chromium, Dissolved	ND		mg/l	0.0010	--	1	02/22/22 08:50	02/22/22 18:11	EPA 3005A	3,200.8	SV
Copper, Dissolved	0.0026		mg/l	0.0010	--	1	02/22/22 08:50	02/22/22 18:11	EPA 3005A	3,200.8	SV
Iron, Dissolved	0.355		mg/l	0.050	--	1	02/22/22 08:50	02/28/22 10:22	EPA 3005A	19,200.7	EW
Lead, Dissolved	ND		mg/l	0.0100	--	10	02/22/22 08:50	02/22/22 19:23	EPA 3005A	3,200.8	SV
Mercury, Dissolved	ND		mg/l	0.00020	--	1	02/22/22 09:57	03/02/22 10:24	EPA 245.1	3,245.1	AC

Project Name: DUNSTAN EAST
Lab Number: L2208205
Project Number: 4055.01
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-04
Client ID: SH-218
Sample Location: NEWTON, MA
Date Collected: 02/16/22 13:30
Date Received: 02/16/22
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Nickel, Dissolved	0.0020		mg/l	0.0020	--	1	02/22/22 08:50	02/22/22 18:11	EPA 3005A	3,200.8	SV
Selenium, Dissolved	ND		mg/l	0.0050	--	1	02/22/22 08:50	02/22/22 18:11	EPA 3005A	3,200.8	SV
Silver, Dissolved	ND		mg/l	0.0004	--	1	02/22/22 08:50	02/22/22 18:11	EPA 3005A	3,200.8	SV
Zinc, Dissolved	0.0138		mg/l	0.0100	--	1	02/22/22 08:50	02/22/22 18:11	EPA 3005A	3,200.8	SV

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

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): 01,03-04 Batch: WG1606575-1										
Iron, Total	ND		mg/l	0.050	--	1	02/20/22 17:29	02/25/22 01:43	19,200.7	MC

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): 01,03-04 Batch: WG1606575-1										
Hardness	ND		mg/l	0.660	NA	1	02/20/22 17:29	02/25/22 01:43	19,200.7	MC

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): 01,03-04 Batch: WG1606585-1										
Antimony, Total	ND		mg/l	0.00400	--	1	02/20/22 17:29	02/21/22 19:34	3,200.8	CD
Arsenic, Total	ND		mg/l	0.00100	--	1	02/20/22 17:29	02/21/22 19:34	3,200.8	CD
Cadmium, Total	ND		mg/l	0.00020	--	1	02/20/22 17:29	02/21/22 19:34	3,200.8	CD
Chromium, Total	ND		mg/l	0.00100	--	1	02/20/22 17:29	02/21/22 19:34	3,200.8	CD
Copper, Total	ND		mg/l	0.00100	--	1	02/20/22 17:29	02/21/22 19:34	3,200.8	CD
Lead, Total	ND		mg/l	0.00100	--	1	02/20/22 17:29	02/21/22 19:34	3,200.8	CD
Nickel, Total	ND		mg/l	0.00200	--	1	02/20/22 17:29	02/21/22 19:34	3,200.8	CD
Selenium, Total	ND		mg/l	0.00500	--	1	02/20/22 17:29	02/21/22 19:34	3,200.8	CD
Silver, Total	ND		mg/l	0.00040	--	1	02/20/22 17:29	02/21/22 19:34	3,200.8	CD
Zinc, Total	ND		mg/l	0.01000	--	1	02/20/22 17:29	02/21/22 19:34	3,200.8	CD

Prep Information

Digestion Method: EPA 3005A

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

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): 01,03-04 Batch: WG1606587-1										
Mercury, Total	ND		mg/l	0.00020	--	1	02/20/22 18:22	02/24/22 07:29	3,245.1	AC

Prep Information

Digestion Method: EPA 245.1

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 01,04 Batch: WG1606716-1										
Iron, Dissolved	ND		mg/l	0.050	--	1	02/22/22 08:50	02/28/22 10:04	19,200.7	EW

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 01,04 Batch: WG1606720-1										
Antimony, Dissolved	ND		mg/l	0.0040	--	1	02/22/22 08:50	02/22/22 17:35	3,200.8	SV
Arsenic, Dissolved	ND		mg/l	0.0010	--	1	02/22/22 08:50	02/22/22 17:35	3,200.8	SV
Cadmium, Dissolved	ND		mg/l	0.0002	--	1	02/22/22 08:50	02/22/22 17:35	3,200.8	SV
Chromium, Dissolved	ND		mg/l	0.0010	--	1	02/22/22 08:50	02/22/22 17:35	3,200.8	SV
Copper, Dissolved	ND		mg/l	0.0010	--	1	02/22/22 08:50	02/22/22 17:35	3,200.8	SV
Lead, Dissolved	ND		mg/l	0.0010	--	1	02/22/22 08:50	02/22/22 17:35	3,200.8	SV
Nickel, Dissolved	ND		mg/l	0.0020	--	1	02/22/22 08:50	02/22/22 17:35	3,200.8	SV
Selenium, Dissolved	ND		mg/l	0.0050	--	1	02/22/22 08:50	02/22/22 17:35	3,200.8	SV
Silver, Dissolved	ND		mg/l	0.0004	--	1	02/22/22 08:50	02/22/22 17:35	3,200.8	SV
Zinc, Dissolved	ND		mg/l	0.0100	--	1	02/22/22 08:50	02/22/22 17:35	3,200.8	SV

Prep Information

Digestion Method: EPA 3005A

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 01,04 Batch: WG1606722-1										
Mercury, Dissolved	ND		mg/l	0.00020	--	1	02/22/22 09:57	03/02/22 10:18	3,245.1	AC

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2208205

Report Date: 03/02/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01,03-04 Batch: WG1606575-2								
Iron, Total	99		-		85-115	-		
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01,03-04 Batch: WG1606575-2								
Hardness	104		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01,03-04 Batch: WG1606585-2								
Antimony, Total	85		-		85-115	-		
Arsenic, Total	105		-		85-115	-		
Cadmium, Total	104		-		85-115	-		
Chromium, Total	102		-		85-115	-		
Copper, Total	101		-		85-115	-		
Lead, Total	102		-		85-115	-		
Nickel, Total	98		-		85-115	-		
Selenium, Total	102		-		85-115	-		
Silver, Total	105		-		85-115	-		
Zinc, Total	101		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01,03-04 Batch: WG1606587-2								
Mercury, Total	99		-		85-115	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2208205

Report Date: 03/02/22

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01,04 Batch: WG1606716-2					
Iron, Dissolved	111	-	85-115	-	
Dissolved Metals - Mansfield Lab Associated sample(s): 01,04 Batch: WG1606720-2					
Antimony, Dissolved	96	-	85-115	-	
Arsenic, Dissolved	99	-	85-115	-	
Cadmium, Dissolved	101	-	85-115	-	
Chromium, Dissolved	102	-	85-115	-	
Copper, Dissolved	94	-	85-115	-	
Lead, Dissolved	99	-	85-115	-	
Nickel, Dissolved	97	-	85-115	-	
Selenium, Dissolved	98	-	85-115	-	
Silver, Dissolved	104	-	85-115	-	
Zinc, Dissolved	94	-	85-115	-	
Dissolved Metals - Mansfield Lab Associated sample(s): 01,04 Batch: WG1606722-2					
Mercury, Dissolved	102	-	85-115	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2208205
Report Date: 03/02/22

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): 01,03-04 QC Batch ID: WG1606575-3 QC Sample: L2208205-01 Client ID: SH-5W												
Iron, Total	13.0	1	13.0	**0**	Q	-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01,03-04 QC Batch ID: WG1606575-3 QC Sample: L2208205-01 Client ID: SH-5W												
Hardness	165	66.2	228	95		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01,03-04 QC Batch ID: WG1606575-7 QC Sample: L2208205-03 Client ID: CHEESE CAKE BROOK - SPOT 2												
Iron, Total	0.678	1	1.72	104		-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01,03-04 QC Batch ID: WG1606575-7 QC Sample: L2208205-03 Client ID: CHEESE CAKE BROOK - SPOT 2												
Hardness	87.6	66.2	156	103		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01,03-04 QC Batch ID: WG1606585-3 QC Sample: L2208205-01 Client ID: SH-5W												
Antimony, Total	ND	0.5	0.5145	103		-	-		70-130	-		20
Arsenic, Total	0.03790	0.12	0.1507	94		-	-		70-130	-		20
Cadmium, Total	0.00027	0.053	0.05383	101		-	-		70-130	-		20
Chromium, Total	0.00649	0.2	0.2031	98		-	-		70-130	-		20
Copper, Total	0.01900	0.25	0.2636	98		-	-		70-130	-		20
Lead, Total	0.02342	0.53	0.5472	99		-	-		70-130	-		20
Nickel, Total	0.00646	0.5	0.4865	96		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1260	105		-	-		70-130	-		20
Silver, Total	ND	0.05	0.05166	103		-	-		70-130	-		20
Zinc, Total	0.09328	0.5	0.5789	97		-	-		70-130	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2208205
Report Date: 03/02/22

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01,03-04 QC Batch ID: WG1606587-3 QC Sample: L2208597-01 Client ID: MS Sample									
Mercury, Total	ND	0.005	0.00483	97	-	-	70-130	-	20
Total Metals - Mansfield Lab Associated sample(s): 01,03-04 QC Batch ID: WG1606587-5 QC Sample: L2208598-01 Client ID: MS Sample									
Mercury, Total	ND	0.005	0.00448	90	-	-	70-130	-	20
Dissolved Metals - Mansfield Lab Associated sample(s): 01,04 QC Batch ID: WG1606716-3 QC Sample: L2208205-01 Client ID: SH-5W									
Iron, Dissolved	3.45	1	4.44	99	-	-	75-125	-	20
Dissolved Metals - Mansfield Lab Associated sample(s): 01,04 QC Batch ID: WG1606720-3 QC Sample: L2208205-01 Client ID: SH-5W									
Antimony, Dissolved	ND	0.5	0.4941	99	-	-	70-130	-	20
Arsenic, Dissolved	0.0164	0.12	0.1365	100	-	-	70-130	-	20
Cadmium, Dissolved	ND	0.053	0.0515	97	-	-	70-130	-	20
Chromium, Dissolved	ND	0.2	0.1969	98	-	-	70-130	-	20
Copper, Dissolved	0.0026	0.25	0.2455	97	-	-	70-130	-	20
Lead, Dissolved	0.0030	0.53	0.4954	93	-	-	70-130	-	20
Nickel, Dissolved	0.0021	0.5	0.4695	93	-	-	70-130	-	20
Selenium, Dissolved	ND	0.12	0.1099	92	-	-	70-130	-	20
Silver, Dissolved	ND	0.05	0.0513	102	-	-	70-130	-	20
Zinc, Dissolved	0.0296	0.5	0.4864	91	-	-	70-130	-	20
Dissolved Metals - Mansfield Lab Associated sample(s): 01,04 QC Batch ID: WG1606722-3 QC Sample: L2208205-04 Client ID: SH-218									
Mercury, Dissolved	ND	0.005	0.00490	98	-	-	75-125	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2208205

Report Date: 03/02/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01,03-04 QC Batch ID: WG1606575-4 QC Sample: L2208205-01 Client ID: SH-5W						
Iron, Total	13.0	11.8	mg/l	10		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01,03-04 QC Batch ID: WG1606575-4 QC Sample: L2208205-01 Client ID: SH-5W						
Hardness	165	161	mg/l	2		20
Total Metals - Mansfield Lab Associated sample(s): 01,03-04 QC Batch ID: WG1606575-8 QC Sample: L2208205-03 Client ID: CHEESE CAKE BROOK - SPOT 2						
Iron, Total	0.678	0.680	mg/l	0		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01,03-04 QC Batch ID: WG1606575-8 QC Sample: L2208205-03 Client ID: CHEESE CAKE BROOK - SPOT 2						
Hardness	87.6	85.1	mg/l	3		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2208205
Report Date: 03/02/22

Parameter	Native Sample	Duplicate Sample	Units	RPD		RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01,03-04 QC Batch ID: WG1606585-4 QC Sample: L2208205-01 Client ID: SH-5W						
Antimony, Total	ND	0.00441	mg/l	NC		20
Arsenic, Total	0.03790	0.03170	mg/l	18		20
Cadmium, Total	0.00027	0.00025	mg/l	8		20
Chromium, Total	0.00649	0.00437	mg/l	**39**	Q	20
Copper, Total	0.01900	0.01709	mg/l	11		20
Lead, Total	0.02342	0.01886	mg/l	**22**	Q	20
Nickel, Total	0.00646	0.00504	mg/l	**25**	Q	20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	0.09328	0.08770	mg/l	6		20
Total Metals - Mansfield Lab Associated sample(s): 01,03-04 QC Batch ID: WG1606587-4 QC Sample: L2208597-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01,03-04 QC Batch ID: WG1606587-6 QC Sample: L2208598-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20
Dissolved Metals - Mansfield Lab Associated sample(s): 01,04 QC Batch ID: WG1606716-4 QC Sample: L2208205-01 Client ID: SH-5W						
Iron, Dissolved	3.45	3.49	mg/l	1		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2208205

Report Date: 03/02/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01,04 QC Batch ID: WG1606720-4 QC Sample: L2208205-01 Client ID: SH-5W					
Antimony, Dissolved	ND	ND	mg/l	NC	20
Arsenic, Dissolved	0.0164	0.0170	mg/l	4	20
Cadmium, Dissolved	ND	ND	mg/l	NC	20
Chromium, Dissolved	ND	ND	mg/l	NC	20
Copper, Dissolved	0.0026	0.0027	mg/l	7	20
Lead, Dissolved	0.0030	0.0031	mg/l	2	20
Nickel, Dissolved	0.0021	0.0022	mg/l	3	20
Selenium, Dissolved	ND	ND	mg/l	NC	20
Silver, Dissolved	ND	ND	mg/l	NC	20
Zinc, Dissolved	0.0296	0.030	mg/l	1	20
Dissolved Metals - Mansfield Lab Associated sample(s): 01,04 QC Batch ID: WG1606722-4 QC Sample: L2208205-04 Client ID: SH-218					
Mercury, Dissolved	ND	ND	mg/l	NC	20

INORGANICS
&
MISCELLANEOUS

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2208205
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-01
Client ID: SH-5W
Sample Location: NEWTON, MA

Date Collected: 02/15/22 11:35
Date Received: 02/16/22
Field Prep: Refer to COC

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	ND		mg/l	0.005	--	1	02/17/22 04:45	02/17/22 09:50	121,4500CN-CE	CS
Nitrogen, Ammonia	0.212		mg/l	0.150	--	2	02/23/22 05:23	02/23/22 21:39	121,4500NH3-BH	AT
TPH, SGT-HEM	178.		mg/l	4.00	--	1	02/17/22 14:15	02/17/22 14:45	140,1664B	NP

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2208205
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-02
Client ID: SH-5W
Sample Location: NEWTON, MA

Date Collected: 02/16/22 08:35
Date Received: 02/16/22
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	1700		mg/l	25	NA	5	-	02/21/22 22:00	121,2540D	MD
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	02/17/22 00:46	121,4500CL-D	AS
pH (H)	6.5		SU	-	NA	1	-	02/17/22 10:10	121,4500H+-B	CL
Phenolics, Total	ND		mg/l	0.030	--	1	02/17/22 07:09	02/18/22 12:02	4,420.1	KP
Chromium, Hexavalent	ND		mg/l	0.010	--	1	02/17/22 07:18	02/17/22 07:56	1,7196A	CL
Anions by Ion Chromatography - Westborough Lab										
Chloride	13.6		mg/l	0.500	--	1	-	02/21/22 21:46	44,300.0	SH

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-03
Client ID: CHEESE CAKE BROOK - SPOT 2
Sample Location: NEWTON, MA
Sample Depth:
Matrix: Water

Date Collected: 02/16/22 11:40
Date Received: 02/16/22
Field Prep: None

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
pH (H)	7.0		SU	-	NA	1	-	02/17/22 10:10	121,4500H+-B	CL
Nitrogen, Ammonia	0.301		mg/l	0.075	--	1	02/23/22 05:23	02/23/22 21:40	121,4500NH3-BH	AT

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2208205
Report Date: 03/02/22

SAMPLE RESULTS

Lab ID: L2208205-04
Client ID: SH-218
Sample Location: NEWTON, MA

Date Collected: 02/16/22 13:30
Date Received: 02/16/22
Field Prep: Refer to COC

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	2100		mg/l	50	NA	10	-	02/21/22 22:00	121,2540D	MD
Cyanide, Total	0.008		mg/l	0.005	--	1	02/17/22 04:45	02/17/22 09:51	121,4500CN-CE	CS
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	02/17/22 00:46	121,4500CL-D	AS
pH (H)	6.2		SU	-	NA	1	-	02/17/22 10:10	121,4500H+-B	CL
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	02/23/22 05:23	02/23/22 21:40	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.00	--	1	02/17/22 14:15	02/17/22 14:45	140,1664B	NP
Phenolics, Total	ND		mg/l	0.030	--	1	02/17/22 07:09	02/18/22 12:03	4,420.1	KP
Chromium, Hexavalent	ND		mg/l	0.010	--	1	02/17/22 07:18	02/17/22 07:57	1,7196A	CL
Anions by Ion Chromatography - Westborough Lab										
Chloride	1860		mg/l	50.0	--	100	-	02/22/22 00:10	44,300.0	SH

Project Name: DUNSTAN EAST
Project Number: 4055.01
Lab Number: L2208205
Report Date: 03/02/22

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): 02,04 Batch: WG1605868-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	02/17/22 00:46	121,4500CL-D	AS
General Chemistry - Westborough Lab for sample(s): 01,04 Batch: WG1605883-1										
Cyanide, Total	ND		mg/l	0.005	--	1	02/17/22 04:45	02/17/22 09:40	121,4500CN-CE	CS
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG1605948-1										
Phenolics, Total	ND		mg/l	0.030	--	1	02/17/22 07:09	02/18/22 11:51	4,420.1	KP
General Chemistry - Westborough Lab for sample(s): 01-02,04 Batch: WG1605980-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	02/17/22 07:18	02/17/22 07:54	1,7196A	CL
General Chemistry - Westborough Lab for sample(s): 01,04 Batch: WG1606059-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	02/17/22 14:15	02/17/22 14:45	140,1664B	NP
General Chemistry - Westborough Lab for sample(s): 02,04 Batch: WG1607475-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	02/21/22 22:00	121,2540D	MD
Anions by Ion Chromatography - Westborough Lab for sample(s): 02,04 Batch: WG1607489-1										
Chloride	ND		mg/l	0.500	--	1	-	02/21/22 17:35	44,300.0	SH
General Chemistry - Westborough Lab for sample(s): 01,03-04 Batch: WG1608064-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	02/23/22 05:23	02/23/22 21:17	121,4500NH3-BH	AT

Lab Control Sample Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2208205

Report Date: 03/02/22

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG1605868-2								
Chlorine, Total Residual	104		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01,04 Batch: WG1605883-2								
Cyanide, Total	93		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG1605948-2								
Phenolics, Total	106		-		70-130	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02,04 Batch: WG1605980-2								
Chromium, Hexavalent	108		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 02-04 Batch: WG1606037-1								
pH	100		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01,04 Batch: WG1606059-2								
TPH	74		-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 02,04 Batch: WG1607475-2								
Solids, Total Suspended	100		-		80-120	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: DUNSTAN EAST

Project Number: 4055.01

Lab Number: L2208205

Report Date: 03/02/22

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04 Batch: WG1607489-2					
Chloride	101	-	90-110	-	
General Chemistry - Westborough Lab Associated sample(s): 01,03-04 Batch: WG1608064-2					
Nitrogen, Ammonia	92	-	80-120	-	20

Matrix Spike Analysis
Batch Quality Control

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2208205
Report Date: 03/02/22

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): 02,04 QC Batch ID: WG1605868-4 QC Sample: L2208201-04 Client ID: MS Sample												
Chlorine, Total Residual	ND	0.25	0.23	92		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01,04 QC Batch ID: WG1605883-4 QC Sample: L2208307-01 Client ID: MS Sample												
Cyanide, Total	0.007	0.2	0.214	103		-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG1605948-4 QC Sample: L2207736-02 Client ID: MS Sample												
Phenolics, Total	ND	0.4	0.39	98		-	-		70-130	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02,04 QC Batch ID: WG1605980-4 QC Sample: L2208205-04 Client ID: SH-218												
Chromium, Hexavalent	ND	0.1	0.102	102		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01,04 QC Batch ID: WG1606059-4 QC Sample: L2200026-36 Client ID: MS Sample												
TPH	ND	20.4	9.18	**45**	Q	-	-		64-132	-		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG1607489-3 QC Sample: L2208205-02 Client ID: SH-5W												
Chloride	13.6	4	17.0	**85**	Q	-	-		90-110	-		18
General Chemistry - Westborough Lab Associated sample(s): 01,03-04 QC Batch ID: WG1608064-4 QC Sample: L2208201-06 Client ID: MS Sample												
Nitrogen, Ammonia	0.146	4	3.48	83		-	-		80-120	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2208205
Report Date: 03/02/22

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG1605868-3 QC Sample: L2208205-04 Client ID: SH-218						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01,04 QC Batch ID: WG1605883-3 QC Sample: L2208205-04 Client ID: SH-218						
Cyanide, Total	0.008	0.009	mg/l	17		30
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG1605948-3 QC Sample: L2207736-02 Client ID: DUP Sample						
Phenolics, Total	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02,04 QC Batch ID: WG1605980-3 QC Sample: L2208205-02 Client ID: SH-5W						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 02-04 QC Batch ID: WG1606037-2 QC Sample: L2208327-01 Client ID: DUP Sample						
pH	7.0	7.0	SU	0		5
General Chemistry - Westborough Lab Associated sample(s): 01,04 QC Batch ID: WG1606059-3 QC Sample: L2200026-35 Client ID: DUP Sample						
TPH	ND	ND	mg/l	NC		34
General Chemistry - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG1607475-3 QC Sample: L2207925-01 Client ID: DUP Sample						
Solids, Total Suspended	190	230	mg/l	19		29
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 02,04 QC Batch ID: WG1607489-4 QC Sample: L2208205-02 Client ID: SH-5W						
Chloride	13.6	13.5	mg/l	1		18
General Chemistry - Westborough Lab Associated sample(s): 01,03-04 QC Batch ID: WG1608064-3 QC Sample: L2208201-06 Client ID: DUP Sample						
Nitrogen, Ammonia	0.146	0.137	mg/l	6		20

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2208205
Report Date: 03/02/22

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent
C	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2208205-01A	Vial Na2S2O3 preserved	A	NA		2.2	Y	Absent		624.1-SIM-RGP(7)
L2208205-01B	Vial Na2S2O3 preserved	A	NA		2.2	Y	Absent		624.1-SIM-RGP(7)
L2208205-01C	Vial Na2S2O3 preserved	A	NA		2.2	Y	Absent		624.1-SIM-RGP(7)
L2208205-01D	Vial Na2S2O3 preserved	A	NA		2.2	Y	Absent		624.1-RGP(7)
L2208205-01E	Vial Na2S2O3 preserved	A	NA		2.2	Y	Absent		624.1-RGP(7)
L2208205-01F	Vial Na2S2O3 preserved	A	NA		2.2	Y	Absent		624.1-RGP(7)
L2208205-01G	Vial Na2S2O3 preserved	A	NA		2.2	Y	Absent		504(14)
L2208205-01H	Vial Na2S2O3 preserved	A	NA		2.2	Y	Absent		504(14)
L2208205-01I	Vial unpreserved	A	NA		2.2	Y	Absent		SUB-ETHANOL(14)
L2208205-01J	Vial unpreserved	A	NA		2.2	Y	Absent		SUB-ETHANOL(14)
L2208205-01K	Vial unpreserved	A	NA		2.2	Y	Absent		SUB-ETHANOL(14)
L2208205-01L	Plastic 250ml HNO3 preserved	A	<2	<2	2.2	Y	Absent		AG-2008S(180),FE-RI(180),CR-2008S(180),PB-2008S(180),ZN-2008S(180),AS-2008S(180),SE-2008S(180),NI-2008S(180),SB-2008S(180),CD-2008S(180),CU-2008S(180),HG-R(28)
L2208205-01M	Plastic 250ml HNO3 preserved	A	<2	<2	2.2	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),AS-2008T(180),SE-2008T(180),AG-2008T(180),HG-U(28),SB-2008T(180),CR-2008T(180),PB-2008T(180)
L2208205-01N	Plastic 250ml NaOH preserved	A	>12	>12	2.2	Y	Absent		TCN-4500(14)
L2208205-01O	Plastic 500ml H2SO4 preserved	A	<2	<2	2.2	Y	Absent		NH3-4500(28)
L2208205-01P	Amber 1000ml Na2S2O3	A	7	7	2.2	Y	Absent		625.1-RGP(7)
L2208205-01Q	Amber 1000ml Na2S2O3	A	7	7	2.2	Y	Absent		625.1-RGP(7)

*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(*)
L2208205-01R	Amber 1000ml Na2S2O3	A	7	7	2.2	Y	Absent		625.1-SIM-RGP(7)
L2208205-01S	Amber 1000ml Na2S2O3	A	7	7	2.2	Y	Absent		625.1-SIM-RGP(7)
L2208205-01T	Amber 1000ml HCl preserved	A	NA		2.2	Y	Absent		TPH-1664(28)
L2208205-02A	Plastic 950ml unpreserved	A	7	7	2.2	Y	Absent		HEXCR-7196(1),CL-300(28),TRC-4500(1),PH-4500(.01)
L2208205-02B	Plastic 950ml unpreserved	A	7	7	2.2	Y	Absent		TSS-2540(7)
L2208205-02C	Amber 950ml H2SO4 preserved	A	<2	<2	2.2	Y	Absent		TPHENOL-420(28)
L2208205-02D	Amber 1000ml Na2S2O3	A	7	7	2.2	Y	Absent		PCB-608.3(365)
L2208205-02E	Amber 1000ml Na2S2O3	A	7	7	2.2	Y	Absent		PCB-608.3(365)
L2208205-02F	Amber 1000ml HCl preserved	A	NA		2.2	Y	Absent		HOLD-WETCHEM()
L2208205-03A	Plastic 60ml unpreserved	C	7	7	2.8	Y	Absent		PH-4500(.01)
L2208205-03B	Plastic 250ml HNO3 preserved	C	<2	<2	2.8	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),HARDU(180),FE-UI(180),AG-2008T(180),AS-2008T(180),SE-2008T(180),HG-U(28),PB-2008T(180),SB-2008T(180),CR-2008T(180)
L2208205-03C	Plastic 500ml H2SO4 preserved	C	<2	<2	2.8	Y	Absent		NH3-4500(28)
L2208205-04A	Vial Na2S2O3 preserved	B	NA		2.6	Y	Absent		624.1-SIM-RGP(7)
L2208205-04B	Vial Na2S2O3 preserved	B	NA		2.6	Y	Absent		624.1-SIM-RGP(7)
L2208205-04C	Vial Na2S2O3 preserved	B	NA		2.6	Y	Absent		624.1-SIM-RGP(7)
L2208205-04D	Vial Na2S2O3 preserved	B	NA		2.6	Y	Absent		624.1-RGP(7)
L2208205-04E	Vial Na2S2O3 preserved	B	NA		2.6	Y	Absent		624.1-RGP(7)
L2208205-04F	Vial Na2S2O3 preserved	B	NA		2.6	Y	Absent		624.1-RGP(7)
L2208205-04G	Vial Na2S2O3 preserved	B	NA		2.6	Y	Absent		504(14)
L2208205-04H	Vial Na2S2O3 preserved	B	NA		2.6	Y	Absent		504(14)
L2208205-04I	Vial unpreserved	B	NA		2.6	Y	Absent		SUB-ETHANOL(14)
L2208205-04J	Vial unpreserved	B	NA		2.6	Y	Absent		SUB-ETHANOL(14)
L2208205-04K	Vial unpreserved	B	NA		2.6	Y	Absent		SUB-ETHANOL(14)
L2208205-04L	Plastic 250ml HNO3 preserved	B	<2	<2	2.6	Y	Absent		CR-2008S(180),FE-RI(180),AG-2008S(180),PB-2008S(180),ZN-2008S(180),AS-2008S(180),NI-2008S(180),SE-2008S(180),CU-2008S(180),CD-2008S(180),SB-2008S(180),HG-R(28)

*Values in parentheses indicate holding time in days

Project Name: DUNSTAN EAST
Project Number: 4055.01

Lab Number: L2208205
Report Date: 03/02/22

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2208205-04M	Plastic 250ml HNO3 preserved	B	<2	<2	2.6	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),HARDU(180),CU-2008T(180),FE-UI(180),AG-2008T(180),SE-2008T(180),AS-2008T(180),HG-U(28),PB-2008T(180),SB-2008T(180),CR-2008T(180)
L2208205-04N	Plastic 250ml NaOH preserved	B	>12	>12	2.6	Y	Absent		TCN-4500(14)
L2208205-04O	Plastic 500ml H2SO4 preserved	B	<2	<2	2.6	Y	Absent		NH3-4500(28)
L2208205-04P	Plastic 950ml unpreserved	B	7	7	2.6	Y	Absent		CL-300(28),HEXCR-7196(1),TRC-4500(1),PH-4500(.01)
L2208205-04Q	Plastic 950ml unpreserved	B	7	7	2.6	Y	Absent		TSS-2540(7)
L2208205-04R	Amber 950ml H2SO4 preserved	B	<2	<2	2.6	Y	Absent		TPHENOL-420(28)
L2208205-04S	Amber 1000ml Na2S2O3	B	7	7	2.6	Y	Absent		PCB-608.3(365)
L2208205-04T	Amber 1000ml Na2S2O3	B	7	7	2.6	Y	Absent		PCB-608.3(365)
L2208205-04U	Amber 1000ml Na2S2O3	B	7	7	2.6	Y	Absent		625.1-RGP(7)
L2208205-04V	Amber 1000ml Na2S2O3	B	7	7	2.6	Y	Absent		625.1-RGP(7)
L2208205-04W	Amber 1000ml Na2S2O3	B	7	7	2.6	Y	Absent		625.1-SIM-RGP(7)
L2208205-04X	Amber 1000ml Na2S2O3	B	7	7	2.6	Y	Absent		625.1-SIM-RGP(7)
L2208205-04Y	Amber 1000ml HCl preserved	B	NA		2.6	Y	Absent		TPH-1664(28)
L2208205-04Z	Amber 1000ml HCl preserved	B	NA		2.6	Y	Absent		TPH-1664(28)

*Values in parentheses indicate holding time in days

Project Name:	DUNSTAN EAST	**Lab Number:**	L2208205
Project Number:	4055.01	**Report Date:**	03/02/22

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:	DUNSTAN EAST	**Lab Number:**	L2208205
Project Number:	4055.01	**Report Date:**	03/02/22

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:	DUNSTAN EAST	**Lab Number:**	L2208205
Project Number:	4055.01	**Report Date:**	03/02/22

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:	DUNSTAN EAST	**Lab Number:**	L2208205
Project Number:	4055.01	**Report Date:**	03/02/22

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.

CHAIN OF CUSTODY

PAGE ____ OF ____

Date Rec'd in Lab: 2/16/22

ALPHA Job #: L2208205

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

Client Information

Client: Sanborn Head & Assoc.
Address: 1 Technology Park Dr. Westford, MA 01
Phone: 978-577-1500
Email: kesher, lgarvey @ sanbornhead.com

Project Information

Project Name: Dunstan East
Project Location: Newton, MA
Project #: 4055.01
Project Manager: L. Garvey
ALPHA Quote #:

Report Information - Data Deliverables

X ADEx X EMAIL

Billing Information

X 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)
X Yes ☐ No NPDES RGP
☐ Other State /Fed Program ____ Criteria ____

Turn-Around Time

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

Additional Project Information:

SH-5W had to be sampled at 2 separate times due to well running dry

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
NPDES RGP
Dissolved metals
NH3
Total metals - Hardness
pH

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	NPDES RGP	Dissolved metals	NH3	Total metals - Hardness	pH	Sample Comments	TOTAL # BOTTLES
08205-01	SH-5W	2/15/22	1135	GW	KAE	X	X				1 bottle field filtered	10
-02	SH-5W	2/16/22	0835	GW	KAE	X						6
-03	SH-52	2/16/22	1140	W	KAE			X	X	X		3
-04	SH-218	2/16/22	1330	GW	KAE	X	X				1 bottle field filtered	26

Container Type														
Preservative														

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
	2/16/22 1750	Plumtree	2/16/22 1515
	2/16/22 1800		2/16 1800

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

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
L2208205

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: L2208205

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-5W	02-15-22 11:35	WATER	Ethanol by EPA 1671 Revision A	
	SH-218	02-16-22 13:30	WATER	Ethanol by EPA 1671 Revision A	

	Relinquished By:	Date/Time:	Received By:	Date/Time:
		2/17/22		
Form No: AL_subcoc				

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

February 22, 2022

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

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

RE: L2208205 **WorkOrder:** 22021055

Dear Scott Enright:

TEKLAB, INC received 2 samples on 2/18/2022 9:25:00 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 II

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

Report Contents

http://www.teklabinc.com/

Client: Alpha Analytical
Client Project: L2208205

Work Order: 22021055
Report Date: 22-Feb-22

This reporting package includes the following:

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

Teklab, Inc. Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: Alpha Analytical **Work Order:** 22021055

Client Project: L2208205 **Report Date:** 22-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)

Teklab, Inc. Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: Alpha Analytical

Work Order: 22021055

Client Project: L2208205

Report Date: 22-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

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: Alpha Analytical
Client Project: L2208205

Work Order: 22021055
Report Date: 22-Feb-22

Cooler Receipt Temp: 2.2 °C

Locations

Collinsville

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

Springfield

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

Kansas City

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

Collinsville Air

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

Chicago

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

Teklab, Inc. Environmental Laboratory

Accreditations

http://www.teklabinc.com/

Client: Alpha Analytical

Client Project: L2208205

Work Order: 22021055

Report Date: 22-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

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 22021055
Client Project: L2208205
Report Date: 22-Feb-22
Lab ID: 22021055-001
Client Sample ID: SH-5W
Matrix: AQUEOUS
Collection Date: 02/15/2022 11:35

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	02/18/2022 13:20	R307263

Teklab, Inc. Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 22021055
Client Project: L2208205
Report Date: 22-Feb-22
Lab ID: 22021055-002
Client Sample ID: SH-218
Matrix: AQUEOUS
Collection Date: 02/16/2022 13:30

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	02/18/2022 13:52	R307263

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Alpha Analytical

Client Project: L2208205

Work Order: 22021055

Report Date: 22-Feb-22

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

Batch R307263 **SampType:** MBLK Units **mg/L**
SampID: MBLK-021822

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		**ND**						02/18/2022

Batch R307263 **SampType:** LCS Units **mg/L**
SampID: LCS-021822

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		**280**	250.0	0	110.3	70	132	02/18/2022

Batch R307263 **SampType:** MS Units **mg/L**
SampID: 22020994-001AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		**290**	250.0	0	117.6	70	132	02/18/2022

Batch R307263 **SampType:** MSD Units **mg/L** RPD Limit: **30**
SampID: 22020994-001AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Ethanol	*	20		**300**	250.0	0	119.8	293.9	1.89	02/18/2022

Teklab, Inc.
Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: Alpha Analytical
Client Project: L2208205

Work Order: 22021055
Report Date: 22-Feb-22

Carrier: UPS

Received By: PWR

Completed by: Mary E. Kemp
On: 18-Feb-22
Mary E. Kemp

Reviewed by: Elizabeth A. Hurley
On: 18-Feb-22
Elizabeth A. Hurley

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

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C	2.2	
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.

2202105S

ALPHA ANALYTICAL
World Class Chemistry

Subcontract Chain of Custody

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

Alpha Job Number
L2208205

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: L2208205

Report to include Method Blank, LCS/LCSD:

Additional Comments: Send all results/reports to subreports@alphalab.com 2.2°C LTG 3.0845. Rat 2/18/22

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
2202105S-001	SH-5W	02-15-22 11:35	WATER	Ethanol by EPA 1671 Revision A	
↓ 002	SH-218	02-16-22 13:30	WATER	Ethanol by EPA 1671 Revision A	

	Relinquished By:	Date/Time:	Received By:	Date/Time:
	[signature]	2/17/22	[signature] (UPS)	2/18/22 0925
Form No: AL_subcoc				

Rat 2/18/22

APPENDIX E

ADDITIVE INFORMATION

Borden & Remington Corp
63 Water St. PO Box 2573
Fall River, MA, USA, 02722
Telephone: (508) 675 0096

SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product identifier used on the label

: **Sulfuric Acid 71-100%**

Product Code(s) : Not available.

Recommended use of the chemical and restrictions on use

: Reagent ;Chemical intermediate.
Use pattern: Professional Use Only
Recommended restrictions: None known.

Chemical family : Inorganic acid

Name, address, and telephone number of the supplier:

Borden & Remington Corp

63 Water St.
PO Box 2573
Fall River, MA, USA
02722

Name, address, and telephone number of the manufacturer:

Refer to supplier

Supplier's Telephone # : 508-675-0096

24 Hr. Emergency Tel # : Chemtrec: 1-800-424-9300 (Within Continental U.S.); 703-527-3887.

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Clear to cloudy liquid. Odorless.

This material is classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Hazard classification :

Corrosive to metals: Category 1
Acute toxicity, inhalation - Category 2 (mist)
Eye damage/irritation: Category 1
Skin corrosion/irritation: Category 1
Specific Target Organ Toxicity, Single Exposure -Category 3 (respiratory)

Label elements

Hazard pictogram(s)

Signal Word

DANGER!

Hazard statement(s)

May be corrosive to metals.
Fatal if inhaled.
Causes severe skin burns and eye damage.
May cause respiratory irritation.

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Precautionary statement(s)

Keep only in original container.
Wash thoroughly after handling.
Do not breathe mists.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/clothing and eye/face protection.
[In case of inadequate ventilation] wear respiratory protection.

If swallowed: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
Wash contaminated clothing before reuse.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Immediately call a POISON CENTER or doctor/physician.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
Absorb spillage to prevent material damage.

Store in corrosive resistant container with a resistant inner liner.
Store locked up.
Store in a well-ventilated place. Keep container tightly closed.

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards

Other hazards which do not result in classification:

Ingestion may cause severe irritation to the mouth, throat and stomach.Contact with metals may release small amounts of flammable hydrogen gas.Prolonged skin contact may cause dermatitis (rash), characterized by red, dry, itching skin.Prolonged or repeated inhalation of fumes or vapours, may cause chronic lung effects, such as bronchitis, and tooth enamel erosion. Chronic skin contact with low concentrations may cause dermatitis.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance

Chemical name	Common name and synonyms	CAS #	Concentration
Sulfuric acid	Battery acid; Hydrogen sulfate; Oil of vitriol	7664-93-9	**71.0 - 100.0**
Water	H2O	7732-18-5	**Balance**

SECTION 4. FIRST-AID MEASURES

Description of first aid measures

Ingestion : Do NOT induce vomiting. Have victim rinse mouth with water, then give one to two glasses of water to drink. Seek immediate medical attention/advice. Never give anything by mouth if victim is unconscious.

Inhalation : Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Seek immediate medical attention/advice.

Skin contact : Take off all contaminated clothing immediately. Immediately flush skin with gently flowing, running water for at least 20 minutes. Do not rub area of contact. Cover wound with sterile dressing. Seek immediate medical attention/advice. Wash contaminated clothing before reuse. Leather and shoes that have been contaminated with the solution may need to be destroyed.

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Eye contact : Immediately flush eyes with running water for at least 20 minutes. Protect unharmed eye. Seek immediate medical attention/advice.

Most important symptoms and effects, both acute and delayed

: May cause serious eye irritation or damage. Symptoms may include redness, pain, tearing and conjunctivitis. Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring. May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding and eventually death. May cause severe irritation to the nose, throat and respiratory tract. Symptoms may include coughing, choking and wheezing. Could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. Prolonged or repeated inhalation of fumes or vapours, may cause chronic lung effects, such as bronchitis, and tooth enamel erosion.

Indication of any immediate medical attention and special treatment needed

: Immediate medical attention is required. Causes burns. Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water with caution. Contact with water will generate considerable heat.

Unsuitable extinguishing media

: Do not use a solid water stream as it may scatter and spread fire.

Special hazards arising from the substance or mixture / Conditions of flammability

: Not considered flammable. Burning produces obnoxious and toxic fumes. Contact with metals may release small amounts of flammable hydrogen gas. Reacts violently with a wide variety of organic and inorganic chemicals including alcohol, carbides, chlorates, picrates, nitrates and metals. Contact with water will generate considerable heat.

Flammability classification (OSHA 29 CFR 1910.106)

: Non-flammable.

Hazardous combustion products

: Sulphur oxides. Carbon dioxide and carbon monoxide. Oxygen.

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Special fire-fighting procedures

: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. A full-body chemical resistant suit should be worn. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. Dike for water control. Do not allow run-off from fire fighting to enter drains or water courses.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

: All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. Refer to Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

Environmental precautions : Do not allow material to contaminate ground water system. For large spills, dike the area to prevent spreading.

Methods and material for containment and cleaning up

SAFETY DATA SHEET

: Remove all sources of ignition. Ventilate area of release. Stop spill or leak at source if safely possible. Dike for water control. Neutralize with sodium bicarbonate or a mixture of soda ash/slaked lime. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Contact the proper local authorities.

Special spill response procedures

: If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).
US CERCLA Reportable quantity (RQ): Sulfuric acid (1000 lbs / 454 kg)

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

: Use in a well-ventilated area. Wear protective gloves/clothing and eye/face protection. See Section 8 for additional personal protection advice when handling this product. Do not ingest. Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and flame. Keep away from bases, metals and other incompatibles. Keep container tightly closed when not in use. Keep only in original container. Wash thoroughly after handling. During preparation or dilution, always add liquid slowly to water and with constant stirring.

Conditions for safe storage : Store in a cool, dry, well-ventilated area. Store locked up. Store away from incompatibles and out of direct sunlight. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. Inspect periodically for damage or leaks. Store in corrosion-resistant containers. Keep only in original container.

Incompatible materials : Strong oxidizing agents;Metals (e.g. Aluminum, brass, copper); Alkalies; Aldehydes ; Reducing agents; Water; Organic materials; Acids Chlorate . .

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

Chemical Name	ACGIH TLV		OSHA PEL	
	TWA	STEL	PEL	STEL
Sulfuric acid	0.2 mg/m³ (thoracic fraction)	N/Av	1 mg/m³	N/Av
Water	N/Av	N/Av	N/Av	N/Av

Exposure controls

Ventilation and engineering measures

: Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.

Respiratory protection : If the TLV is exceeded, a NIOSH/MSHA-approved respirator is advised. Confirmation of which type of respirator is most suitable for the intended application should be obtained from respiratory protection suppliers. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02.

Skin protection : Wear chemically protective gloves (impervious), boots, aprons, and gauntlets to prevent prolonged or repeated skin contact. Wear impervious gloves, such as butyl rubber. Unsuitable material: polyvinyl alcohol. Advice should be sought from glove suppliers.

Eye / face protection : Chemical splash goggles must be worn when handling this material. A full face shield may also be necessary.

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Other protective equipment	:	Other equipment may be required depending on workplace standards. An eyewash station and safety shower should be made available in the immediate working area.
General hygiene considerations	:	Do not breathe mist or vapor. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove and wash contaminated clothing before re-use. Do not take contaminated clothing home.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Clear, oily, colourless liquid
Odour	:	Odorless.
Odour threshold	:	N/Av
pH	:	<1.0
Melting/Freezing point	:	-40°C (-40°F)
Initial boiling point and boiling range	:	102°C (215.6°F)
Flash point	:	Not applicable.
Flashpoint (Method)	:	Not applicable.
Evaporation rate (BuAe = 1)	:	Slower than ether.
Flammability (solid, gas)	:	Not applicable.
Lower flammable limit (% by vol.)	:	Not applicable.
Upper flammable limit (% by vol.)	:	Not applicable.
Oxidizing properties	:	None known.
Explosive properties	:	Not explosive
Vapour pressure	:	<0.3 mmHg @75°F
Vapour density	:	3.4
Relative density / Specific gravity	:	1.84
Solubility in water	:	Soluble
Other solubility(ies)	:	None known.
Partition coefficient: n-octanol/water or Coefficient of water/oil distribution	:	N/Av
Auto-ignition temperature	:	N/Ap
Decomposition temperature	:	Not available.
Viscosity	:	N/Av
Volatiles (% by weight)	:	Not available.
Volatile organic Compounds (VOC's)	:	Not available.
Absolute pressure of container	:	N/Ap
Flame projection length	:	N/Ap
Other physical/chemical comments	:	None.

SECTION 10. STABILITY AND REACTIVITY

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Reactivity	:	Contact with metals may release small amounts of flammable hydrogen gas. Corrosive in contact with metals Avoid contact with incompatible materials. Contact with water will generate considerable heat. Reacts vigorously, violently or explosively with many organic and inorganic chemicals, such as strong acids, acid chlorides, acid anhydrides, ketones, glycols, and organic peroxides.
Chemical stability	:	Stable under the recommended storage and handling conditions prescribed.
Possibility of hazardous reactions	:	Hazardous polymerization does not occur. Contact with metals may release small amounts of flammable hydrogen gas.
Conditions to avoid	:	Avoid heat and open flame. Ensure adequate ventilation, especially in confined areas. Avoid contact with incompatible materials.
Incompatible materials	:	Strong oxidizing agents;Metals (e.g. Aluminum, brass, copper); Alkalies; Aldehydes ; Reducing agents; Water; Organic materials; Acids Chlorate . .
Hazardous decomposition products	:	Decomposes at 340 deg C into sulfur trioxide and water.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation	:	YES
Routes of entry skin & eye	:	YES
Routes of entry Ingestion	:	YES
Routes of exposure skin absorption	:	NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation	:	Fatal if inhaled. Inhalation of high concentrations of fumes or mists may cause severe irritation and corrosive damage to the nose, throat and upper respiratory tract. Symptoms may include coughing, choking and wheezing. Could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.
Sign and symptoms ingestion	:	May be harmful if swallowed. May cause severe irritation and corrosive damage in the mouth, throat and stomach. Symptoms may include abdominal pain, vomiting, burns, perforations, bleeding and eventually death.
Sign and symptoms skin	:	This material is classified as hazardous under OSHA regulations (29CFR 1910.1200) (Hazcom 2012). Classification: Skin corrosion/irritation: Category 1 Causes severe skin burns and eye damage. Direct skin contact may cause corrosive skin burns, deep ulcerations and possibly permanent scarring.
Sign and symptoms eyes	:	This material is classified as hazardous under OSHA regulations (29CFR 1910.1200) (Hazcom 2012). Classification: Eye damage/irritation: Category 1 Causes serious eye damage. Symptoms may include severe pain, tearing, redness, swelling and blurred vision. Contact may lead to permanent injury and blindness.
Potential Chronic Health Effects	:	Chronic skin contact with low concentrations may cause dermatitis. Prolonged or repeated inhalation of fumes or vapours, may cause chronic lung effects, such as bronchitis, and tooth enamel erosion.
Mutagenicity	:	Not expected to be mutagenic in humans.

SAFETY DATA SHEET

Carcinogenicity : This material is not classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Strong inorganic acid mist containing sulfuric acid is classified as a Group 1 Human Carcinogen by the IARC. However, this classification does not apply to liquid forms of sulfuric acid.

Reproductive effects & Teratogenicity

: Not expected to cause reproductive effects.

Sensitization to material : Not expected to be a skin or respiratory sensitizer.

Specific target organ effects : Target Organs:: Eyes, skin, respiratory system and digestive system.

This material is classified as hazardous under OSHA regulations (29CFR 1910.1200) (Hazcom 2012). Classification:
Specific target organ toxicity, single exposure -Category 3
May cause respiratory irritation.

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Medical conditions aggravated by overexposure

: Pre-existing skin, eye and respiratory disorders.

Synergistic materials : Not available.

Toxicological data : See below for toxicological data on the substance.
The calculated ATE values for this mixture are:
ATE inhalation (mists) = 0.5 mg/L (75%)

Chemical name	LC_{50}(4hr) inh, rat	LD_{50} (Oral, rat)	LD_{50} (Rabbit, dermal)
Sulfuric acid	0.375mg/L	2140 mg/kg	N/Av
Water	N/Av	>90 mL/kg	N/Av

Other important toxicological hazards

: None known or reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity : Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

Ecotoxicity data:

Ingredients	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Sulfuric acid	7664-93-9	N/Av	N/Av	None.
Water	7732-18-5	No information available.	No information available.	Not applicable.

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Ingredients	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Sulfuric acid	7664-93-9	N/Av	N/Av	None.
Water	7732-18-5	No information available.	No information available.	Not applicable.

Ingredients	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Sulfuric acid	7664-93-9	>100mg/L(Green algae)	N/Av	None.
Water	7732-18-5	No information available.	No information available.	Not applicable.

Persistence and degradability

: Biodegradation is not applicable to inorganic materials.

Bioaccumulation potential : No data is available on the product itself.

Components	Partition coefficent n-octanol/ater (log Kow)	Bioconcentration factor (BCF)
Sulfuric acid (CAS 7664-93-9)	N/Ap	no bioaccumulation
Water (CAS 7732-18-5)	N/Ap	N/Ap

Mobility in soil : No data is available on the product itself.

Other Adverse Environmental effects

: No additional information.

SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal : Handle waste according to recommendations in Section 7. Empty containers retain residue (liquid and/or vapour) and can be dangerous.

Methods of Disposal : Dispose in accordance with all applicable federal, state, provincial and local regulations.

RCRA : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14. TRANSPORTATION INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
49CFR/DOT	UN1830	SULFURIC ACID ; or SULPHURIC ACID	8	II	
49CFR/DOT Additional information	May be shipped as a limited quantity in receptacles not exceeding 1.0 Liters, according to 49 CFR 173.154.				
TDG	UN1830	SULPHURIC ACID	8	II	

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Fall River, MA, USA, 02722
Telephone: (508) 675 0096

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TDG Additional information	May be shipped as LIMITED QUANTITY when transported in containers no larger than 1.0 Litre, in packages not exceeding 30 kg gross mass.				
ICAO/IATA	UN1830	Sulphuric acid	8	II	
ICAO/IATA Additional information	Refer to ICAO/IATA Packing Instruction				
IMDG	UN1830	SULFURIC ACID or SULPHURIC ACID	8	II	
IMDG Additional information	May be shipped as a limited quantity. Consult the IMDG regulations for more information.				

Special precautions for user : None known.

Environmental hazards : See ECOLOGICAL INFORMATION, Section 12.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: Not applicable.

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:

Ingredients	CAS #	TSCA Inventory	CERCLA Reportable Quantity(RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Sulfuric acid	7664-93-9	Yes	1000 lb/ 454 kg	1000 lb TPQ	Yes	1%
Water	7732-18-5	Yes	N/Ap	N/Av	No	N/Ap

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: Acute Health Hazard. Chronic Health Hazard

Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

Ingredients	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Sulfuric acid	7664-93-9	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes
Water	7732-18-5	No	N/Ap	No	No	No	No	No	No

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Fall River, MA, USA, 02722
Telephone: (508) 675 0096

SAFETY DATA SHEET

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

WHMIS information: Refer to Section 2 for a WHMIS Classification for this product.

International Information:

Components listed below are present on the following International Inventory list:

Ingredients	CAS #	European EINECs	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Sulfuric acid	7664-93-9	231-639-5	Present	Present	(1)-724; (1)-430	KE-32570	Present	HSR001572, HSR001573, HSR001588 (dilution)
Water	7732-18-5	231-791-2	Present	Listed	Listed	KE-35400	Present	Listed

SECTION 16. OTHER INFORMATION

Legend : ACGIH: American Conference of Governmental Industrial Hygienists
CA: California
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
DOT: Department of Transportation
EPA: Environmental Protection Agency
HMIS: Hazardous Materials Identification System
HSDB: Hazardous Substances Data Bank
IARC: International Agency for Research on Cancer
Inh: Inhalation
IUCLID: International Uniform ChemicaL Information Database
MA: Massachusetts
MN: Minnesota
MSHA: Mine Safety and Health Administration
N/Ap: Not Applicable
N/Av: Not Available
NFPA: National Fire Protection Association
NIOSH: National Institute of Occupational Safety and Health
NJ: New Jersey
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PA: Pennsylvania
PEL: Permissible exposure limit
RCRA: Resource Conservation and Recovery Act
RI: Rhode Island
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

Borden & Remington Corp
63 Water St. PO Box 2573
Fall River, MA, USA, 02722
Telephone: (508) 675 0096

SAFETY DATA SHEET

References : Canadian Centre for Occupational Health and Safety, CCInfoWeb Databases, 2015 (Chempendium, RTECs, HSDB, INCHEM).
European Chemicals Agency, Classification Legislation, 2015
Material Safety Data Sheet from manufacturer
OECD - The Global Portal to Information on Chemical Substances - eChemPortal, 2015

Preparation Date (mm/dd/yyyy)

: 10/13/2015

Other special considerations for handling

: Provide adequate information, instruction and training for operators.

HMIS Rating : *- Chronic hazard 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

Health: 3 *Flammability:* 0 *Reactivity:* 2

NFPA Rating

0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe

: *Health:* 3 *Flammability:* 0 *Instability:* 2 *Special Hazards:* None.

Prepared for: Borden & Remington Corp 63 Water St. Fall River, MA 02722 Telephone: 508-675-0096	
Prepared by: ICC The Compliance Center Inc. Telephone: (888) 442-9628 (U.S.): (888) 977-4834 (Canada) http://www.thecompliancecenter.com	

DISCLAIMER

This Safety Data Sheet was prepared by ICC The Compliance Center Inc using information provided by / obtained from Borden & Remington Corp and CCOHS' Web Information Service. The information in the Safety Data Sheet is offered for your consideration and guidance when exposed to this product. ICC The Compliance Center Inc and Borden & Remington Corp .expressly disclaim all expressed or implied warranties and assume no responsibilities for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.
This Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of ICC The Compliance Center Inc and Borden & Remington Corp.

END OF DOCUMENT

SAFETY DATA SHEET

Revision date 2019-04-15 **Revision number** 1

SECTION 1) CHEMICAL PRODUCT AND SUPPLIER'S IDENTIFICATION

Product ID: FOAMTROL-100
Product Name: Blended Water Treatment.

Revision Date: Apr15,2019
Supersedes Date: Dec 11, 2018

Manufacturer's Name: Azure Water Services
Address: 280 Callegari Drive West Haven, CT, US, 06516
Emergency Phone: Chemtrec 800-424-9300, in US and Canada only

SECTION 2) HAZARDS IDENTIFICATION

Classification of the substance or mixture

Not a hazardous substance or mixture according to United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200).

Hazards Not Otherwise Classified (HNOC)

None.

SECTION 3) COMPOSITION / INFORMATION ON INGREDIENTS

All of the product's ingredients are either listed or exempt from the TSCA Inventory.

Specific chemical identity is being withheld as a trade secrets

None of the chemicals in this product are hazardous according to the GHS.

SECTION 4) FIRST-AID MEASURES

Inhalation

Remove source of exposure or move person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor/. If breathing has stopped, trained personnel should begin rescue breathing or, if the heart has stopped, immediately start cardiopulmonary resuscitation (CPR) or automated external defibrillation (AED).

Eye Contact

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a flushing duration of 30 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately call a POISON CENTER/doctor.

Skin Contact

Take off immediately all contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Rinse skin with lukewarm, gently flowing water/shower for a duration of 30 minutes or until medical aid is available. Immediately call a POISON CENTER/doctor. Wash contaminated clothing before re-use or discard.

Ingestion

Rinse mouth with water. Do NOT induce vomiting. Give 1 to 2 cups of milk or water to drink. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, lie on your side, in the recovery position. Immediately call a POISON CENTER/doctor.

Most Important Symptoms and Effects, Both acute and Delayed

No data available.

Indication of Any Immediate Medical Attention and Special Treatment Needed

No data available.

SECTION 5) FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical, foam, carbon dioxide. Sand or earth may be used for small fires only.

Use extinguishing agent suitable for type of surrounding fire.

Unsuitable Extinguishing Media

Do not use direct water stream since this may cause fire to spread.

Specific Hazards in Case of Fire

In case of fire, hazardous decomposition products may include sulphur oxides.

Fire-Fighting Procedures

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

Special Protective Actions

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6) ACCIDENTAL RELEASE MEASURES

Emergency Procedure

Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

Absorb spill with absorbent material or vacuum spill into polyethylene lined steel or plastic drums.

Do not touch or walk through spilled material.

If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

Recommended Equipment

Positive pressure, full-facepiece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).

Personal Precautions

Avoid breathing vapor or mist. Avoid contact with skin, eye or clothing. Ensure adequate ventilation. Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental Precautions

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning Up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Contaminated absorbent material may pose the same hazard as the spilled product.

SECTION 7) HANDLING AND STORAGE

General

Wash hands after use.
Do not get in eyes, on skin or on clothing.
Do not breathe vapors or mists.
Use good personal hygiene practices.
Eating, drinking and smoking in work areas is prohibited.
Remove contaminated clothing and protective equipment before entering eating areas.
Eyewash stations and showers should be available in areas where this material is used and stored.

Ventilation Requirements

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight and strong oxidizers. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty containers retain residue and may be dangerous.
Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored.

SECTION 8) EXPOSURE CONTROLS, PERSONAL PROTECTION

Eye Protection

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Skin Protection

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over-boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

Respiratory Protection

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers.

Appropriate Engineering Controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

SECTION 9) PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density	8.18 lb/gal
Specific Gravity	0.98

Appearance	milky, white liquid
pH	6.75 - 7.25
Odor Threshold	N/A
Odor Description	characteristic
Water Solubility	complete
Viscosity	500 - 3,000 cps 65F
Vapor Pressure	Similar to water
Vapor Density	N/A
Freezing Point	32 °F
Boiling Point	>212 °F
Evaporation Rate	N/A
Flammability	Will not burn

SECTION 10) STABILITY AND REACTIVITY

Stability

Stable under normal storage and handling conditions.

Conditions To Avoid

Avoid heat, sparks, flame, high temperature and contact with incompatible materials.

Hazardous Reactions/Polymerization

Hazardous polymerization will not occur.

Incompatible Materials

Strong bases, acids, oxidizing and reducing agents.

Hazardous Decomposition Products

May produce carbon monoxide, carbon dioxide.

SECTION 11) TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation, ingestion, skin absorption.

Acute Toxicity

Not Established.

Chronic Exposure Toxicity

The chronic local effect may consist of multiple areas of superficial destruction of the skin or of primary irritant dermatitis. Similarly, inhalation of dust, spray, or mist may result in varying degrees of irritation or damage to the respiratory tract tissues and an increased susceptibility to respiratory illness,

Carcinogenicity

This product does not contain any known or anticipated carcinogens according to the criteria of the NTP Annual Report on carcinogens and OSHA 29 CFR 1910,Z.

SECTION 12) ECOLOGICAL INFORMATION

Toxicity

No data available.

No Data Available

Mobility in Soil

No data available.

Bio-accumulative Potential

No data available.

Persistence and Degradability

No data available.

Other Adverse Effect

No data available.

SECTION 13) DISPOSAL CONSIDERATIONS

Waste Disposal

Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws.
Empty Containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.

SECTION 14) TRANSPORT INFORMATION

U.S. DOT Information

For all transportation accidents, call CHEMTREC at 800/424-9300. All spills and leaks of this material must be handled in accordance with local, state, and federal regulations.

DOT Shipping Designation:

Non-hazardous under 29-CFR 1910.1200. Water treatment compound

SECTION 15) REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
No applicable CAS	No applicable chemical	-	-

SECTION 16) OTHER INFORMATION

Glossary

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDGCanadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center(US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self Contained Breathing Apparatus; STEL-Short Term Exposure Limit; TCEQ Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

Additional Information

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

Version 1.0:

Revision Date: Dec 11, 2018

First Edition.

DISCLAIMER

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist. The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

APPENDIX F

FEDERAL CORRESPONDENCE

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: 2022-0017057
Project Name: Dunstan East

March 08, 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: 2022-0017057
Event Code: None
Project Name: Dunstan East
Project Type: Mixed-Use Construction
Project Description: The location is 1185 Washington Street, Newton, MA 02465. The property is approximately 4 acres. Lat: 42.3494699, Long: -71.2220368. The proposed construction is the development of a mixed-use residential, assisted living, office, retail, and theater.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.3498453,-71.22141701481847,14z

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

Agency: Sanborn Head & Associates, Inc.
Name: Lindsey Aborn
Address: 98 North Washington Street
City: Boston
State: MA
Zip: 02114
Email laborn@sanbornhead.com
Phone: 7812485730

Lindsey Aborn

From: Meagan Riley - NOAA Federal <meagan.riley@noaa.gov>
Sent: Tuesday, March 22, 2022 3:11 PM
To: Lindsey Aborn
Subject: Re: 1185 Washington Street, West Newton, MA

Hi, Lindsey. There are no Endangered Species Act (ESA)-listed species located or near in the Cheese Cake Brook. As I mentioned in my previous email, please see our ESA Section 7 Mapper for more information about ESA-listed species present in a particular area.

Thanks,
Meagan

Meagan Riley
Section 7 Biologist, Greater Atlantic Regional Fisheries Office
NOAA Fisheries | U.S. Department of Commerce
Office: (978) 281-9339

---------- Forwarded message ---------
From: **Lindsey Aborn** <laborn@sanbornhead.com>
Date: Thu, Mar 10, 2022 at 1:50 PM
Subject: 1185 Washington Street, West Newton, MA
To: nmfs.gar.garfo@noaa.gov <nmfs.gar.garfo@noaa.gov>

Good afternoon,

I am requesting information to be included as part of a Notice of Intent (NOI) for a Remediation General Permit (RGP). The NOI is for construction dewatering during excavation activities in the vicinity of 1185 Washington Street in West Newton, Massachusetts. Effluent will be discharged to the Cheese Cake Brook via a private onsite catch basin.

As part of the application to the USEPA for the RPG, we need to investigate whether this proposed temporary discharge has the potential to adversely affect any federally listed species in the reach of the Cheese Cake Brook located downstream of the discharge point.

The approximate discharge location is:

Latitude: 42.35033 Longitude: -71.22136

Thank you in advance for your assistance, and please let me know if you require further information.

Lindsey

Lindsey Aborn
Senior Project Geologist

Not professionally licensed

SANBORN | HEAD & ASSOCIATES, INC.

D 857.327.9742 | M 781.248.5730 | 98 N. Washington Street, Suite 101, Boston, MA 02114

Click here to follow us on LinkedIn | Twitter | Facebook | sanbornhead.com

Drawn Action Area & Overlapping S7 Consultation Areas

Area of Interest (AOI) Information

Area : 2,210.8 acres

Mar 8 2022 12:54:57 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 G

NATIONAL REGISTER OF HISTORICAL PLACES, NEWTON, MASSACHUSETTS

Appendix G
National Register of Historic Places
Research Documentation
Newton, Massachusetts

Reference Number	Property Name	State	County	City	Street & Number	Listed Date
04001221	West Parish Burying Ground	MASSACHUSETTS	Middlesex	Newton	River and Cherry Sts.	11/13/2004
04001256	South Burying Ground	MASSACHUSETTS	Middlesex	Newton	Winchester St.	11/27/2004
08000166	Washington Park Historic District	MASSACHUSETTS	Middlesex	Newton	4-97 Washington Park & 5,15 Park Place	3/12/2008
08001178	Myrtle Baptist Church Neighborhood Historic District	MASSACHUSETTS	Middlesex	Newton	Roughly Curve St. and Prospect St.	12/11/2008
09001095	Crafts Street City Stable	MASSACHUSETTS	Middlesex	Newton	90 Crafts St.	12/18/2009
73000306	Jackson Homestead	MASSACHUSETTS	Middlesex	Newton	527 Washington St.	6/4/1973
76000266	Bigelow, Dr. Henry Jacob, House	MASSACHUSETTS	Middlesex	Newton	742 Dedham St.	1/1/1976
76000267	Durant, Capt. Edward, House	MASSACHUSETTS	Middlesex	Newton	286 Waverly Ave.	5/13/1976
76000950	Fessenden, Reginald A., House	MASSACHUSETTS	Middlesex	Newton	45 Waban Hill Rd.	1/7/1976
76002137	Woodland, Newton Highlands, and Newton Centre Railroad Stations, and Baggage and Express Building	MASSACHUSETTS	Middlesex	Newton	1897 Washington St., 18 Station Ave., 80 and 50 Union St.	6/3/1976
78000457	Allen, Nathaniel Topliff, Homestead	MASSACHUSETTS	Middlesex	Newton	35 Webster St.	1/9/1978
78000458	Ware Paper Mill	MASSACHUSETTS	Middlesex	Newton	2276 Washington St.	5/22/1978
79000357	Peirce School	MASSACHUSETTS	Middlesex	Newton	88 Chestnut St.	12/6/1979
79000362	Winslow-Haskell Mansion	MASSACHUSETTS	Middlesex	Newton	53 Vista Ave.	10/25/1979
80000637	St. Mary's Church and Cemetery	MASSACHUSETTS	Middlesex	Newton	258 Concord St.	4/16/1980
80000638	Echo Bridge	MASSACHUSETTS	Middlesex	Newton	Spans Charles River	4/9/1980
82002745	Farlow and Kendrick Parks Historic District	MASSACHUSETTS	Middlesex	Newton	Roughly bounded by Franklin, Park, Church, Center and Wesley Sts. and Maple Ave.	7/8/1982
82002746	First Baptist Church in Newton	MASSACHUSETTS	Middlesex	Newton	848 Beacon St.	4/15/1982
83004010	East Parish Burying Ground	MASSACHUSETTS	Middlesex	Newton	Centre and Cotton Sts.	11/23/1983
84000105	Weeks Junior High School	MASSACHUSETTS	Middlesex	Newton	7 Hereward Rd.	10/23/1984
84002543	Claflin School	MASSACHUSETTS	Middlesex	Newton	110-112 Washington Park	8/16/1984
85000028	Warren, Dr. Samuel, House	MASSACHUSETTS	Middlesex	Newton	432 Cherry St.	1/3/1985
86001735	Crystal Lake and Pleasant Street Historic District	MASSACHUSETTS	Middlesex	Newton	Roughly bounded by Sudbury Aqueduct, Pleasant Ave., Lake Ave., and Crystal St. and Webster Ct.	9/4/1986
86001739	Farlow and Kendrick Parks Historic District (Boundary Increase)	MASSACHUSETTS	Middlesex	Newton	223, 226, 234, 237, 242, 243, 248, and 256 Park St.	9/4/1986
86001741	Gray Cliff Historic District	MASSACHUSETTS	Middlesex	Newton	35, 39, 43, 53, 54, 64, 65, and 70 Gray Cliff Rd.	9/4/1986
86001742	Hyde Avenue Historic District	MASSACHUSETTS	Middlesex	Newton	36, 42, 52, 59, and 62 Hyde Ave.	12/23/1986
86001744	Lasell Neighborhood Historic District	MASSACHUSETTS	Middlesex	Newton	Roughly bounded by Woodland and Studio Rds., Aspen and Seminary Aves., and Grove St.	9/4/1986
86001747	Newton Highlands Historic District	MASSACHUSETTS	Middlesex	Newton	Roughly bounded by Lincoln and Hartford Sts., Erie Ave., and Woodward St.	9/4/1986
86001748	Newton Lower Falls Historic District	MASSACHUSETTS	Middlesex	Newton	Roughly bounded by Hagar, Grove, Washington, and Concord Sts.	9/4/1986
86001749	Newton Theological Institution Historic District	MASSACHUSETTS	Middlesex	Newton	Roughly bounded by Braeland Ave., Ripley St. and Langley Rd., Bowdoin School Access Rd., and Cypress St.	9/4/1986
86001750	Newton Upper Falls Historic District	MASSACHUSETTS	Middlesex	Newton	Roughly bounded by Boylston, Elliot, and Oak Sts., and the Charles River	9/4/1986
86001753	Newtonville Historic District	MASSACHUSETTS	Middlesex	Newton	Roughly bounded by Highland Ave., Walnut Mill St., Otis St., and Lowell Ave.	9/4/1986
86001756	Old Chestnut Hill Historic District	MASSACHUSETTS	Middlesex	Newton	Along Hammond St. and Chestnut Hill Rd. roughly bounded by Beacon St. and Essex Rd., and Suffolk Rd.	9/4/1986
86001758	Our Lady Help of Christians Historic District	MASSACHUSETTS	Middlesex	Newton	Adams and Washington Sts.	9/4/1986
86001760	Putnam Street Historic District	MASSACHUSETTS	Middlesex	Newton	Roughly bounded by Winthrop, Putnam, Temple, and Shaw Sts.	9/4/1986

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86001762	Sumner and Gibbs Streets Historic District	MASSACHUSETTS	Middlesex	Newton	Roughly Sumner St. between Willow St. and Cotswold Terr. and 184 Gibbs St.	9/4/1986
86001763	Union Street Historic District	MASSACHUSETTS	Middlesex	Newton	Roughly Union St. between Langley Rd. and Herrick St., and 17--31 Herrick St.	9/4/1986
86001764	Webster Park Historic District	MASSACHUSETTS	Middlesex	Newton	Along Webster Pk. and Webster St. between Westwood St. and Oak Ave.	9/4/1986
86001766	West Newton Hill Historic District	MASSACHUSETTS	Middlesex	Newton	Roughly bounded by Highland Ave., Lenox, Hampshire, and Chestnut Sts.	9/4/1986
86001767	Adams, Amos, House	MASSACHUSETTS	Middlesex	Newton	37 Park Ave.	9/4/1986
86001768	Adams, Seth, House	MASSACHUSETTS	Middlesex	Newton	72 Jewett St.	9/4/1986
86001769	Auburndale Congregational Church	MASSACHUSETTS	Middlesex	Newton	64 Hancock St.	9/4/1986
86001770	Bartlett-Hawkes Farm	MASSACHUSETTS	Middlesex	Newton	15 Winnetaska Rd.	9/4/1986
86001771	Bayley House	MASSACHUSETTS	Middlesex	Newton	16 Fairmont Ave.	9/4/1986
86001773	Bemis Mill	MASSACHUSETTS	Middlesex	Newton	1--3 Bridge St.	9/4/1986
86001774	Bigelow, Henry, House	MASSACHUSETTS	Middlesex	Newton	15 Bigelow Terr.	9/4/1986
86001776	Blodgett, William, House	MASSACHUSETTS	Middlesex	Newton	11 Fairmont Ave.	9/4/1986
86001777	Brackett House	MASSACHUSETTS	Middlesex	Newton	621 Centre St.	9/4/1986
86001778	Buckingham, John, House	MASSACHUSETTS	Middlesex	Newton	33--35 Waban St.	9/4/1986
86001779	Building at 1-6 Walnut Terrace	MASSACHUSETTS	Middlesex	Newton	1--6 Walnut Terr.	9/4/1986
86001781	Central Congregational Church	MASSACHUSETTS	Middlesex	Newton	218 Walnut St.	9/4/1986
86001782	Chestnut Hill, The	MASSACHUSETTS	Middlesex	Newton	219 Commonwealth Ave.	9/4/1986
86001783	Claflin, Adams, House	MASSACHUSETTS	Middlesex	Newton	156 Grant Ave.	9/4/1986
86001785	Clark House	MASSACHUSETTS	Middlesex	Newton	379 Central St.	9/4/1986
86001786	Collins, Frederick, House	MASSACHUSETTS	Middlesex	Newton	1734 Beacon St.	9/4/1986
86001787	Curtis, Allen Crocker, House-Pillar House	MASSACHUSETTS	Middlesex	Newton	26 Quinobequin Rd.	9/4/1986
86001788	Curtis, William, House	MASSACHUSETTS	Middlesex	Newton	2330 Washington St.	9/4/1986
86001790	Dupee Estate	MASSACHUSETTS	Middlesex	Newton	400 Beacon St.	9/4/1986
86001792	Elliott, Charles D., House	MASSACHUSETTS	Middlesex	Newton	7 Colman St.	9/4/1986
86001793	Eminence, The	MASSACHUSETTS	Middlesex	Newton	122 Islington Rd.	9/4/1986
86001795	Estabrook, Rufus, House	MASSACHUSETTS	Middlesex	Newton	33 Woodland Rd.	9/4/1986
86001796	Evangelical Baptist Church	MASSACHUSETTS	Middlesex	Newton	23 Chapel St.	9/4/1986
86001798	Farquhar, Samuel, House	MASSACHUSETTS	Middlesex	Newton	7 Channing St.	9/4/1986
86001800	Fenno, John A., House	MASSACHUSETTS	Middlesex	Newton	171 Lowell Ave.	9/4/1986
86001802	First Unitarian Church	MASSACHUSETTS	Middlesex	Newton	1326 Washington St.	9/4/1986
86001804	Fuller, Capt. Edward, Farm	MASSACHUSETTS	Middlesex	Newton	59--71 North St.	9/4/1986
86001806	Gane, Henry, House	MASSACHUSETTS	Middlesex	Newton	121 Adena Rd.	9/4/1986
86001808	Gunderson, Jos., House	MASSACHUSETTS	Middlesex	Newton	983 Centre St.	9/4/1986
86001809	Harbach, John, House	MASSACHUSETTS	Middlesex	Newton	303 Ward St.	9/4/1986
86001810	Harding House-Walker Missionary Home	MASSACHUSETTS	Middlesex	Newton	161--163 Grove St.	9/4/1986
86001812	Haskell, Charles, House	MASSACHUSETTS	Middlesex	Newton	27 Sargent St.	9/4/1986
86001813	House at 1008 Beacon Street	MASSACHUSETTS	Middlesex	Newton	1008 Beacon St.	9/4/1986
86001814	House at 102 Staniford Street	MASSACHUSETTS	Middlesex	Newton	102 Staniford St.	9/4/1986
86001815	House at 107 Waban Hill Road	MASSACHUSETTS	Middlesex	Newton	107 Waban Hill Rd.	9/4/1986
86001816	House at 115-117 Jewett Street	MASSACHUSETTS	Middlesex	Newton	115--117 Jewett St.	9/4/1986
86001817	House at 15 Davis Avenue	MASSACHUSETTS	Middlesex	Newton	15 Davis Ave.	9/4/1986
86001818	House at 152 Suffolk Road	MASSACHUSETTS	Middlesex	Newton	152 Suffolk Rd.	9/4/1986
86001819	House at 170 Otis Street	MASSACHUSETTS	Middlesex	Newton	170 Otis St.	9/4/1986

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86001820	House at 173-175 Ward Street	MASSACHUSETTS	Middlesex	Newton	173--175 Ward St.	9/4/1986
86001821	House at 203 Islington Road	MASSACHUSETTS	Middlesex	Newton	203 Islington Rd.	9/4/1986
86001822	House at 215 Brookline Street	MASSACHUSETTS	Middlesex	Newton	215 Brookline St.	9/4/1986
86001823	House at 2212 Commonwealth Avenue	MASSACHUSETTS	Middlesex	Newton	2212 Commonwealth Ave.	9/4/1986
86001825	House at 230 Winchester Street	MASSACHUSETTS	Middlesex	Newton	230 Winchester St.	9/4/1986
86001826	House at 3 Davis Avenue	MASSACHUSETTS	Middlesex	Newton	3 Davis Ave.	9/4/1986
86001827	House at 307 Lexington Street	MASSACHUSETTS	Middlesex	Newton	307 Lexington St.	9/4/1986
86001828	House at 309 Waltham Street	MASSACHUSETTS	Middlesex	Newton	309 Waltham St.	9/4/1986
86001829	House at 31 Woodbine Street	MASSACHUSETTS	Middlesex	Newton	31 Woodbine St.	9/4/1986
86001830	House at 41 Middlesex Road	MASSACHUSETTS	Middlesex	Newton	41 Middlesex Rd.	9/4/1986
86001831	House at 47 Sargent Street	MASSACHUSETTS	Middlesex	Newton	47 Sargent St.	9/4/1986
86001832	House at 511 Watertown Street	MASSACHUSETTS	Middlesex	Newton	511 Watertown St.	9/4/1986
86001833	House at 60 William Street	MASSACHUSETTS	Middlesex	Newton	60 William St.	9/4/1986
86001835	House at 729 Dedham Street	MASSACHUSETTS	Middlesex	Newton	729 Dedham St.	9/4/1986
86001836	House at 81-83 Gardner Street	MASSACHUSETTS	Middlesex	Newton	81--83 Gardner St.	9/4/1986
86001838	Hyde House	MASSACHUSETTS	Middlesex	Newton	27 George St.	9/4/1986
86001839	Hyde, Eleazer, House	MASSACHUSETTS	Middlesex	Newton	401 Woodward St.	9/4/1986
86001840	Hyde, Gershom, House	MASSACHUSETTS	Middlesex	Newton	29 Greenwood St.	9/4/1986
86001841	Jackson House	MASSACHUSETTS	Middlesex	Newton	125 Jackson St.	9/4/1986
86001843	Jackson, Samuel, Jr., House	MASSACHUSETTS	Middlesex	Newton	137 Washington St.	9/4/1986
86001844	Jennison, Joshua, House	MASSACHUSETTS	Middlesex	Newton	11 Thornton St.	9/4/1986
86001846	Judkins, Amos, House	MASSACHUSETTS	Middlesex	Newton	8 Central Ave.	9/4/1986
86001847	King House	MASSACHUSETTS	Middlesex	Newton	328 Brookline St.	9/4/1986
86001848	Kingsbury House	MASSACHUSETTS	Middlesex	Newton	137 Suffolk St.	9/4/1986
86001849	Kistler House	MASSACHUSETTS	Middlesex	Newton	945 Beacon St.	9/4/1986
86001850	Merriam, Galen, House	MASSACHUSETTS	Middlesex	Newton	102 Highland St.	9/4/1986
86001851	Mount Pleasant	MASSACHUSETTS	Middlesex	Newton	15 Bracebridge Rd.	9/4/1986
86001852	Needham Street Bridge	MASSACHUSETTS	Middlesex	Newton	Needham St. at Charles River	9/4/1986
86001855	Newton Street Railway Carbarn	MASSACHUSETTS	Middlesex	Newton	1121 Washington St.	9/4/1986
86001857	Nichols House	MASSACHUSETTS	Middlesex	Newton	140 Sargent St.	9/4/1986
86001859	Old Shephard Farm	MASSACHUSETTS	Middlesex	Newton	1832 Washington St.	9/4/1986
86001860	Page, H. P., House	MASSACHUSETTS	Middlesex	Newton	110 Jewett St.	9/4/1986
86001862	Parsons, Edward, House	MASSACHUSETTS	Middlesex	Newton	56 Cedar St.	9/4/1986
86001863	Peabody-Williams House	MASSACHUSETTS	Middlesex	Newton	7 Norman Rd.	9/4/1986
86001864	Potter Estate	MASSACHUSETTS	Middlesex	Newton	65--71 Walnut Pk.	12/23/1986
86001866	Prescott Estate	MASSACHUSETTS	Middlesex	Newton	770 Centre St.	9/4/1986
86001868	Railroad Hotel	MASSACHUSETTS	Middlesex	Newton	1273--1279 Washington St.	9/4/1986
86001869	Rawson Estate	MASSACHUSETTS	Middlesex	Newton	41 Vernon St.	9/4/1986
86001871	Richards, James Lorin, House	MASSACHUSETTS	Middlesex	Newton	47 Kirkstall and 22 Oakwood Rds.	9/4/1986
86001872	Riley, Charles, House	MASSACHUSETTS	Middlesex	Newton	93 Bellevue St.	9/4/1986
86001875	Salisbury, Jonas, House	MASSACHUSETTS	Middlesex	Newton	62 Walnut Pk.	9/4/1986
86001876	Salisbury, Jonas, House	MASSACHUSETTS	Middlesex	Newton	85 Langley Rd.	9/4/1986
86001880	Simpson House	MASSACHUSETTS	Middlesex	Newton	57 Hunnewell Ave.	9/4/1986
86001881	Smith, Curtis S., House	MASSACHUSETTS	Middlesex	Newton	56 Fairmont Ave.	9/4/1986
86001882	Smith-Peterson House	MASSACHUSETTS	Middlesex	Newton	32 Farlow Rd.	9/4/1986
86001883	Souther, John, House	MASSACHUSETTS	Middlesex	Newton	43 Fairmont St.	9/4/1986
86001884	Staples-Crafts-Wiswall Farm	MASSACHUSETTS	Middlesex	Newton	1615 Beacon St.	9/4/1986

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86001889	Stone, Joseph L., House	MASSACHUSETTS	Middlesex	Newton	77--85 Temple St.	9/4/1986
86001891	Strong's Block	MASSACHUSETTS	Middlesex	Newton	1637--1651 Beacon St.	9/4/1986
86001892	Thaxter, Celia, House	MASSACHUSETTS	Middlesex	Newton	524 California St.	9/4/1986
86001893	Thayer House	MASSACHUSETTS	Middlesex	Newton	17 Channing St.	9/4/1986
86001894	Ward, Ephraim, House	MASSACHUSETTS	Middlesex	Newton	121 Ward St.	9/4/1986
86001895	Wheat, Samuel, House	MASSACHUSETTS	Middlesex	Newton	399 Waltham St.	9/4/1986
86001896	Whittemore's Tavern	MASSACHUSETTS	Middlesex	Newton	473 Auburn St.	9/4/1986
86001897	Woodward, John, House	MASSACHUSETTS	Middlesex	Newton	50 Fairlee Rd.	9/4/1986
86001898	Working Boys Home	MASSACHUSETTS	Middlesex	Newton	333 Nahanton St.	9/4/1986
86001960	Davis, Seth, House	MASSACHUSETTS	Middlesex	Newton	32 Eden Ave.	9/4/1986
86001961	House at 230 Melrose Street	MASSACHUSETTS	Middlesex	Newton	230 Melrose St.	9/4/1986
86001963	House at 68 Maple Street	MASSACHUSETTS	Middlesex	Newton	68 Maple St.	9/4/1986
86001964	Sacco-Pettee Machine Shops	MASSACHUSETTS	Middlesex	Newton	156 Oak St.	12/23/1986
90000007	Old Chestnut Hill Historic District (Boundary Increase)	MASSACHUSETTS	Middlesex	Newton	Roughly Chestnut Hill, Essex, and Gate House;Middlesex, Hammond, and Longwood;and Suffolk and Old Orchard	2/16/1990
90000008	Day Estate Historic District	MASSACHUSETTS	Middlesex	Newton	Commonwealth Ave. and Dartmouth St.	2/16/1990
90000009	Brae-Burn Historic District	MASSACHUSETTS	Middlesex	Newton	Brae Burn and Windmere Rds.	2/16/1990
90000010	Morton Road Historic District	MASSACHUSETTS	Middlesex	Newton	Morton Rd. at Morton St.	2/16/1990
90000011	Gray Cliff Historic District (Boundary Increase)	MASSACHUSETTS	Middlesex	Newton	The Ledges and Bishopsgate Rds.	2/16/1990
90000012	Commonwealth Avenue Historic District	MASSACHUSETTS	Middlesex	Newton	Roughly Commonwealth Ave. from Walnut St. to Waban Hill Rd.	2/16/1990
90000013	Newton Highlands Historic District (Boundary Increase)	MASSACHUSETTS	Middlesex	Newton	Roughly Lincoln St., Hartford St., Erie Ave., and Woodward St.	2/16/1990
90000014	Newtonville Historic District (Boundary Increase)	MASSACHUSETTS	Middlesex	Newton	Roughly Highland and Lowell Aves., Otis St., and Birch Hill Rd., and Walnut St. from Newtonville to Washington	2/16/1990
90000015	Pine Ridge Road-Plainfield Street Historic District	MASSACHUSETTS	Middlesex	Newton	Roughly Pine Ridge Rd., Upland Rd., Plainfield St., and Chestnut St.	2/16/1990
90000016	Saco-Lowell Shops Housing Historic District	MASSACHUSETTS	Middlesex	Newton	Oak, William, Butts, and Saco Sts.	2/16/1990
90000017	West Newton Village Center Historic District	MASSACHUSETTS	Middlesex	Newton	Roughly Washington St. from Putnam to Davis Ct.	2/16/1990
90000018	Windsor Road Historic District	MASSACHUSETTS	Middlesex	Newton	Windsor and Kent Rds.	2/16/1990
90000019	Monadnock Road Historic District	MASSACHUSETTS	Middlesex	Newton	Roughly Monadnock Rd., Wachusett Rd., Hudson St., Tudor Rd., Beacon St., and Hobart Rd.	2/16/1990
90000020	Newton City Hall and War Memorial	MASSACHUSETTS	Middlesex	Newton	1000 Commonwealth Ave.	2/16/1990
90000021	Crimmins, Thomas A., House	MASSACHUSETTS	Middlesex	Newton	19 Dartmouth St.	2/16/1990
90000022	City Stable and Garage	MASSACHUSETTS	Middlesex	Newton	74 Elliot St.	2/16/1990
90000023	Boston Edison Power Station	MASSACHUSETTS	Middlesex	Newton	374 Homer St.	2/16/1990
90000024	Newton Centre Branch Library	MASSACHUSETTS	Middlesex	Newton	1294 Centre St.	2/16/1990
90000025	Hayward, Fred R., House	MASSACHUSETTS	Middlesex	Newton	1547 Centre St.	2/16/1990
90000026	Towle, Loren, Estate	MASSACHUSETTS	Middlesex	Newton	785 Centre St.	2/16/1990
90000028	Harriman, Henry I., House	MASSACHUSETTS	Middlesex	Newton	825 Centre St.	2/16/1990
90000029	Riverside Concrete Company-Lamont's Market	MASSACHUSETTS	Middlesex	Newton	2 Charles St.	2/16/1990
90000030	Noves, Charles W., House	MASSACHUSETTS	Middlesex	Newton	271 Chestnut St.	2/16/1990
90000031	Howes, C. G., Dry Cleaning-Carley Real Estate	MASSACHUSETTS	Middlesex	Newton	1173 Washington St.	2/16/1990
90000032	Warren, Levi, Jr., High School	MASSACHUSETTS	Middlesex	Newton	1600 Washington St.	2/16/1990
90000034	Hopewell, Frank B., House	MASSACHUSETTS	Middlesex	Newton	301 Waverley Ave.	2/16/1990
90000035	Agudas Achim Anshei Sfard Synagogue	MASSACHUSETTS	Middlesex	Newton	168 Adams St.	2/16/1990
90000036	Plummer Memorial Library	MASSACHUSETTS	Middlesex	Newton	375 Auburn St.	2/16/1990

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90000037	Waban Branch Library	MASSACHUSETTS	Middlesex	Newton	1608 Beacon St.	2/16/1990
90000038	Eddy, George W., House	MASSACHUSETTS	Middlesex	Newton	85 Bigelow Rd.	2/16/1990
90000039	Childs, Mayor Edwin O., House	MASSACHUSETTS	Middlesex	Newton	340 California St.	2/16/1990
90000040	Bruner, Mayall, House	MASSACHUSETTS	Middlesex	Newton	36 Magnolia Ave.	2/16/1990
90000041	Pierce, F. Lincoln, Houses	MASSACHUSETTS	Middlesex	Newton	231--237 Mill St.	2/16/1990
90000042	Luke, Arthur F., House	MASSACHUSETTS	Middlesex	Newton	221 Prince St.	2/16/1990
90000043	Sawyer, C. A., House (Second)	MASSACHUSETTS	Middlesex	Newton	221 Prince St.	2/16/1990
90000044	Goodbar, Lafayette, House	MASSACHUSETTS	Middlesex	Newton	614 Walnut St.	2/16/1990
90000045	Harrison, C. Lewis, House	MASSACHUSETTS	Middlesex	Newton	14 Eliot Memorial Rd.	2/16/1990
90000046	Hammond, E. C., House	MASSACHUSETTS	Middlesex	Newton	35 Groveland St.	2/16/1990
90000047	Walker Home for Missionary Children	MASSACHUSETTS	Middlesex	Newton	161--63, 165, 167 Grove St., 136, 138, 144 Hancock St.	6/4/1992
90000048	Kessler, William F., House	MASSACHUSETTS	Middlesex	Newton	211 Highland St.	2/16/1990
90000049	Second Church of Newton	MASSACHUSETTS	Middlesex	Newton	60 Highland St.	2/16/1990
90000050	Stratton, Edward B., House	MASSACHUSETTS	Middlesex	Newton	25 Kenmore St.	2/16/1990
90000108	Newton Cottage Hospital Historic District	MASSACHUSETTS	Middlesex	Newton	2014 Washington St.	2/21/1990
90000110	Farlow Hill Historic District	MASSACHUSETTS	Middlesex	Newton	Roughly bounded by Shornecliffe Rd., Franklin St., Chamberlain Rd., Huntington Rd., and Farlow Rd.	2/21/1990
90000111	Stewart, Frank H., House	MASSACHUSETTS	Middlesex	Newton	41 Montvale Rd.	2/21/1990
90000112	Church, William L., House	MASSACHUSETTS	Middlesex	Newton	145 Warren St.	2/21/1990
90000175	Hammond House	MASSACHUSETTS	Middlesex	Newton	9 Old Orchard Rd.	3/9/1990
96000364	Maynard, Charles, House	MASSACHUSETTS	Middlesex	Newton	459 Crafts St.	4/4/1996
98000990	Brandeis University President's House	MASSACHUSETTS	Middlesex	Newton	66 Beaumont Ave.	8/19/1998
99000805	Old Chestnut Hill Historic District (Boundary Increase)	MASSACHUSETTS	Middlesex	Newton	Suffolk Rd.	7/8/1999
78000459	Colby Hall	MASSACHUSETTS	Middlesex	Newton Centr	141 Herrick Rd.	1/30/1978