



HALEY & ALDRICH, INC.  
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19 April 2021  
File No. 133860-003

US Environmental Protection Agency  
Office of Ecosystem Protection  
5 Post Office Square – Suite 100 (OEP06-01)  
Boston, MA 02109-3912

Attention: EPA/OEP RGP Applications Coordinator

Subject: Notice of Intent (NOI)  
Temporary Construction Dewatering  
15 Necco Street  
Boston, Massachusetts

Ladies and Gentlemen,

On behalf of our client, ARE-MA Region No. 74 LLC, and in accordance with the National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP) in Massachusetts, MAG910000, this letter submits a Notice of Intent (NOI) in Appendix A and the applicable documentation as required by the US Environmental Protection Agency (EPA) for temporary construction site dewatering under the RGP. Haley & Aldrich, Inc. (Haley & Aldrich) has prepared this submission to facilitate off-site discharge of temporary dewatering during construction activities at the 15 Necco Street site in Boston, Massachusetts (the “site”).

#### **SITE LOCATION AND HISTORICAL SITE USAGE**

The approximately 45,000 square foot (sq ft) site is located at 15 Necco Street in Boston, Massachusetts, as shown in Figure 1. The site is currently a vacant paved lot. The site was most recently used as a laydown area for the adjacent development at 5 and 6 Necco Court. The site is bordered by 6-story brick office building at 5 and 6 Necco Court to the north; paved parking lots (planned for future redevelopment) to the south; Necco Street to the east, beyond which is a parking garage; and the Boston Harbor Walk and Fort Point Channel to the west. Current ground surface elevations range from approximately El. 13.5 to El. 15.5. The Harbor Walk along the west edge of the property has an elevation of approximately El. 14.5.

Site history is based on review of available historical information, including Sanborn Fire Insurance Maps and historical maps available online from the Boston Planning and Development Agency. The general area of the site was part of Boston Harbor prior to filling in the 1860s, with land depicted at the site on the 1869 Boston Colton map. Boston Wharf Company is the earliest depicted occupant, with portions of three storage warehouses (No. 10, No. 14, No. 15) and several small outbuildings occupying the site by 1888. The warehouses stored sugar, molasses, and glass.

By 1910, the warehouse building No. 14 that occupied most of the site was reconfigured to include a storage tank, which is also depicted on the 1919 Bromley Map. By 1923, the portion of warehouse building No. 15 on the site appears to be demolished and building No. 10 was reconfigured. The 1923 Sanborn Map also depicts an oil house and “50-gallon chemical tank on wheels” on the southern side of building No. 15, which is depicted through at least 1964.

By 1938, an aerial photograph shows buildings No. 10 and No. 15 had been demolished along with the eastern portion of building No. 14 (including the tank). The 1950 Sanborn Map indicates the remaining portion of building No. 14 was used for warehousing floor covering supplies and tar in drums, and the 50-gallon chemical tank is still depicted. A wooden platform is also shown on the eastern portion of the site that connected building No. 14 to the abutting buildings at 5 and 6 Necco Court, and a small office building is located on the southeast corner of the site. By the late 1990s, structures at the site had been demolished, and the site has been used for parking and most recently as a construction staging area.

## PROPOSED CONSTRUCTION

The proposed development is planned to consist of a new 12-story new lab/office building with supplemental heating and cooling provided by geothermal wells and 1 level of below-grade space below a portion (7,300 sq ft) of the above-grade building. Temporary construction dewatering will be required for the drill water generated during geothermal well installation, during excavation below the water table for new site elements including the partial basement at El. 9.5 and to manage stormwater run-off into open excavations. The building will be supported by deep foundations bearing in bedrock installed from current ground surface. Also note, that the groundwater levels on the site are tidally influenced therefore pumping will vary based on the construction activity and astronomical tide cycles.

Thirty-five (35) geothermal wells are planned to be installed in the area shown on Figure 2. The wells will be drilled to depths of approximately 600 feet below ground surface. Drilling for geothermal well installation will be followed by pile installation and below-grade excavations.

Proposed site grades will be raised up from current grades sloping up to El. 21 and will consist of a combination of softscape and hardscape landscape features.

A Best Management Practices Plan (BMPP), which outlines the proposed discharge operations covered under the RGP, will be available at the site and is not being submitted with this NOI, as requested by EPA.

## ENVIRONMENTAL CONDITIONS AND REGULATORY BACKGROUND

The development site includes two separate parcels with different Release Tracking Numbers (RTNs), summarized below and shown on Figure 2:

- **15 Necco Property - RTN 3-33854** is associated with polycyclic aromatic hydrocarbons (PAHs), petroleum hydrocarbons (TPH), and metals (antimony, lead, zinc) in soil. Environmental conditions were reported to MassDEP by the previous owner, General Electric (GE), in

March 2017, and GE submitted and a Tier II Site Classification on 13 March 2018. GE filed a Release Abatement Measure (RAM) Plan in April 2017 for soil management activities associated with a formerly planned development at the site. Due to changes in the planned development and property ownership, a RAM Completion report was filed in January 2020 documenting the limited site preparation activities conducted for the former development. Haley & Aldrich prepared and filed a new Tier II Classification submittal on 6 September 2019 on behalf of the new property owner, ARE-MA Region No. 71 Holding, LLC to establish new regulatory deadlines as an Eligible Person under Chapter 21E.

- **5 Necco Property - RTN 3-34132** is associated with PAHs, TPH, and metals (arsenic and lead) in soil associated with the 5 Necco Street parcel. A portion of this RTN is within the current development. GE filed a RAM Plan in July 2017 for soil management activities associated with this RTN, which included excavation for utilities and treatment of TCLP lead impacted soils. The RAM was completed in February 2020, and RTN 3-34132 achieved a Permanent Solution in September 2020 relying on an Activity and Use Limitation (AUL) to maintain a condition of No Significant Risk.

Soil management for the new development will be conducted under a new RAM Plan that will include both site RTNs noted above. The RAM Plan will be filed prior to construction and will outline procedures for management of contaminated soil during construction of the new building and site improvements. Following completion of RAM activities, it is anticipated RTN 3-33854 will achieve conditions for a Permanent Solution without relying on an AUL and that the portion of RTN 3-34132 within the new development will achieve conditions for a Revised Permanent Solution and partial AUL termination. The AUL is anticipated to remain on a portion of the RTN 3-34132MCP site including the 5 and 6 Necco Court buildings.

Groundwater is not part of either MCP Disposal Site at the site. In preparation for site development, 182 soil samples were collected at the site to characterize soils. Fill soils contained concentrations of PAHs, TPH, and metals typical of urban fill and attributed to historic site filling and use, as documented in regulatory filings for the RTNs described above.

## GROUNDWATER QUALITY DATA

On 18 April 2016, groundwater sampling was conducted by the previous owner of the site at four observation well locations (B-102, -104, -105, -106(OW)) located within the site for volatile organic compounds, extractable petroleum hydrocarbons, volatile petroleum hydrocarbons (carbon ranges only), and total metals. This historical data did not detect concentrations above applicable Massachusetts Contingency Plan RCGW-2 reportable concentrations.

On 12 January 2021, a groundwater sample was collected for this permit application from observation well BWC-22(OW), located across Necco Street as indicated on Figure 2. (Observation wells previously sampled at the site in 2016 were destroyed during site work for the former development.) The collected sample was submitted to Alpha Analytical Laboratory (Alpha) of Westborough, MA, for chemical analysis of 2017 NPDES Remediation General Permit parameters including volatile organic compounds, semi-volatile organic compounds, polycyclic aromatic hydrocarbons, total metals, total petroleum

hydrocarbons, pesticides, polychlorinated biphenyls, total suspended solids, chloride, total cyanide, total phenolics, and total residual chlorine.

Refer to Table I for a summary of groundwater analytical data, and observation well locations are shown on Figure 2. Laboratory Data reports are provided in Appendix F. The 2016 data represents site specific contaminants of concern, and the 2021 data represents regional groundwater conditions that will be managed during temporary construction dewatering. The groundwater analyses did not detect concentrations of chemical constituents above applicable Massachusetts Contingency Plan (MCP) RCGW-2 reportable concentrations.

Section D.4 of the NOI includes the maximum and average detections from the data collected in 2016 and 2021. Soil data was also considered for Section D.4 of the NOI. Dewatering effluent may include drill water, which is potable water from the City of Boston that is anticipated to contain chlorine. Accordingly, total residual chlorine is marked “believed present” on the NOI form even though site groundwater data was non detect for that parameter. Ethanol sampling was not conducted on the groundwater sample as site history does not suggest that ethanol was stored at the property, nor that a petroleum product containing ethanol was released at the site. Ethanol has been increasingly used in fuels since 2006 (according to the 2016 NOI Fact Sheet), and according to site history, no known fuel-related storage or handling activities have been conducted on-site since that time.

#### **RECEIVING WATER QUALITY INFORMATION AND DILUTION FACTOR**

On 12 January 2021, Haley & Aldrich collected a receiving water sample from the Fort Point Channel using a disposable polyethylene bailer. The surface water samples were collected and submitted to Alpha for chemical analysis of ammonia and salinity. Field parameters, including pH and temperature, were collected from surface water sample at the time of sampling. The results of water quality testing are summarized in Table I. Copies of the groundwater testing laboratory data reports are provided in Appendix F.

It is our understanding that since the receiving water is a saltwater body, hardness does not need to be analyzed on either the effluent water or receiving water. We will additionally confirm with the MassDEP that the dilution factor for the receiving waters is 1.

#### **EFFLUENT CRITERIA DETERMINATION**

The EPA suggested WQBEL spreadsheet was populated using the maximum detections in groundwater and recent receiving water data. As requested by EPA, the Microsoft Excel spreadsheet for the WQBEL spreadsheet will be submitted to the EPA via email for their review upon submission of this NOI.

## DEWATERING SYSTEM AND OFF-SITE DISCHARGE

During the construction activities, it will be necessary to perform temporary dewatering to control surface water runoff from precipitation, groundwater seepage and construction-generated water to enable construction in-the-dry and manage water from geothermal drilling activities. Dewatering activities are anticipated to start in May 2021 and are anticipated to be required for up to 18 months.

We anticipate that temporary dewatering systems could generate a typical flow rate of 50 to 100 gallons per minute (gpm) with a peak discharge flow of about 250 gpm. Peak discharge will depend on water production from rock fractures during geothermal drilling and/or tidal variability due to astronomical cycles or storm events.

Temporary dewatering will be conducted from a containment pit at the well head for geothermal drilling and from shallow sumps or dewatering wells in excavations.

Construction dewatering includes piping and discharging to storm drains located on or near the site that discharge to the Fort Point Channel, as shown on Figure 3. An effluent treatment system will be designed by the Contractor to meet the 2017 NPDES RGP Discharge Effluent Criteria. Prior to discharge, collected water will be routed through a sedimentation tank, a bag filter, pH treatment (as required), and other necessary treatment components, to remove suspended solids and undissolved chemical constituents or treat dissolved chemical constituents as required to meet NPDES RGP discharge criteria, as shown on Figure 4. Cut sheets for the pH treatment are included in Appendix B.

It is anticipated that dewatering influent may have an elevated pH. A pH adjustment system consisting of sulfuric acid will be added to the treatment system to lower the pH as necessary to maintain pH within discharge requirements. Dosing will be automatically controlled using a meter pump, pH controller, and probe. The sulfuric acid will be stored in a drum within secondary containment.

The estimated maximum magnitude of application ("worst case/ceiling value") would be 48 gallons of sulfuric acid per day at a flow rate of 0.36 million gallons per day, which equates to a concentration of 133 ppm. The lethal concentration to kill 50% of the fish population (LC50) in a receiving water is 500 ppm per the SDS in Appendix B. So even at ceiling values, the sulfuric acid would not exceed LC50. Actual daily application of sulfuric acid is anticipated to be 0.5 gallons/day or less.

Part F of the RGP NOI requires that chemical additives be identified if applied to the effluent prior to discharge. To satisfy the confirmation requirements of RGP Part 2.5.3.d.ii:

1. The addition of a pH conditioner will not add any pollutants in concentrations which exceed permit effluent limitations;
2. The use of this chemical will not result in the exceedance of any applicable water quality standard;
3. This chemical will not add any pollutants that would justify the application of permit conditions that are different from or absent in the permit.

## DOCUMENTATION OF NATIONAL HISTORIC PRESERVATION ACT ELIGIBILITY REQUIREMENTS

Based on a review of the resources provided by the U.S. National Register of Historic Places and a review of the Massachusetts Cultural Resource Information System (MACRIS), the site is within the Fort Point Channel District and adjacent properties to the north are designated as National Register Historic Places & Local Historic District. The dewatering effluent is planned to be stored in a sediment tank along the southern property line of the site and pumped directly into a manhole or catch basin on the southern boundary of the site, approximately 100 ft away from the historic buildings. The outfall is located 250 feet from the site and outside of the Fort Point Channel District, therefore the discharge and related activities are not considered to have the potential to affect historic properties. The discharge is considered to meet Criterion B. Documentation is included in Appendix C.

## DETERMINATION OF ENDANGERED SPECIES ACT ELIGIBILITY

### Fish and Wildlife Service

According to the Endangered Species Act (ESA) guidelines outlined in Appendix I of the 2017 NPDES RGP, a preliminary determination for the action area associated with this project was established using the U.S. Fish and Wildlife Service (FWS) Information, Planning, and Conservation (IPaC) online system; a copy of the determination is attached in Appendix D. Based on the results of the determination, the project and action area are considered to meet FWS Criterion A as no listed species or critical habitat have been established to be present within the project action area.

### National Marine Fisheries Service Eligibility

Based on our review of the National Marine Fisheries Service (NMFS) criterion, it is the opinion of Haley & Aldrich that related activities under the NPDES RGP are not likely to adversely affect federally threatened or endangered listed species or critical habitat under the jurisdiction of NMFS and should not result in a take of listed species.

## OWNER AND OPERATOR INFORMATION

### **Owner:**

ARE-MA Region No. 74, LLC  
400 Technology Square, Suite 101  
Cambridge, MA 02139  
Contact: Dante Angelucci  
Title: Senior Vice President - Development

### **Operator:**

John Moriarty Associates  
3 Church Street #2  
Winchester, MA 01890  
Contact: Josh Snyder  
Title: Project Executive

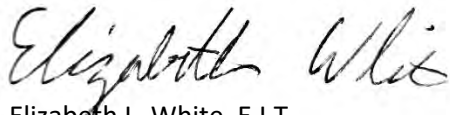
## BOSTON WATER AND SEWER COMMISSION

Appendix E provides a copy of the Boston Water and Sewer Commission (BWSC) Dewatering Permit application.

## CLOSING

Thank you very much for your consideration. Please feel free to contact us should you wish to discuss the information contained herein or if you need additional information.

Sincerely yours,  
HALEY & ALDRICH, INC



Elizabeth L. White, E.I.T.  
Environmental Engineer



Katelyn M. Tripp  
Senior Project Manager

### Attachments:

Table 1 – Summary of Groundwater Quality Data  
Figure 1 – Site Locus  
Figure 2 – Site and Subsurface Location Plan  
Figure 3 – Proposed Discharge Route  
Figure 4 – Proposed Treatment System Schematic

Appendix A – NOI for RGP  
Appendix B – Cut Sheets for pH Treatment  
Appendix C – National Register of Historic Places and Massachusetts  
Historical Commission Documentation  
Appendix D – Endangered Species Act Documentation  
Appendix E – BWSC Permit Application  
Appendix F – Laboratory Data Reports

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## TABLE



TABLE I  
SUMMARY OF ANALYTICAL DATA  
15 NECCO STREET  
BOSTON, MA  
FILE NO: 133860

		GROUNDWATER						RECEIVING WATER
Location Name	MCP Reportable Concentration RCGW-2 2014	MW-102	MW-104	MW-105	MW-106	MW-106	OW-22	FORT POINT
Location Name Per Plan		B-102(OW)	B-104(OW)	B-105(OW)	B-106(OW)	B-106(OW)	BWS-22(OW)	-
Sample Name						MW-106/DUP-	OW-	FORT
Sample Date		MW-102-20160418	MW-104-20160418	MW-105-20160418	MW-106-20160418	20160418	22_2021_0112	POINT_2021_0112
Lab Sample ID		04/18/2016	04/18/2016	04/18/2016	04/18/2016	04/18/2016	01/12/2021	01/12/2021
		L1611471-03	L1611471-02	L1611471-06	L1611471-04	L1611471-05	L2101624-01	L2101634-01
<b>Volatile Organic Compounds (ug/L)</b>								
Cymene (p-Isopropyltoluene)	10000	4.4	ND (2)	ND (10)	ND (2)	ND (2)	-	-
Total BTEX	NA	ND	ND	ND	ND	ND	ND	
<b>Semi-Volatile Organic Compounds (ug/L)</b>								
Total Group I PAHs	NA	-	-	-	-	-	ND	
Total Group II PAHs	NA	-	-	-	-	-	ND	
Total Phthalates	NA	-	-	-	-	-	ND	-
<b>Total Petroleum Hydrocarbons (mg/L)</b>								
Petroleum hydrocarbons	5	-	-	-	-	-	ND (4.4)	-
<b>EPH (ug/L)</b>								
C11-C22 Aromatic Hydrocarbons, Adjusted	5000	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	-	-
C19-C36 Aliphatic Hydrocarbons	50000	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	-	-
C9-C18 Aliphatic Hydrocarbons	5000	ND (100)	ND (100)	ND (100)	ND (100)	ND (100)	-	-
2-Methylnaphthalene	2000	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	-	-
Acenaphthene	6000	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	-	-
Acenaphthylene	40	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	-	-
Anthracene	30	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	-	-
Benzo(a)anthracene	1000	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	-	-
Benzo(a)pyrene	500	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	-	-
Benzo(b)fluoranthene	400	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	-	-
Benzo(g,h,i)perylene	20	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	-	-
Benzo(k)fluoranthene	100	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	-	-
Chrysene	70	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	-	-
Dibenz(a,h)anthracene	40	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	-	-
Fluoranthene	200	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	-	-
Fluorene	40	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	-	-
Indeno(1,2,3-cd)pyrene	100	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	-	-
Naphthalene	700	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	-	-
Phenanthrene	10000	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	-	-
Pyrene	20	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	-	-
<b>VPH (ug/L)</b>								
C5-C8 Aliphatic Hydrocarbons, Adjusted	3000	ND (50)	ND (50)	ND (50)	ND (50)	ND (50)	-	-
C9-C10 Aromatic Hydrocarbons	4000	ND (50)	ND (50)	ND (50)	ND (50)	ND (50)	-	-
C9-C12 Aliphatic Hydrocarbons, Adjusted	5000	ND (50)	ND (50)	55.1	ND (50)	ND (50)	-	-
<b>Metals (mg/L)</b>								
Antimony, Total	8	-	-	-	-	-	ND (0.04)	-
Arsenic, Total	0.9	ND (0.005)	ND (0.005)	0.012	ND (0.005)	ND (0.005)	ND (0.01)	-
Barium, Total	50	0.384	0.084	0.329	0.945	0.93	-	-
Cadmium, Total	0.004	ND (0.004)	ND (0.004)	ND (0.004)	ND (0.004)	ND (0.004)	ND (0.002)	-
Chromium, Total	0.3	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	-
Chromium VI (Hexavalent), Dissolved	0.3	-	-	-	-	-	ND (0.01)	-
Chromium III (Trivalent), Total	0.6	-	-	-	-	-	ND (0.01)	-
Copper, Total	100	-	-	-	-	-	ND (0.01)	-
Iron, Total	NA	-	-	-	-	-	0.901	-
Lead, Total	0.01	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	-
Mercury, Total	0.02	ND (0.0002)	ND (0.0002)	ND (0.0002)	ND (0.0002)	ND (0.0002)	ND (0.0002)	-
Nickel, Total	0.2	-	-	-	-	-	ND (0.02)	-
Selenium, Total	0.1	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.01)	ND (0.05)	-
Silver, Total	0.007	ND (0.007)	ND (0.007)	ND (0.007)	ND (0.007)	ND (0.007)	ND (0.004)	-
Zinc, Total	0.9	-	-	-	-	-	ND (0.1)	-
<b>PCBs (ug/L)</b>								
Aroclor-1016 (PCB-1016)	5	-	-	-	-	-	ND (0.25)	-
Aroclor-1221 (PCB-1221)	5	-	-	-	-	-	ND (0.25)	-
Aroclor-1232 (PCB-1232)	5	-	-	-	-	-	ND (0.25)	-
Aroclor-1242 (PCB-1242)	5	-	-	-	-	-	ND (0.25)	-
Aroclor-1248 (PCB-1248)	5	-	-	-	-	-	ND (0.25)	-
Aroclor-1254 (PCB-1254)	5	-	-	-	-	-	ND (0.25)	-
Aroclor-1260 (PCB-1260)	5	-	-	-	-	-	ND (0.2)	-
Sum of PCBs	NA	-	-	-	-	-	ND	-
<b>Other</b>								
Ammonia, Total (mg/L)	NA	-	-	-	-	-	3.67	ND (0.075)
Chloride, Total (mg/L)	NA	-	-	-	-	-	11600	-
Chlorine, residual, Total (mg/L)	NA	-	-	-	-	-	ND (0.02)	-
Cyanide, Total (mg/L)	0.03	-	-	-	-	-	ND (0.005)	-
Total Phenols (mg/L)	NA	-	-	-	-	-	ND (0.03)	-
Total Suspended Solids (TSS) (mg/L)	NA	-	-	-	-	-	15	-
Salinity, Total (SU)	NA	-	-	-	-	-	-	27
<b>Field Parameters</b>								
Temperature (Deg C)	NA	-	-	-	-	-	17.5	-
Dissolved Oxygen, Field (mg/L)	NA	-	-	-	-	-	0.25	-
Conductivity, Field (mS/cm)	NA	-	-	-	-	-	1.38	-
Turbidity, Field (NTU)	NA	-	-	-	-	-	22.2	-
pH, Field (SU)	NA	-	-	-	-	-	7.96	-

ABBREVIATIONS AND NOTES:

-: Not Analyzed

NA: Not Applicable

ND (2.5): Not detected, number in parentheses is the laboratory reporting limit

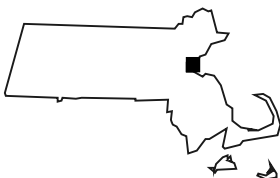
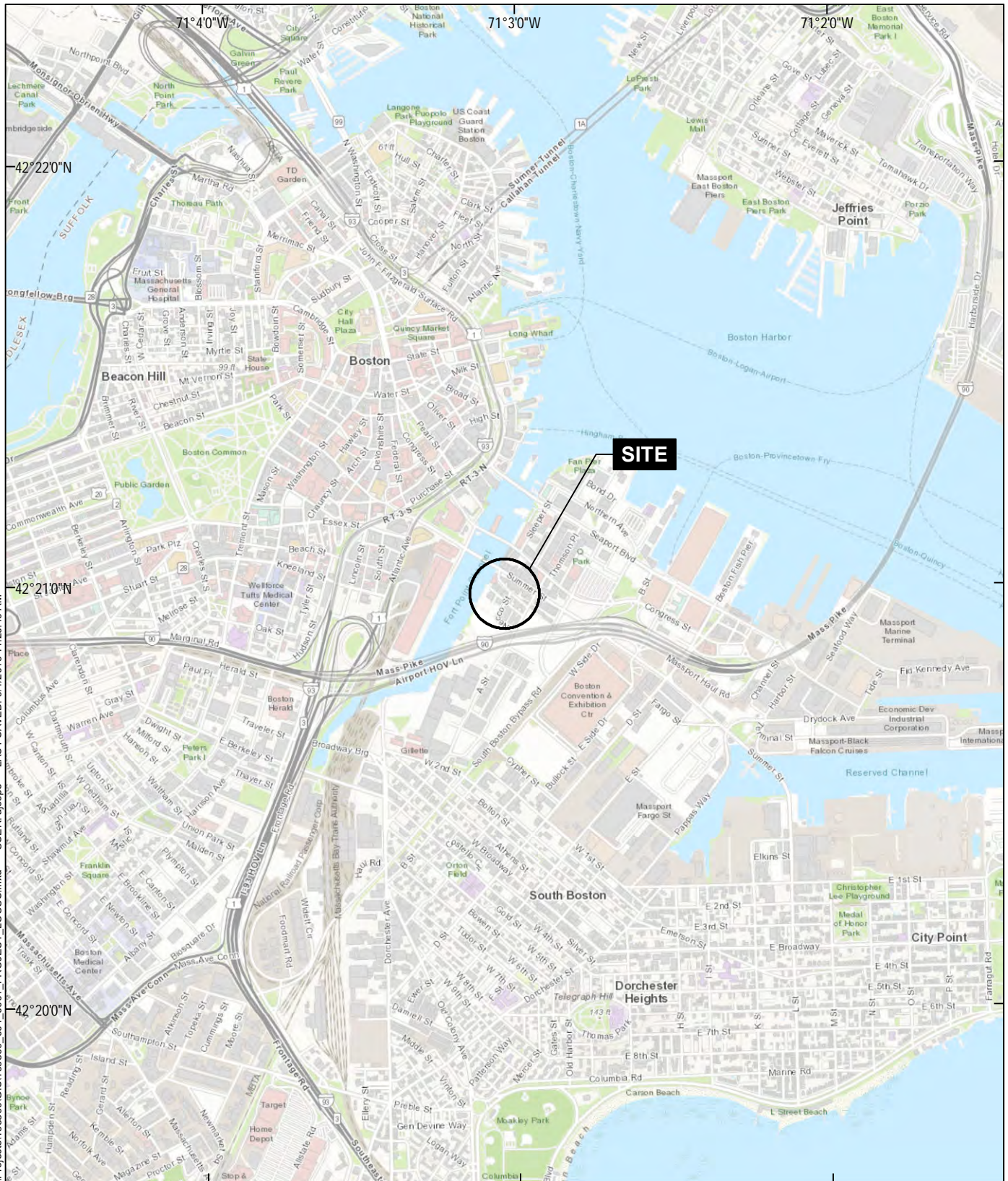
- Analytes detected in Volatile and Semi-Volatile Organics and PCBs for at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

- Bold values indicate an exceedance of the RCGW-2 criteria.

## FIGURES



GIS FILE PATH: \\haleyaldrich.com\share\CP\Projects\133860\GIS\133860\_001\_0001\_PROJECT\_LOCUS.mxd — USER: ajpspe — LAST SAVED: 9/1/2019 11:20:10 AM



MAP SOURCE: ESRI  
SITE COORDINATES: 71°3'2\"/>

**HALEY  
ALDRICH**

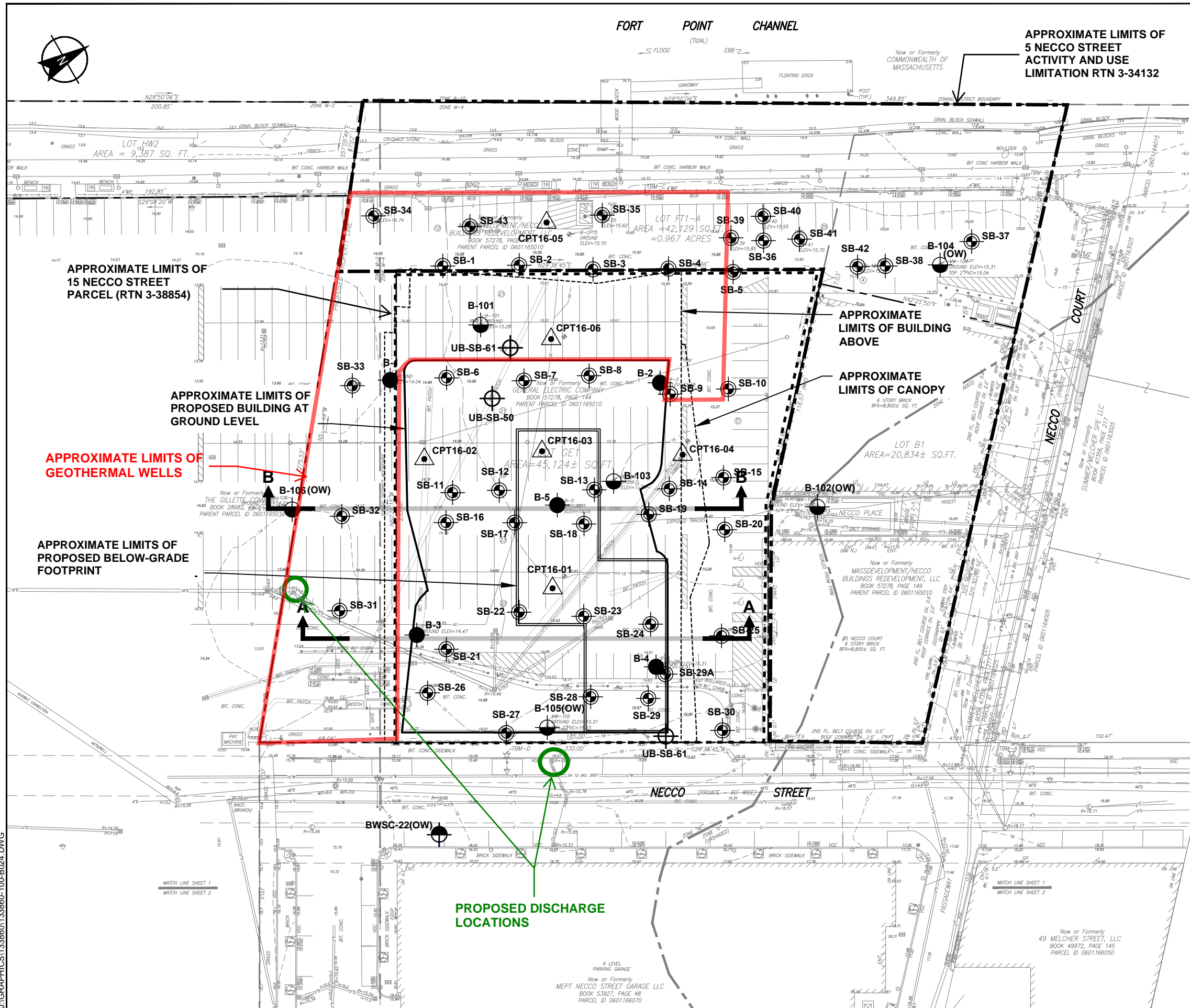
15 NECCO STREET  
BOSTON, MASSACHUSETTS

## PROJECT LOCUS

APPROXIMATE SCALE: 1 IN = 2000 FT  
APRIL 2021

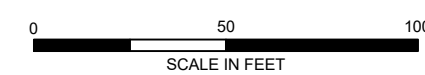
**FIGURE 1**





- LEGEND**
- B-1** DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING CONDUCTED BY GEOSearch, INC. AND OBSERVED BY AECOM BETWEEN 5 APRIL AND 15 APRIL 2016
  - SB-1** DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING CONDUCTED BY GEOSearch, INC., INC. AND OBSERVED BY AECOM BETWEEN 28 DECEMBER 2016 AND 26 JANUARY 2017
  - B-101** DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING CONDUCTED BY AECOM
  - CPT16-01** DESIGNATION AND APPROXIMATE LOCATION OF CONE PENETRATION TEST CONDUCTED BY CONETEC AND OBSERVED BY AECOM ON 21 AND 22 APRIL 2016.
  - B1101** DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING CONDUCTED BY GUID DRILLING CO, INC. AND OBSERVED BY GEI CONSULTANTS, INC. ON 16 AND 17 JULY 2001.
  - UB-SB-61** DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING OR OBSERVATION WELL INSTALLED BY CAMP, DRESSER & MCKEE.
  - BWC-22 (OW)** DESIGNATION AND APPROXIMATE LOCATION OF OBSERVATION WELL CONDUCTED BY GUID DRILLING CO, INC. AND OBSERVED BY HALEY & ALDRICH, INC. ON 14 JUNE 2002
  - (OW)** INDICATES OBSERVATION WELL INSTALLED IN COMPLETED BOREHOLE

- NOTES**
- BASE PLAN OBTAINED FROM EXISTING CONDITIONS PLAN PREPARED BY FELDMAN DATED 23 APRIL 2016.
  - EXPLORATION DESIGNATIONS AND LOCATIONS OBTAINED FROM REPORTS BY OTHERS (SEE TEXT FOR REFERENCES).
  - PROPOSED BUILDING AND BASEMENT FOOTPRINTS OBTAINED FROM PLANS PROVIDED BY ELKUS MANFREDI ARCHITECTS ON 14 OCTOBER 2020.



**HALEY ALDRICH**

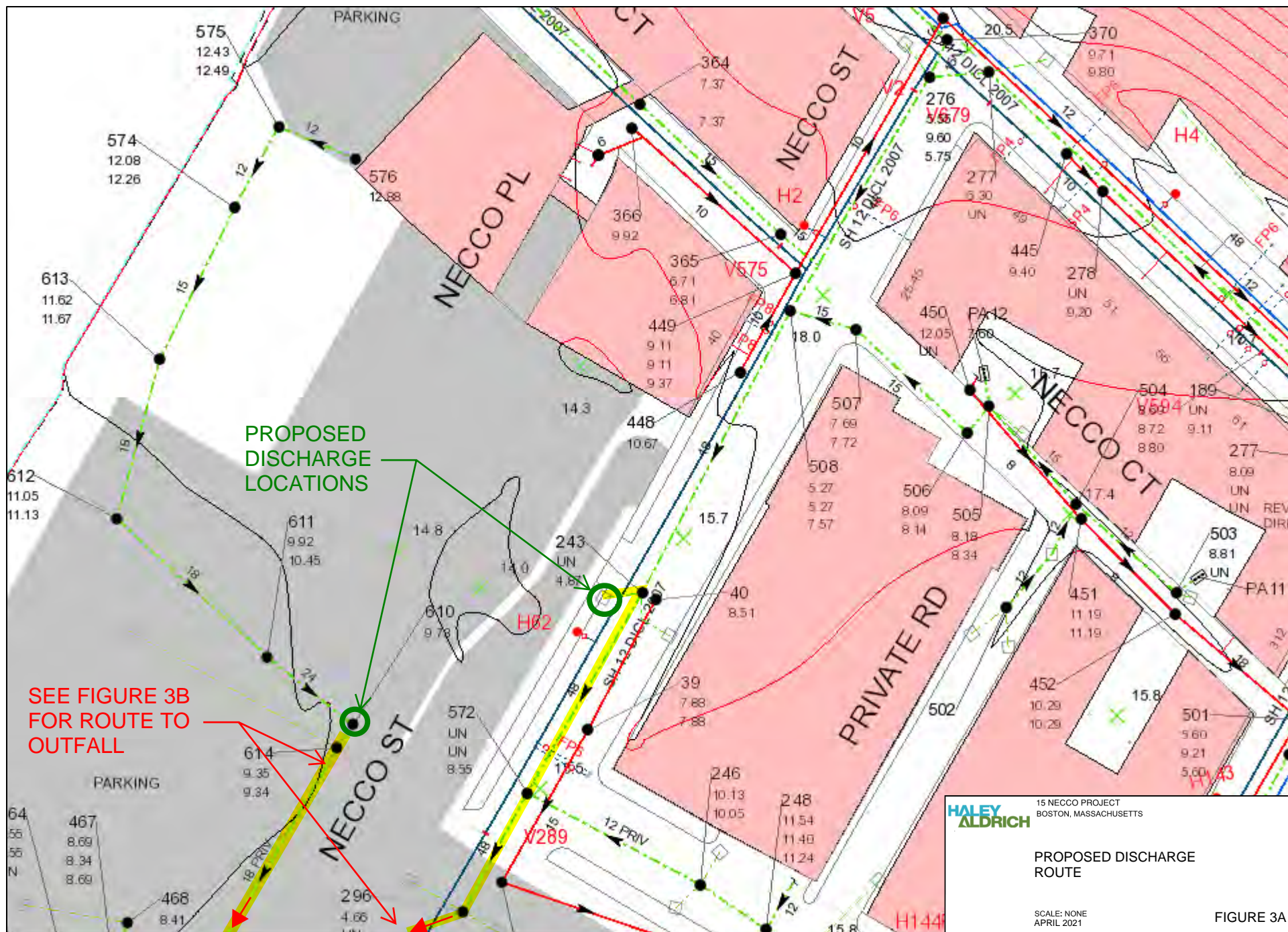
15 NECCO STREET  
BOSTON, MASSACHUSETTS

**SITE AND SUBSURFACE  
EXPLORATION LOCATION PLAN**

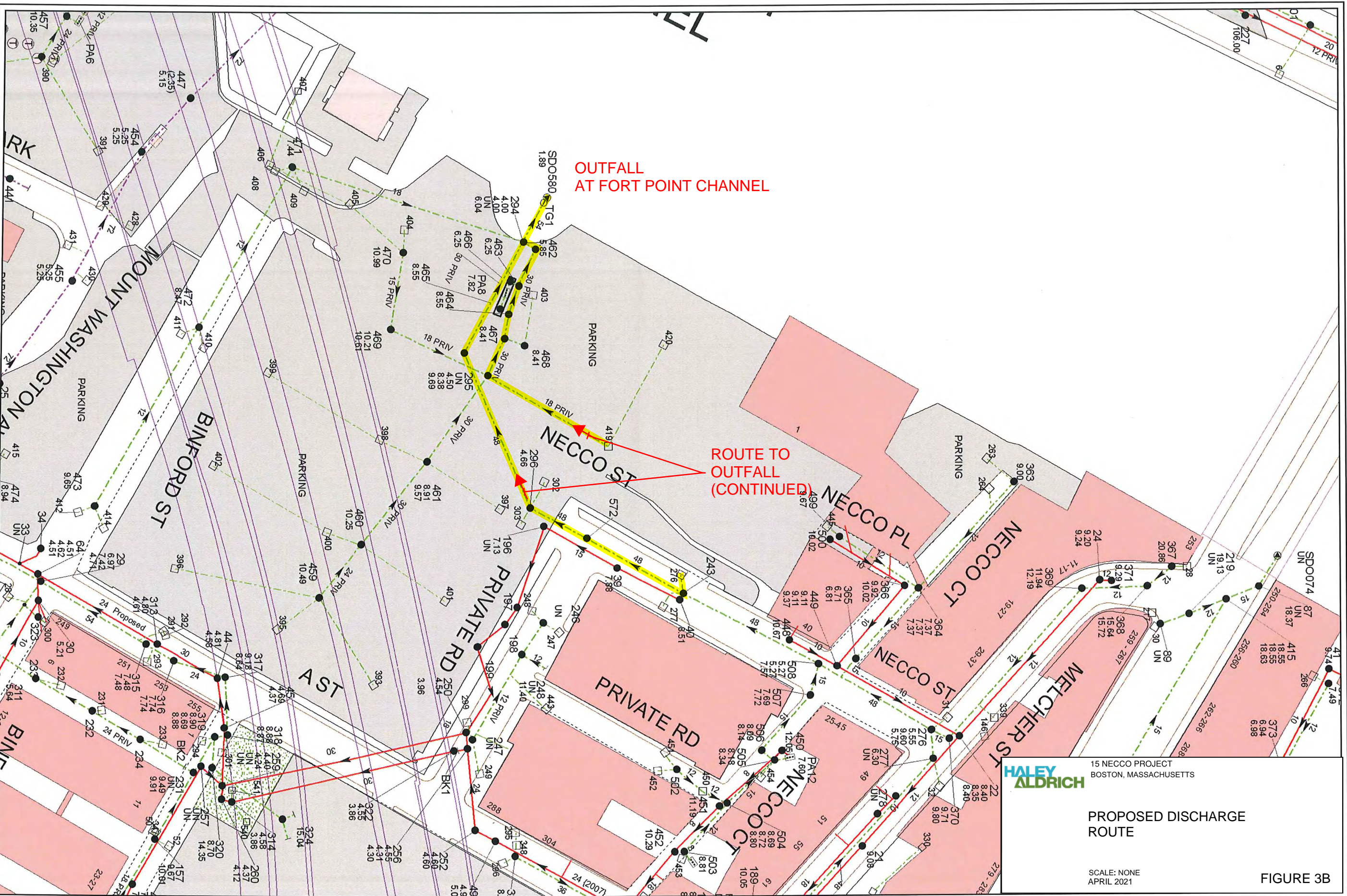
SCALE: AS SHOWN  
APRIL 2021

**FIGURE 2**









HALEY  
ALDRICH

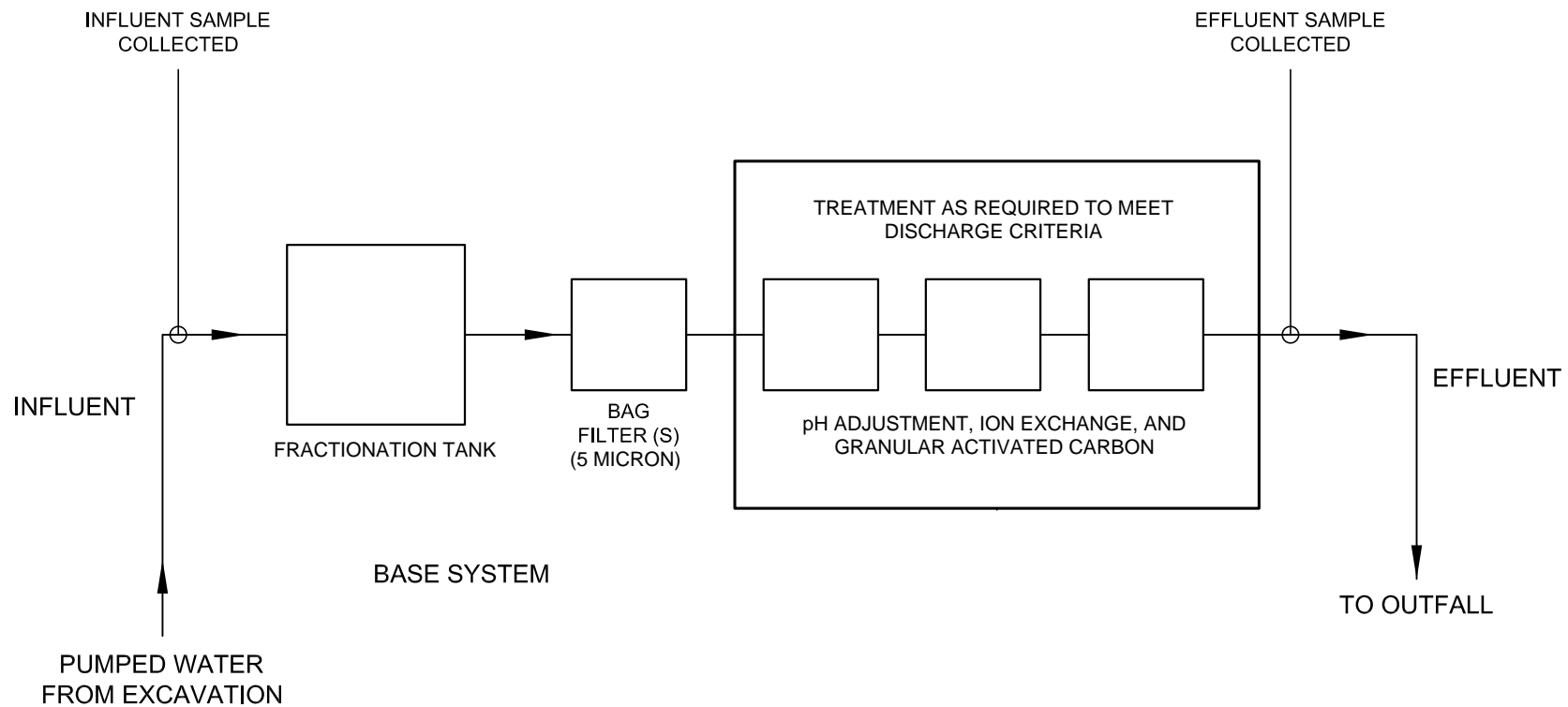
15 NECCO PROJECT  
BOSTON, MASSACHUSETTS

PROPOSED DISCHARGE  
ROUTE

SCALE: NONE  
APRIL 2021

FIGURE 3B





**LEGEND:**

—▶— DIRECTION OF FLOW

**NOTE:**

1. DETAILS OF TREATMENT SYSTEM MAY VARY FROM SYSTEM INDICATED ABOVE. SPECIFIC MEANS AND METHODS OF TREATMENT TO BE SELECTED BY CONTRACTOR. WATER WILL BE TREATED TO MEET REQUIRED EFFLUENT STANDARDS.

**HALEY  
ALDRICH**

15 NECCO PROJECT  
BOSTON, MASSACHUSETTS

**PROPOSED TREATMENT  
SYSTEM SCHEMATIC**

SCALE: NONE  
APRIL 2021

**FIGURE 4**

## **APPENDIX A**

### **NOI for RGP**



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

### A. General site information:

1. Name of site: <b>15 Necco Street</b>	Site address: Street: <b>15 Necco Street</b> City: <b>Boston</b> State: <b>MA</b> Zip: <b>02210</b>		
2. Site owner  <b>ARE-MA Region No. 74 LLC</b>  Owner is (check one): <input type="checkbox"/> Federal <input type="checkbox"/> State/Tribal <input checked="" type="checkbox"/> Private <input type="checkbox"/> Other; if so, specify:	Contact Person: <b>Dante Angelucci</b> Telephone: <b>617-252-4964</b> Email: <b>dangelucci@are.com</b> Mailing address: Street: <b>400 Technology Square, Suite 101</b> City: <b>Cambridge</b> State: <b>MA</b> Zip: <b>02139</b>		
3. Site operator, if different than owner  <b>John Moriarty Associates</b>	Contact Person: <b>Josh Snyder</b> Telephone: <b>781-953-8586</b> Email: <b>jsnyder@jm-a.com</b> Mailing address: <b>3 Church Street #2</b> Street: City: <b>Winchester</b> State: <b>MA</b> Zip: <b>01890</b>		
4. NPDES permit number assigned by EPA: <b>N/A</b>  NPDES permit is (check all that apply): <input type="checkbox"/> RGP <input type="checkbox"/> DGP <input type="checkbox"/> CGP <input type="checkbox"/> MSGP <input type="checkbox"/> Individual NPDES permit <input type="checkbox"/> Other; if so, specify:	5. Other regulatory program(s) that apply to the site (check all that apply): <input checked="" type="checkbox"/> MA Chapter 21e; list RTN(s): <b>RTN 3-33854, RTN 3-34132</b> <input type="checkbox"/> NH Groundwater Management Permit or Groundwater Release Detection Permit: <input type="checkbox"/> CERCLA <input type="checkbox"/> UIC Program <input type="checkbox"/> POTW Pretreatment <input type="checkbox"/> CWA Section 404		

**B. Receiving water information:**

1. Name of receiving water(s): <b>Fort Point Channel / Boston Inner Harbor</b>	Waterbody identification of receiving water(s): <b>MA70-02</b>	Classification of receiving water(s): <b>SB</b>
Receiving water is (check any that apply): <input type="checkbox"/> Outstanding Resource Water <input type="checkbox"/> Ocean Sanctuary <input type="checkbox"/> territorial sea <input type="checkbox"/> Wild and Scenic River		
2. Has the operator attached a location map in accordance with the instructions in B, above? (check one): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Are sensitive receptors present near the site? (check one): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, specify: <b>Surface water at Fort Point Channel immediately adjacent to the site</b>		
3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP. Listed as Category 5 waters, under 2016 303(d) List – "Waters requiring a TMDL". Shell-fishing and primary contact recreational use is impaired. The listed impairments are contaminants in fish and/or shellfish, dissolved oxygen, enterococcus, fecal coliform, and PCBs in fish tissue. A final TMDL is available for enterococcus and fecal coliform..		
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.		N/A - Receiving water is an ocean
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.		1 - Receiving water is an ocean
6. Has the operator received confirmation from the appropriate State for the 7Q10 and dilution factor indicated? (check one): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		

**C. Source water information:**

1. Source water(s) is (check any that apply):			
<input checked="" type="checkbox"/> 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): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> 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): <input type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> The receiving water Possible tidal flooding	<input checked="" type="checkbox"/> Potable water; if so, indicate municipality or origin: <b>City of Boston</b>
		<input type="checkbox"/> A surface water other than the receiving water; if so, indicate waterbody:	<input checked="" type="checkbox"/> Other; if so, specify: Although "Contaminated Groundwater" is listed, see table for compounds actually detected

2. Source water contaminants: <b>None above applicable RCGW-2, see table for compounds actually detected</b>	
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): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> 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): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
3. Has the source water been previously chlorinated or otherwise contains residual chlorine? (check one): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

#### **D. Discharge information**

1.The discharge(s) is a(n) (check any that apply): <input type="checkbox"/> Existing discharge <input checked="" type="checkbox"/> New discharge <input type="checkbox"/> New source	
Outfall(s): <b>1) SDO580</b>	Outfall location(s): (Latitude, Longitude) <b>1) 42.348474, -71.052718</b>
Discharges enter the receiving water(s) via (check any that apply): <input type="checkbox"/> Direct discharge to the receiving water <input checked="" type="checkbox"/> Indirect discharge, if so, specify:  <input type="checkbox"/> A private storm sewer system <input checked="" type="checkbox"/> 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): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Has the operator has received permission from the owner to use such system for discharges? (check one): <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No, if so, explain, with an estimated timeframe for obtaining permission: <b>BWSC permit application being submitted concurrently with this NOI</b> Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Provide the expected start and end dates of discharge(s) (month/year): <b>May 2021 - December 2022</b> Indicate if the discharge is expected to occur over a duration of: <input type="checkbox"/> less than 12 months <input checked="" type="checkbox"/> 12 months or more <input type="checkbox"/> is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	

2. Activity Category: (check all that apply)	3. Contamination Type Category: (check all that apply)	
<input type="checkbox"/> I – Petroleum-Related Site Remediation <input type="checkbox"/> II – Non-Petroleum-Related Site Remediation <input checked="" type="checkbox"/> III – Contaminated Site Dewatering <input type="checkbox"/> IV – Dewatering of Pipelines and Tanks <input type="checkbox"/> V – Aquifer Pump Testing <input checked="" type="checkbox"/> VI – Well Development/Rehabilitation <input type="checkbox"/> VII – Collection Structure Dewatering/Remediation <input type="checkbox"/> VIII – Dredge-Related Dewatering	<p>a. If Activity Category I or II: (check all that apply)</p> <p><input type="checkbox"/> A. Inorganics</p> <p><input type="checkbox"/> B. Non-Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> C. Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> D. Non-Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> E. Halogenated Semi-Volatile Organic Compounds</p> <p><input type="checkbox"/> F. Fuels Parameters</p>	
	<p>b. If Activity Category III, IV, V, VI, VII or VIII: (check either G or H)</p>	
	<table border="1"> <tr> <td data-bbox="970 800 1419 873"><input checked="" type="checkbox"/> G. Sites with Known Contamination</td><td data-bbox="1419 800 2003 873"><input type="checkbox"/> H. Sites with Unknown Contamination</td></tr> </table>	<input checked="" type="checkbox"/> G. Sites with Known Contamination
<input checked="" type="checkbox"/> G. Sites with Known Contamination	<input type="checkbox"/> H. Sites with Unknown Contamination	
<table border="1"> <tr> <td data-bbox="970 873 1419 1414"> <p>c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)</p> <p><input checked="" type="checkbox"/> A. Inorganics</p> <p>*<input checked="" type="checkbox"/> B. Non-Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> C. Halogenated Volatile Organic Compounds</p> <p>*<input checked="" type="checkbox"/> D. Non-Halogenated Semi-Volatile Organic Compounds</p> <p>*<input checked="" type="checkbox"/> E. Halogenated Semi-Volatile Organic Compounds</p> <p>*<input checked="" type="checkbox"/> F. Fuels Parameters</p> </td><td data-bbox="1419 873 2003 1414"> <p>d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</p> </td></tr> </table>	<p>c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)</p> <p><input checked="" type="checkbox"/> A. Inorganics</p> <p>*<input checked="" type="checkbox"/> B. Non-Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> C. Halogenated Volatile Organic Compounds</p> <p>*<input checked="" type="checkbox"/> D. Non-Halogenated Semi-Volatile Organic Compounds</p> <p>*<input checked="" type="checkbox"/> E. Halogenated Semi-Volatile Organic Compounds</p> <p>*<input checked="" type="checkbox"/> F. Fuels Parameters</p>	<p>d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</p>
<p>c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply)</p> <p><input checked="" type="checkbox"/> A. Inorganics</p> <p>*<input checked="" type="checkbox"/> B. Non-Halogenated Volatile Organic Compounds</p> <p><input type="checkbox"/> C. Halogenated Volatile Organic Compounds</p> <p>*<input checked="" type="checkbox"/> D. Non-Halogenated Semi-Volatile Organic Compounds</p> <p>*<input checked="" type="checkbox"/> E. Halogenated Semi-Volatile Organic Compounds</p> <p>*<input checked="" type="checkbox"/> F. Fuels Parameters</p>	<p>d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply</p>	

\*detected in soil only

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		X	1	4500NH3-BH	75	3670	3670	Report mg/L	---
Chloride		X	1	300.0	125000	11600000	11600000	Report µg/l	---
Total Residual Chlorine	X		1	4500CL	20	ND	ND	0.2 mg/L	7.5 ug/L
Total Suspended Solids		X	1	2540D	5000	15000	15000	30 mg/L	—
Antimony Total		X*	1	200.8	40	ND	ND	206 µg/L	640
Arsenic Total		X	6	200.8	10	12	2	104 µg/L	36
Cadmium Total		X*	6	200.8	4	ND	ND	10.2 µg/L	8.9
Chromium III		X*	1	NA	10	ND	ND	323 µg/L	100
Chromium VI		X*	1	200.8	10	ND	ND	323 µg/L	50
Copper Total	X		1	200.8	10	ND	ND	242 µg/L	3.7
Iron Total		X	1	200.7	50	901	901	5,000 µg/L	
Lead Total		X*	6	200.8	10	ND	ND	160 µg/L	8.5
Mercury Total		X*	6	245.1	0.2	ND	ND	0.739 µg/L	1.11
Nickel Total		X*	1	200.8	20	ND	ND	1,450 µg/L	8.3
Selenium Total		X*	6	200.8	50	ND	ND	235.8 µg/L	71
Silver Total		X*	6	200.8	7	ND	ND	35.1 µg/L	2.2
Zinc Total		X*	1	200.8	100	ND	ND	420 µg/L	86
Cyanide Total	X		1	4500CN	5	ND	ND	178 mg/L	1.0 ug/L
B. Non-Halogenated VOCs									
Total BTEX		X*	6	624.1	5	ND	ND	100 µg/L	---
Benzene		X*	6	624.1	2.5	ND	ND	5.0 µg/L	---
1,4 Dioxane	X		6	8260C-SIM	250	ND	ND	200 µg/L	---
Acetone		X*	6	624.1	25	ND	ND	7.97 mg/L	---
Phenol	X		1	420.1-SIM	30	ND	ND	1,080 µg/L	300

X\* - detected in soil only

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	X		6	624.1	5	ND	ND	4.4 µg/L	1.6
1,2 Dichlorobenzene	X		6	624.1	5	ND	ND	600 µg/L	---
1,3 Dichlorobenzene	X		6	624.1	5	ND	ND	320 µg/L	---
1,4 Dichlorobenzene	X		6	624.1	5	ND	ND	5.0 µg/L	---
Total dichlorobenzene	X		6	624.1	NA	ND	ND	763 µg/L in NH	---
1,1 Dichloroethane	X		6	624.1	5	ND	ND	70 µg/L	---
1,2 Dichloroethane	X		6	624.1	5	ND	ND	5.0 µg/L	---
1,1 Dichloroethylene	X		6	624.1	5	ND	ND	3.2 µg/L	---
Ethylene Dibromide	X		6	504.1	10	ND	ND	0.05 µg/L	---
Methylene Chloride	X		6	624.1	10	ND	ND	4.6 µg/L	---
1,1,1 Trichloroethane	X		6	624.1	5	ND	ND	200 µg/L	---
1,1,2 Trichloroethane	X		6	624.1	5	ND	ND	5.0 µg/L	---
Trichloroethylene	X		6	624.1	5	ND	ND	5.0 µg/L	---
Tetrachloroethylene	X		6	624.1	5	ND	ND	5.0 µg/L	3.3
cis-1,2 Dichloroethylene	X		6	624.1	5	ND	ND	70 µg/L	---
Vinyl Chloride	X		6	624.1	5	ND	ND	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	X		1	625.1	NA	ND	ND	190 µg/L	
Diethylhexyl phthalate	X		1	625.1	2.2	ND	ND	101 µg/L	2.2
Total Group I PAHs		X*	1	625.1	NA	ND	ND	1.0 µg/L	---
Benzo(a)anthracene		X*	1	625.1 SIM	0.1	ND	ND	As Total PAHs	0.0038
Benzo(a)pyrene		X*	1	625.1 SIM	0.1	ND	ND		0.0038
Benzo(b)fluoranthene		X*	1	625.1 SIM	0.1	ND	ND		0.0038
Benzo(k)fluoranthene		X*	1	625.1 SIM	0.1	ND	ND		0.0038
Chrysene		X*	1	625.1 SIM	0.1	ND	ND		0.0038
Dibenzo(a,h)anthracene		X*	1	625.1 SIM	0.1	ND	ND		0.0038
Indeno(1,2,3-cd)pyrene		X*	1	625.1 SIM	0.1	ND	ND		0.0038

X\* - detected in soil only

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		X*	1	625.1 SIM	NA	ND	ND	100 µg/L	---
Naphthalene		X*	1	625.1 SIM	0.1	ND	ND	20 µg/L	---
<b>E. Halogenated SVOCs</b>									
Total PCBs		X*	1	608.3	NA	ND	ND	0.000064 µg/L	---
Pentachlorophenol	X		1	625.1 SIM	1	ND	ND	1.0 µg/L	---
<b>F. Fuels Parameters</b>									
Total Petroleum Hydrocarbons		X*	1	1664A	4400	ND	ND	5.0 mg/L	---
Ethanol	X							Report mg/L	---
Methyl-tert-Butyl Ether		X*	6	624.1	10	ND	ND	70 µg/L	
tert-Butyl Alcohol		X*	1	624.1	100	ND	ND	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	X		6	624.1	20	ND	ND	90 µg/L in MA 140 µg/L in NH	---
<b>Other (i.e., pH, temperature, hardness, salinity, LC<sub>50</sub>, additional pollutants present); if so, specify:</b>									
temperature		X	1	Field	NA	17.5	17.5	Celsius	
pH		X	1	Field	NA	7.96	7.96	SU	
See Attached Table 1									

X\* - detected in soil only

**Compounds detected in soil only:**

**VOCs**

1,2,4-Trimethylbenzene  
1,3,5-Trimethylbenzene  
2-Butanone (Methyl Ethyl Ketone)  
Acetone  
Benzene  
Carbon disulfide  
Ethylbenzene  
Isopropylbenzene (Cumene)  
Methyl Tert Butyl Ether  
Naphthalene  
n-Propylbenzene  
Tert-Butyl Alcohol (tert-Butanol)  
Toluene  
Xylenes

**SVOCs**

1-Methylnaphthalene  
2-Methylnaphthalene  
4-Methylphenol  
Acenaphthene  
Acenaphthylene  
Anthracene  
Benzo(a)anthracene  
Benzo(a)pyrene  
Benzo(b)fluoranthene  
Benzo(g,h,i)perylene  
Benzo(k)fluoranthene  
Carbazole  
Chrysene  
Dibenz(a,h)anthracene  
Dibenzofuran  
Fluoranthene  
Fluorene  
Indeno(1,2,3-cd)pyrene  
Naphthalene  
Phenanthrene  
Pyrene

**Metals**

Antimony  
Beryllium  
Cadmium  
Chromium  
Lead  
Mercury  
Nickel  
Selenium  
Silver  
Vanadium  
Zinc

**Other**

Lead TCLP  
Aroclor-1242 (PCB-1242)  
Aroclor-1248 (PCB-1248)  
Aroclor-1254 (PCB-1254)  
Aroclor-1260 (PCB-1260)  
C9-C10 Aliphatic Hydrocarbons  
4,4'-DDT  
Conductivity (umhos/cm)



### E. Treatment system information

<p>1. Indicate the type(s) of treatment that will be applied to effluent prior to discharge: (check all that apply)</p> <p> <input type="checkbox"/> Adsorption/Absorption         <input type="checkbox"/> Advanced Oxidation Processes         <input type="checkbox"/> Air Stripping         <input type="checkbox"/> Granulated Activated Carbon (“GAC”)/Liquid Phase Carbon Adsorption         <input type="checkbox"/> Ion Exchange         <input type="checkbox"/> Precipitation/Coagulation/Flocculation         <input checked="" type="checkbox"/> Separation/Filtration         <input checked="" type="checkbox"/> Other; if so, specify: pH adjustment with sulfuric acid, as required       </p>	
<p>2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.</p> <p>Prior to discharge, collected water will be routed through a sedimentation/fractionation tank, bag filters, and pH treatment, and as necessary additional treatment components (noted herein: Ion exchange, GAC, oil/water separator), to remove suspended solids and undissolved chemical constituents, as shown on Figure 4 of the NPDES permit application.</p> <p>Identify each major treatment component (check any that apply):</p> <p> <input checked="" type="checkbox"/> Fractionation tanks         <input type="checkbox"/> Equalization tank         <input type="checkbox"/> Oil/water separator         <input type="checkbox"/> Mechanical filter         <input type="checkbox"/> Media filter         <input type="checkbox"/> Chemical feed tank         <input type="checkbox"/> Air stripping unit         <input checked="" type="checkbox"/> Bag filter         <input checked="" type="checkbox"/> Other; if so, specify: pH adjustment with sulfuric acid, as needed       </p> <p>Indicate if either of the following will occur (check any that apply):</p> <p> <input type="checkbox"/> Chlorination         <input type="checkbox"/> De-chlorination       </p>	
<p>3. Provide the <b>design flow capacity</b> in gallons per minute (gpm) of the most limiting component.</p> <p>Indicate the most limiting component: <b>Flow meter</b></p> <p>Is use of a flow meter feasible? (check one): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No, if so, provide justification:</p>	
<p>Provide the proposed maximum effluent flow in gpm. <b>250 gpm</b></p>	
<p>Provide the average effluent flow in gpm. <b>75 gpm</b></p>	
<p>If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:</p>	
<p>4. Has the operator attached a schematic of flow in accordance with the instructions in E, above? (check one): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p>	

### 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)	
<input type="checkbox"/> Algaecides/biocides <input type="checkbox"/> Antifoams <input type="checkbox"/> Coagulants <input type="checkbox"/> Corrosion/scale inhibitors <input type="checkbox"/> Disinfectants <input type="checkbox"/> Flocculants <input type="checkbox"/> Neutralizing agents <input type="checkbox"/> Oxidants <input type="checkbox"/> Oxygen <input type="checkbox"/> scavengers <input checked="" type="checkbox"/> pH conditioners <input type="checkbox"/> Bioremedial agents, including microbes <input type="checkbox"/> Chlorine or chemicals containing chlorine <input type="checkbox"/> Other; if so, specify:	
2. Provide the following information for each chemical/additive, using attachments, if necessary:	
a. Product name, chemical formula, and manufacturer of the chemical/additive;	See attached manufacturers cut sheets and SDSs for equipment which may be utilized if necessary. This information is only included as a contingency and is not currently needed based on groundwater data. Exact specifications on frequency, duration, quantity, and method of application are not known at this time. If the system eventually requires chemical additives, these details will be provided to EPA.
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): <input type="checkbox"/> Yes <input type="checkbox"/> 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): <input type="checkbox"/> Yes <input type="checkbox"/> No <b>See above</b>	

### G. Endangered Species Act eligibility determination

1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit:
<input checked="" type="checkbox"/> <b>FWS Criterion A:</b> 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".
<input type="checkbox"/> <b>FWS Criterion B:</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): <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No; if no, is consultation underway? (check one): <input type="checkbox"/> Yes <input type="checkbox"/> No
<input type="checkbox"/> <b>FWS Criterion C:</b> 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) <input type="checkbox"/> the operator <input type="checkbox"/> EPA <input type="checkbox"/> Other; if so, specify:

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

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

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

#### **H. National Historic Preservation Act eligibility determination**

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

- ☐ **Criterion A:** No historic properties are present. The discharges and discharge-related activities (e.g., BMPs) do not have the potential to cause effects on historic properties.
- ☒ **Criterion B:** Historic properties are present. Discharges and discharge related activities do not have the potential to cause effects on historic properties.
- ☐ **Criterion C:** Historic properties are present. The discharges and discharge-related activities have the potential to have an effect or will have an adverse effect on historic properties.

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

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

#### **I. Supplemental information**

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

Refer to attached Haley & Aldrich, Inc. letter

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 implemented upon initiation of discharge.

Notification provided to the appropriate State, including a copy of this NOI, if required.  
Forthcoming Release Abatement Measure (RAM) submitted to MassDEP will reference this application

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.  
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 ☐  
**BWSC Permit being submitted concurrently with this NOI**  
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 ☒

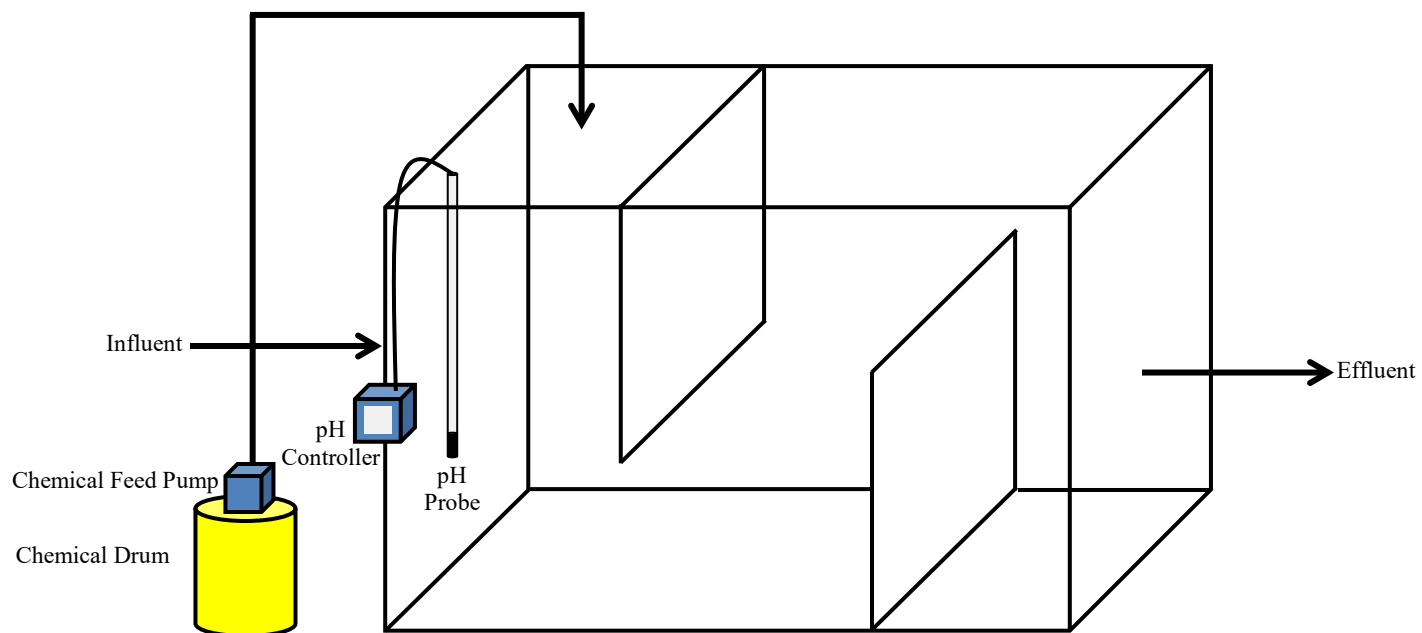
Signature:

Date:

Print Name and Title: Josh Snyder, Project Executive

## **APPENDIX B**

### **Cut Sheets for pH Treatment**



**Notes:**

- 1.) Figure is not to scale.
- 2.) System layout can vary with site conditions.

**Configuration of pH Adjustment System**



## One Controller for the Broadest Range of Sensors.

Choose from 30 digital and analog sensor families for up to 17 different parameters.

### Maximum Versatility

The sc200 controller allows the use of digital and analog sensors, either alone or in combination, to provide compatibility with Hach's broad range of sensors, eliminating the need for dedicated, parameter-specific controllers.

### Ease of Use and Confidence in Results

Large, high-resolution, transreflective display provides optimal viewing resolution in any lighting condition. Guided calibration procedures in 19 languages minimize complexity and reduce operator error. Password-protected SD card reader offers a simple solution for data download and transfer. Visual warning system provides critical alerts.

### Wide Variety of Communication Options

Utilize two to five analog outputs to transmit primary and secondary values for each sensor, or integrate Hach sensors and analyzers into MODBUS RS232/RS485, Profibus® DP, and HART networks.



*Password protected SD card reader offers a simple solution for data download and transfer, and sc200 and digital sensor configuration file duplication and backup.*

## Controller Comparison



Features	Previous Models		sc200™ Controller	Benefits
	sc100™ Controller	GLI53 Controller		
<b>Display</b>	64 x 128 pixels 33 x 66 mm (1.3 x 2.6 in.)	64 x 128 pixels 33 x 66 mm (1.3 x 2.6 in.)	160 x 240 pixels 48 x 68 mm (1.89 x 2.67 in.) Transreflective	<ul style="list-style-type: none"> <li>Improved user interface—50% bigger</li> <li>Easier to read in daylight and sunlight</li> </ul>
<b>Data Management</b>	irDA Port/PDA Service Cable	N/A	SD Card Service Cable	<ul style="list-style-type: none"> <li>Simplifies data transfer</li> <li>Standardized accessories/ max compatibility</li> </ul>
<b>Sensor Inputs</b>	2 Max Direct Digital Analog via External Gateway	2 Max Analog Depending on Parameter	2 Max Digital and/or Analog with Sensor Card	<ul style="list-style-type: none"> <li>Simplifies analog sensor connections</li> <li>Works with analog and digital sensors</li> </ul>
<b>Analog Inputs</b>	N/A	N/A	1 Analog Input Signal Analog 4-20mA Card	<ul style="list-style-type: none"> <li>Enables non-sc analyzer monitoring</li> <li>Accepts mA signals from other analyzers for local display</li> <li>Consolidates analog mA signals to a digital output</li> </ul>
<b>4-20 mA Outputs</b>	2 Standard	2 Standard	2 Standard Optional 3 Additional	<ul style="list-style-type: none"> <li>Total of five (5) 4-20 mA outputs allows multiple mA outputs per sensor input</li> </ul>
<b>Digital Communication</b>	MODBUS RS232/RS485 Profibus DP V1.0	HART	MODBUS RS232/RS485 Profibus DP V1.0 HART 7.2	<ul style="list-style-type: none"> <li>Unprecedented combination of sensor breadth and digital communication options</li> </ul>



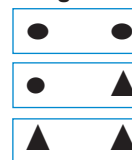
## Choose from Hach's Broad Range of Digital and Analog Sensors

Parameter	Sensor	Digital or Analog
Ammonia	AMTAX™ sc, NH4D sc, AISE sc, AN-ISE sc	●
Chlorine	CLF10 sc, CLT10 sc, 9184 sc	●
Chlorine Dioxide	9185 sc	●
Conductivity	GLI 3400 Contacting, GLI 3700 Inductive	▲
Dissolved Oxygen	LDO® Model 2, 5740 sc	●
Dissolved Oxygen	5500	▲
Flow	U53, F53 Sensors	▲
Nitrate	NITRATAX™ sc, NO3D sc, NISE sc, AN-ISE sc	●
Oil in Water	FP360 sc	●
Organics	UVAS sc	●
Ozone	9187 sc	●
pH/ORP	pHD	●
pH/ORP	pHD, pH Combination, LCP	▲
Phosphate	PHOSPHAX™ sc	●
Sludge Level	SONATAX™ sc	●
Suspended Solids	SOLITAX™ sc, TSS sc	●
Turbidity	1720E, FT660 sc, SS7 sc, ULTRATURB sc, SOLITAX sc, TSS sc	●
Ultra Pure Conductivity	8310, 8311, 8312, 8315, 8316, 8317 Contacting	▲
Ultra Pure pH/ORP	8362	▲

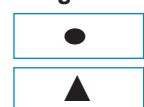
● = Digital    ▲ = Analog

Connect up to two of any of the sensors listed above, in any combination, to meet your application needs. The diagrams below demonstrate the potential configurations. Operation of analog sensors requires the controller to be equipped with the appropriate sensor module. Contact Hach Technical Support for help with selecting the appropriate module.

### 2 Channel Configurations



### 1 Channel Configurations



## Specifications\*

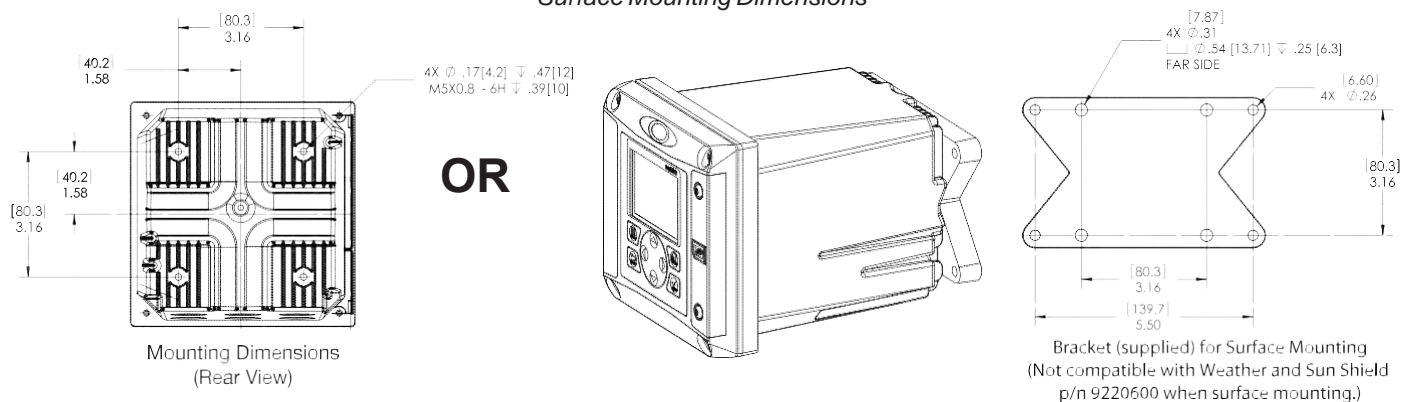
<b>Dimensions (H x W x D)</b>	5.7 in x 5.7 in x 7.1 in (144 mm x 144 mm x 181 mm)
<b>Display</b>	Graphic dot matrix LCD with LED backlighting, transreflective
<b>Display Size</b>	1.9 x 2.7 in. (48 mm x 68 mm)
<b>Display Resolution</b>	240 x 160 pixels
<b>Weight</b>	3.75 lbs. (1.70 kg)
<b>Power Requirements (Voltage)</b>	100 - 240 V AC, 24 V DC
<b>Power Requirements (Hz)</b>	50/60 Hz
<b>Operating Temperature Range</b>	-20 to 60 °C , 0 to 95% RH non-condensing
<b>Analog Outputs</b>	Two (Five with optional expansion module) to isolated current outputs, max 550 Ω , Accuracy: ± 0.1% of FS (20mA) at 25 °C, ± 0.5% of FS over -20 °C to 60 °C range
<b>Analog Output Functional Mode</b>	Operational Mode: measurement or calculated value Linear, Logarithmic, Bi-linear, PID
<b>Security Levels</b>	2 password-protected levels
<b>Mounting Configurations</b>	Wall, pole, and panel mounting
<b>Enclosure Rating</b>	NEMA 4X/IP66
<b>Conduit Openings</b>	1/2 in NPT Conduit
<b>Relay: Operational Mode</b>	Primary or secondary measurement, calculated value (dual channel only) or timer

<b>Relay Functions</b>	Scheduler (Timer), Alarm, Feeder Control, Event Control, Pulse Width Modulation, Frequency Control, and Warning
<b>Relays</b>	Four electromechanical SPDT (Form C) contacts, 1200 W, 5 A
<b>Communication</b>	MODBUS RS232/RS485, PROFIBUS DPV1, or HART 7.2 optional
<b>Memory Backup</b>	Flash memory
<b>Electrical Certifications</b>	EMC CE compliant for conducted and radiated emissions: - CISPR 11 (Class A limits) - EMC Immunity EN 61326-1 (Industrial limits) Safety cETLus safety mark for: - General Locations per ANSI/UL 61010-1 & CAN/CSA C22.2. No. 61010-1 - Hazardous Location Class I, Division 2, Groups A, B, C & D (Zone 2, Group IIC) per FM 3600 / FM 3611 & CSA C22.2 No. 213 M1987 with approved options and appropriately rated Class I, Division 2 or Zone 2 sensors cULus safety mark - General Locations per UL 61010-1 & CAN/CSA C22.2. No. 61010-1

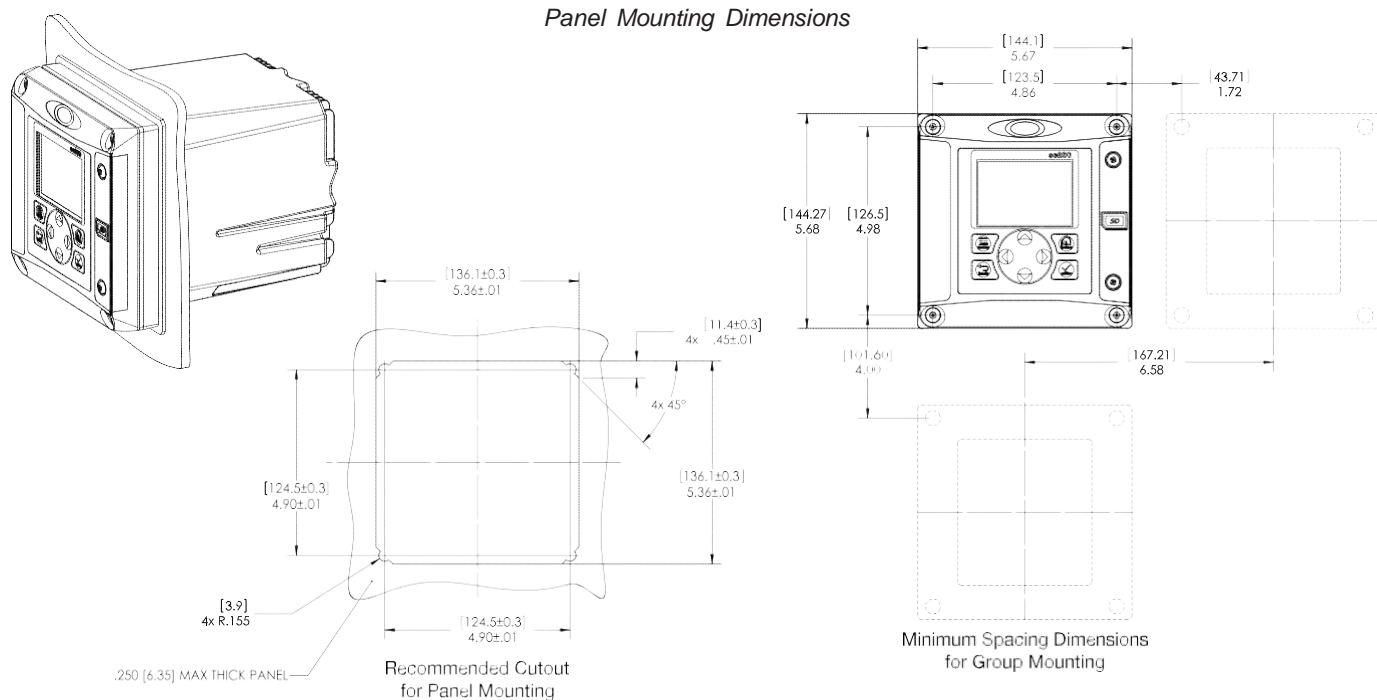
*\*Subject to change without notice.*

## Dimensions

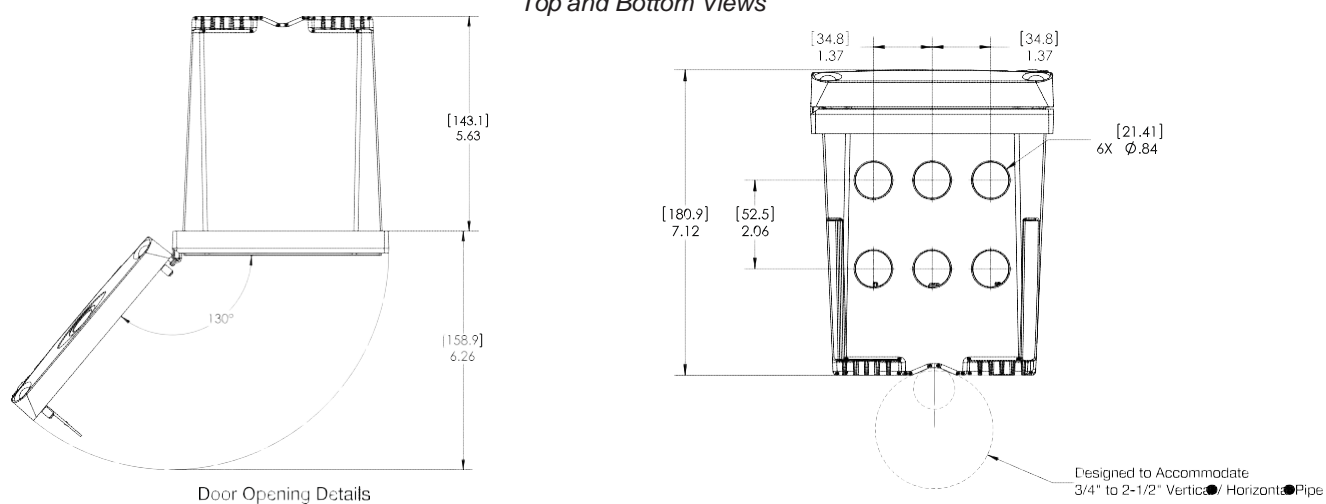
### Surface Mounting Dimensions



### Panel Mounting Dimensions



### Top and Bottom Views



## 3/4-inch Combination pH and ORP Sensor Kits



Use the Digital Gateway to make any Hach analog combination pH or ORP sensor compatible with the Hach sc1000 Controller.

Digital combination pH and ORP sensors are available in convertible, insertion, and sanitary mounting styles. Choose from rugged dome electrodes or "easy-to-clean" flat glass electrodes.

DW

WW

PW

IW

### Features and Benefits

#### Low Price—High Performance

These combination sensors are designed for specialty applications for immersion or in-line mounting. The reference cell features a double-junction design for extended service life, and a built-in solution ground. The body is molded from chemically-resistant Ryton® or PVDF, and the reference junction is coaxial porous Teflon®. All sensors are rated 0 to 105°C up to 100 psig, and have integral 4.5 m (15 ft.) cables with tinned leads. The PC-series (for pH) and RC-series (for ORP) combination sensors are ideal for measuring mild and aggressive media.

#### Special Electrode Configurations

Sensors with rugged dome electrodes, "easy-to-clean" flat glass electrodes, and even HF (hydrofluoric acid) resistant glass electrodes are available for a wide variety of process solutions.

#### Temperature Compensation Element Option

The PC-series combination pH sensors are available with or without a Pt 1000 ohm RTD temperature element. The RC-series combination ORP sensors are supplied without a temperature element.

#### Versatile Mounting Styles

Sensors are available in three mounting styles—convertible, insertion, and sanitary. Please turn to page 3 for more information.

#### Full-Featured "Plug and Play" Hach sc Digital Controllers

There are no complicated wiring or set up procedures with any Hach sc controller. Just plug in any combination of Hach digital sensors and it's ready to use—it's "plug and play."

**One or multiple sensors**—The sc controller family allows you to receive data from up to eight Hach digital sensors in any combination using a single controller.

**Communications**—Multiple alarm/control schemes are available using the relays and PID control outputs. Available communications include analog 4-20 mA, digital MODBUS® (RS485 and RS232) or Profibus DP protocols. (Other digital protocols are available. Contact your Hach representative for details.)

**Data logger**—A built-in data logger collects measurement data, calibration, verification points, and alarm history.

## Specifications\*

Most pH applications fall in the 2.5-12.5 pH range. General purpose pH glass electrodes perform well in this range. Some industrial applications require accurate measurements and control at pH values below 2 or above 12. Consult Hach Technical Support for details on these applications.

### Combination pH Sensors

#### Measuring Range

0 to 14 pH

#### Accuracy

Less than 0.1 pH under reference conditions

#### Temperature Range

0 to 105°C (32 to 221°F)

#### Flow Rate

0 to 2 m/s (0 to 6.6 ft./s); non-abrasive

#### Pressure Range

0 to 6.9 bar at 100°C (0 to 100 psig at 212°F)

#### Signal Transmission Distance

100 m (328 ft.) when used with the Hach Digital Gateway and a Hach sc Digital Controller.

1000 m (3280 ft.) when used with the Hach Digital Gateway, Termination Box, and a Hach sc Digital Controller.

#### Sensor Cable

Integral coaxial cable (plus two conductors for temperature compensator option); 4.5 m (15 ft.) long

#### Wetted Materials

Convertible style: Ryton® body (glass filled)

Insertion style: PVDF body (Kynar®)

Sanitary style: 316 stainless steel sleeved PVDF body

Common materials for all sensor styles include PTFE Teflon double junction, glass process electrode, and Viton® O-rings

#### Warranty

90 days

### Combination ORP Sensors

#### Measuring Range

-2000 to +2000 millivolts

#### Accuracy

Limited to calibration solution accuracy ( $\pm 20$  mV)

#### Temperature Range

0 to 105°C (32 to 221°F)

#### Flow Rate

0 to 2 m/s (0 to 6.6 ft./s); non-abrasive

#### Pressure Range

0 to 6.9 bar at 100°C (0 to 100 psig at 212°F)

#### Signal Transmission Distance

100 m (328 ft.) when used with the Hach Digital Gateway and a Hach sc Digital Controller.

1000 m (3280 ft.) when used with the Hach Digital Gateway, Termination Box, and a Hach sc Digital Controller.

#### Sensor Cable

Integral coaxial cable; 4.5 m (15 ft.) long; terminated with stripped and tinned wires

#### Wetted Materials

Convertible style: Ryton® body (glass filled)

Insertion style: PVDF body (Kynar®)

Common materials for all sensor styles include PTFE Teflon double junction, glass with platinum process electrode, and Viton® O-rings

#### Warranty

90 days

\*Specifications subject to change without notice.

Ryton® is a registered trademark of Phillips 66 Co.; Viton® is a registered trademark of E.I. DuPont de Nemours + Co.; Kynar® is a registered trademark of Pennwalt Corp.

## Engineering Specifications

1. The pH sensor shall be available in convertible, insertion or sanitary styles. The ORP sensor shall be available in only convertible or insertion styles.
2. The convertible style sensor shall have a Ryton® body. The insertion style sensor shall have a PVDF body. The sanitary style sensor shall have a 316 stainless steel sleeved PVDF body. Common materials for all sensor styles shall include a PTFE Teflon® double junction, and Viton® O-rings. The pH sensor shall have a glass pH electrode. The ORP sensor shall have a platinum ORP electrode.
3. The convertible style pH sensor shall be available with or without a built-in Pt 1000 ohm RTD temperature element. Insertion and sanitary style pH sensors shall have a built-in Pt 1000 ohm RTD temperature element. Convertible and insertion style ORP sensors shall not have a built-in temperature element.
4. The sensor shall communicate via MODBUS® RS-485 to a Hach sc Digital Controller.
5. The sensor shall be Hach Company Model PC sc or PC-series for pH measurement or Model PC sc or RC-series for ORP measurement.

## Dimensions

### Convertible Style Sensor

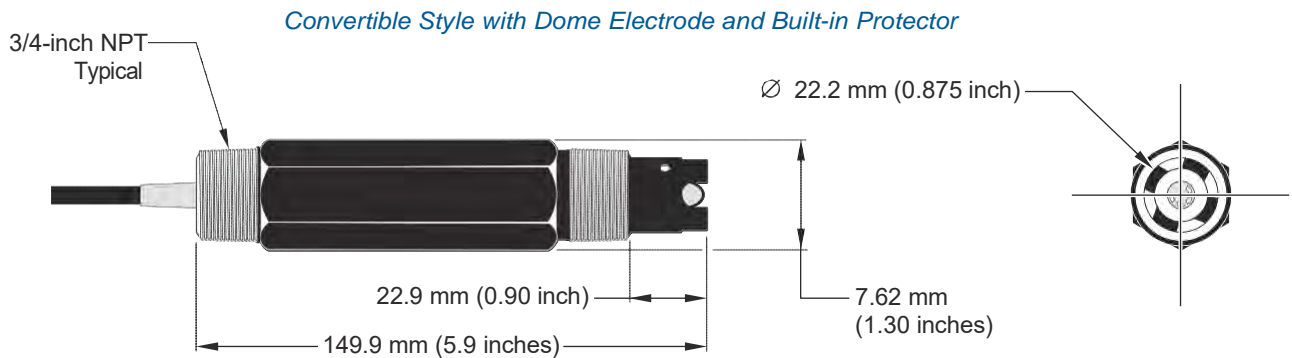
The convertible style sensor has a Ryton® body that features 3/4-inch NPT threads on both ends. The sensor can be directly mounted into a standard 3/4-inch pipe tee for flow-through mounting or fastened onto the end of a pipe for immersion mounting. The convertible style sensor enables inventory consolidation, thereby reducing associated costs. Mounting tees and immersion mounting hardware are offered in a variety of materials to suit application requirements.

### Insertion Style Sensor

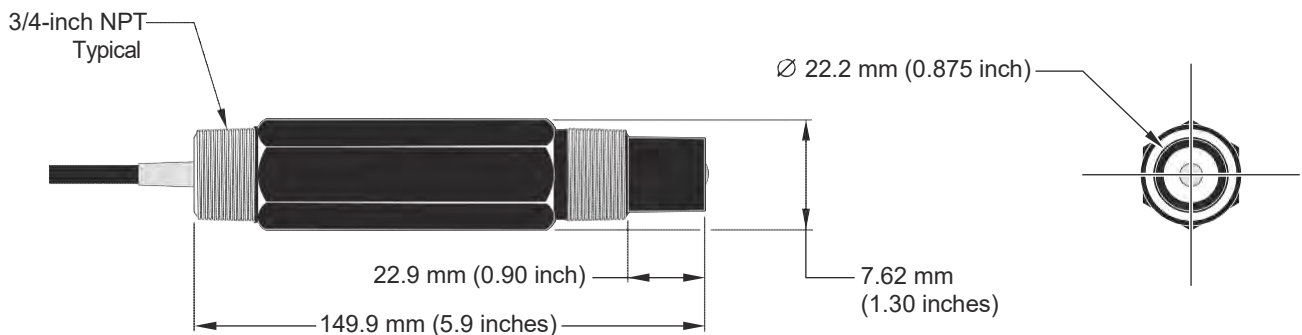
Insertion style sensors feature a longer, non-threaded PVDF body with two Viton® O-rings, providing a seal when used with the optional Hach insertion mount hardware assembly. This ball valve hardware enables sensor insertion and retraction from a pipe or vessel without having to stop the process flow.

### Sanitary Style Sensor

The sanitary style sensor, offered for pH measurement, has a 316 stainless steel-sleeved PVDF body with a 2-inch flange. The sensor mates to a standard 2-inch Tri-Clover fitting. The optional Hach sanitary mounting hardware includes a standard 2-inch sanitary tee, sanitary clamp, and Viton® sanitary gasket.



*Convertible Style with Flat Electrode*





The Pulsatron Series A Plus offers manual function controls over stroke length and stroke rate as standard with the option to select external pace for automatic control.

Ten distinct models are available, having pressure capabilities to 250 PSIG (17 BAR) @ 12 GPO (1.9 lph), and flow capacities to 58 GPO (9.1 lph) @ 100 PSIG (7.0 BAR), with a standard turndown ratio of 100:1, and optional ratio of 1000:1. Metering performance is reproducible to within  $\pm 3\%$  of maximum capacity.

Features

- Manual Control by on-line adjustable stroke rate and stroke length.
- Highly Reliable timing circuit.
- Circuit Protection against voltage and current upsets.
- Solenoid Protection by thermal overload with auto-reset.
- Water Resistant, for outdoor and indoor applications.
- Internally Dampened To Reduce Noise.
- Guided Ball Check Valve Systems , to reduce back flow and enhance outstanding priming characteristics.
- Few Moving Parts and Wall Mountable.
- Safe & Easy Priming with durable leak-free bleed valve assembly (standard).
- Optional Control: External pace with auto/manual selection.

Controls



Manual Stroke Rate

Manual Stroke Length

External Pacing- Optional

External Pace With Stop-  
Optional (125 SPM only)

Controls Options		
Feature	Standard Configuration	Optional Configuration <sup>1</sup>
External Pacing	--	Auto / Manual Selection /
External Pace w/ Stop (125SPM only)	--	Auto / Manual Selection <sup>2</sup>
Manual Stroke Rate	10:1 Ratio	100:1 Raio
Manual Stroke Length	10:1 Ratio	10:1 Ratio
Total Turndown Ratio	100:1 Ratio	1000:1 Ratio

Note 1: On S2, S3 & S4 sizes only.

Note 2: Not available on 1000:1 turndown pumps.

Operating Benefits

- Reliable metering performance.
- Rated "hot" for continuous duty.
- High viscosity capability.
- Leak-free, sealless , liquid end.



Aftermarket

- KOPkits
- Gauges
- Dampeners
- Pressure Relief Valves
- Tanks
- Pre-Engineered Systems
- Process Controllers (PULSAblue, MicroVision)



Series A Plus  
Electronic Metering Pumps

# Series A Plus

## Specifications and Model Selection

MODEL			LBC2	LB02	LBC3	LB03	LB04	LB64	LBC4	LBS2	LBS3	LBS4
Capacity nominal (max.)		GPH	025	025	0.42	0.50	1.00	125	2.00	0.50	1.38	2.42
		GPO	6	6	10	12	24	30	48	12	33	58
		LPH	0.9	0.9	1.6	1.9	3.8	4.7	7.6	1.9	5.2	9.14
Pressure <sup>3</sup> (max.)	GFPP, PVDF, 316SS or PVC <N/code w/TFE Seats)	PSIG (Bar)	250 (17)	150 (10)	250 (17)	150 (10)	100 (7)	100 (7)	50 (33)	250 (17)	150 (10)	100 (7)
	PVC (V code) Viton or CSPE Seats IDegas Liquid End		150 (10)							150 (10)		
Connections:		Tubing	1 1/4" ID X 3/8" OD						3/8" ID X 1/2" OD	1 1/4" ID X 3/8" OD		
		Piping							1 1/4" FNPT			
Strokes/Minute		SPM	125							250		

Note 3: Pumps with rated pressure above 150 PSI will be de-rated to 150 PSI Max. when selecting certain valve options, see Price Book for details.

## Engineering Data

Pump Head Materials Available: GFPP, PVC, PVDF, 316 SS, PTFE-faced CSPE-backed

Diaphragm: PTFE-faced CSPE-backed

Check Valves Materials Available: Seats/O-Rings:

PTFE  
CSPE  
Viton  
Ceramic  
PTFE  
316 SS  
Alloy C

Balls:

Fittings Materials Available:

GFPP, PVC, PVDF

Bleed Valve:

Same as fitting and check valve selected, except 316SS

Injection Valve & Foot Valve Assy:

Same as fitting and check valve selected

Tubing:

Clear PVC  
White PE

Important: Material Code - GFPP=Glass-filled Polypropylene, PVC=Polyvinyl Chloride, PE=Polyethylene, PVDF=Polyvinylidene Fluoride, CSPE=Generic formulation of Hypalon, a registered trademark of E.I. DuPont Company. Viton is a registered trademark of E.I. DuPont Company. PVC wetted end recommended for sodium hypochlorite.

## Engineering Data

Reproducibility: +/- 3% at maximum capacity  
Viscosity Max CPS: 1000 CPS  
Stroke Frequency Max SPM: 125 / 250 by Model  
Stroke Frequency Turn-Down Ratio: 10:1/100:1 by Model  
Stroke Length Turn-Down Ratio: 10:1  
Power Input: 115 VAC/50-60 HZ/1 ph  
230 VAC/50-60 HZ/1 ph

Average Current Draw:

@ 115 VAC; Amps: 0.6 Amps  
@ 230 VAC; Amps: 0.3 Amps  
Peak Input Power: 130 Watts  
Average Input Power @ Max SPM: 50 Watts

## Custom Engineered Designs - Pre-Engineered Systems



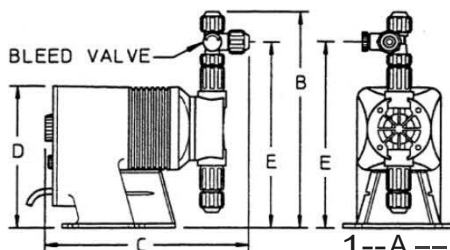
### Pre-Engineered Systems

Pulsafeeder's Pre-Engineered Systems are designed to provide complete chemical feed solutions for all electronic metering applications. From stand alone simplex pH control applications to full-featured, redundant sodium hypochlorite disinfection metering, these rugged fabricated assemblies offer turn-key simplicity and industrial-grade durability. The UV-stabilized, high-grade HOPE frame offers maximum chemical compatibility and structural rigidity. Each system is factory assembled and hydrostatically tested prior to shipment.

## Dimensions

Series A PLUS Dimensions (inches)						
Model No.	A	B	C	D	E	Shipping Weight
LB02 IS2	5.0	9.6	9.5	6.5	8.2	10
LBC2	5.0	9.9	9.5	6.5	8.5	10
LBC3	5.0	9.9	9.5	6.5	8.5	10
LB03 IS3	5.0	9.9	9.5	6.5	8.5	10
LB04	5.0	9.9	9.5	6.5	8.5	10
LB64	5.0	9.9	9.5	6.5	8.5	10
LBC4	5.0	9.9	9.5	6.5	8.5	10

NOTE: inches X 2.54 cm





## 95-Gallon OverPack - 32" dia x 41.5", 1 each/package



Stock a SpillTech® OverPack with sorbents for emergency spill response, or use it as a salvage drum to ship damaged containers or hazardous waste.

- DOT-Approved for Salvage: All SpillTech® OverPacks are DOT-approved and X-rated for use as salvage drums. Helps companies conform to federal regulations when shipping damaged or leaking containers of hazardous materials, or absorbents contaminated with hazardous substances.
- Perfect for Spill Kits: Stores sorbent products (not included) for easy access as needed for spill control. Saves time when quick response is necessary.
- Sturdy Construction: 100% polyethylene OverPack resists chemicals, rust and corrosion for years of use. Integrated handles make them easy to lift, move or carry with standard material handling equipment. Twist-on, double-wall lid with closed-cell gasket provides sealed, secure closure to prevent leaks and protect contents from moisture, dirt and damage. Durable to withstand rough handling.
- Customized for You: We can customize a Spill Kit to your exact specifications, including the container, its contents and accessories, with no upcharge! Contact your local Distributor for details.

### A95OVER Specifications

<b>Dimensions:</b>	ext. dia. 32" x 41.5" H
<b>Shipping Dimensions:</b>	31.75" W x 41.5" L x 31.75" H
<b>Sold as:</b>	1 per package
<b>Color:</b>	Yellow
<b>Composition:</b>	Polyethylene
<b># per Pallet:</b>	3
<b>Incinerable:</b>	No
<b>Ship Class:</b>	250

### Metric Equivalent Specifications

<b>Dimensions:</b>	ext. dia. 81.3cm x 105.4cm H
<b>Shipping Dimensions:</b>	80.6cm W x 105.4cm L x 80.6cm H

## **A95OVER Technical Information**

### **Warnings & Restrictions:**

There are no known warnings and restrictions for this product.

### **Regulations and Compliance:**

49 CFR 173.3(c)(1) - If a container of hazardous waste is damaged or leaking, it can be placed in a compatible salvage drum that meets UN criteria for shipping

49 CFR 173.12(b)(2)(iv) - When labpacking, "Inner packagings...must be surrounded by a chemically compatible absorbent material in sufficient quantity to absorb the total liquid contents."

49 CFR 173.12(b) - A container used for labpacking must be "a UN 1A2 or UN 1B2 metal drum, a UN 1D plywood drum, a UN 1G fiber drum or a UN 1H2 plastic drum tested and marked at least for the Packing Group III performance level for liquids or solids."

# Sulfuric Acid, 70-100%

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and

Regulations Revision Date: 05/15/15

Version: 1.0

### SECTION 1: IDENTIFICATION

#### Product Identifier

**Product Name:** Sulfuric Acid, 70-100%

**Formula:** H<sub>2</sub>-O<sub>4</sub>-S

#### Intended Use of the Product

**Use of the Substance/Mixture:** Industrial use.

#### Name, Address, and Telephone of the Responsible Party

**Manufacturer**

#### Emergency Telephone Number

**Emergency number :**

CHEMTREC 1-800-424-9300

For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC – Day or Night

### SECTION 2: HAZARDS IDENTIFICATION

#### Classification of the Substance or Mixture

##### **Classification (GHS-US)**

Acute Tox. 2 (Inhalation:dust,mist) H330

Skin Corr. 1A H314

Eye Dam. 1 H318

Carc. 1A H350

#### Label Elements

##### **GHS-US Labeling**

##### **Hazard Pictograms (GHS-US)**

:



GHS05



GHS06



GHS08

##### **Signal Word (GHS-US)**

: Danger

##### **Hazard Statements (GHS-US)**

: H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

H330 - Fatal if inhaled

H350 - May cause cancer

##### **Precautionary Statements (GHS-US)**

: P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

P260 - Do not breathe fume, mist, vapors, spray

P264 - Wash hands and forearms thoroughly after handling

P271 - Use only outdoors or in a well-ventilated area

P280 - Wear eye protection, face protection, protective gloves, protective clothing

P284 - Wear respiratory protection

P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

P304+P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing

P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

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P308+P313 - If exposed or concerned: Get medical advice/attention  
P310 - Immediately call a POISON CENTER or doctor/physician  
P320 - Specific treatment is urgent (see Section 4)  
P363 - Wash contaminated clothing before reuse  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P405 - Store locked up  
P501 - Dispose of contents/container according to local, regional, national, and international regulations

### Other Hazards

**Other Hazards Not Contributing to the Classification:** Not available

**Unknown Acute Toxicity (GHS-US)** Not available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### Substances

Name	Product identifier	% (w/w)	Classification (GHS-US)
Sulfuric acid	(CAS No) 7664-93-9	70 - 100	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318 Carc. 1A, H350

Full text of H-phrases: see section 16

## SECTION 4: FIRST AID MEASURES

### Description of First Aid Measures

**General:** IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible).

**Inhalation:** Using proper respiratory protection, immediately move the exposed person to fresh air. Keep at rest and in a position comfortable for breathing. Give oxygen or artificial respiration if necessary. Seek immediate medical advice. Symptoms may be delayed.

**Skin Contact:** Remove/Take off immediately all contaminated clothing. Rinse immediately with plenty of water (for at least 15 minutes). Seek medical attention immediately if exposure is severe. Obtain medical attention if irritation develops or persists. Wash contaminated clothing before reuse.

**Eye Contact:** Immediately rinse with water for a prolonged period (at least 15 minutes) while holding the eyelids wide open. Seek medical attention immediately if exposure is severe. Obtain medical attention if irritation develops or persists.

**Ingestion:** If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

### Most Important Symptoms and Effects Both Acute and Delayed

**General:** Corrosive. Causes burns.

**Inhalation:** Causes severe respiratory irritation if inhaled. Symptoms may include burning of nose and throat, constriction of airway, difficulty breathing, shortness of breath, bronchial spasms, chest pain, and pink frothy sputum. Contact may cause immediate severe irritation progressing quickly to chemical burns. May cause pulmonary edema. Symptoms may be delayed.

**Skin Contact:** Contact may cause immediate severe irritation progressing quickly to chemical burns.

**Eye Contact:** Contact may cause immediate severe irritation progressing quickly to chemical burns. Can cause blindness.

**Ingestion:** May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Swallowing a small quantity of this material will result in serious health hazard.

**Chronic Symptoms:** Repeated or prolonged inhalation may damage lungs. Prolonged and repeated contact will eventually cause permanent tissue damage.

### Indication of Any Immediate Medical Attention and Special Treatment Needed

If medical advice is needed, have product container or label at hand.

## SECTION 5: FIRE-FIGHTING MEASURES

### Extinguishing Media

**Suitable Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.

**Unsuitable Extinguishing Media:** Do not get water inside containers. Do not apply water stream directly at source of leak. Do not use a heavy water stream. A direct water stream will cause violent splattering and generation of heat.

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### Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Not flammable. Under conditions of fire this material may produce: Sulphur oxides.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** Reacts with water.

### Advice for Firefighters

**Precautionary Measures Fire:** Not available

**Firefighting Instructions:** Keep upwind. Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Firefighters must use full bunker gear including NIOSH-approved positive-pressure self-contained breathing apparatus to protect against potential hazardous combustion and decomposition products.

**Hazardous Combustion Products:** Sulphur oxides.

**Other information:** Do not allow run-off from fire fighting to enter drains or water courses.

### Reference to Other Sections

Refer to section 9 for flammability properties.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Do not breathe vapour or mist.

#### For Non-Emergency Personnel

**Protective Equipment:** Use recommended respiratory protection. Wear suitable protective clothing, gloves and eye/face protection.

**Emergency Procedures:** Stop leak if safe to do so. Eliminate ignition sources. Evacuate unnecessary personnel. Ventilate area. Keep upwind.

#### For Emergency Personnel

**Protective Equipment:** Use recommended respiratory protection. Wear suitable protective clothing, gloves and eye/face protection.

**Emergency Procedures:** Stop leak if safe to do so. Eliminate ignition sources. Evacuate unnecessary personnel. Ventilate area.

### Environmental Precautions

If spill could potentially enter any waterway, including intermittent dry creeks, contact the U.S. COAST GUARD NATIONAL RESPONSE CENTER at 800-424-8802. In case of accident or road spill notify CHEMTREC at 800-424-9300

### Methods and Material for Containment and Cleaning Up

**For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

**Methods for Cleaning Up:** Ventilate area. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Collect absorbed material and place into a sealed, labeled container for proper disposal. Practice good housekeeping - spillage can be slippery on smooth surface either wet or dry. Liquid spill: neutralize with powdered limestone or sodium bicarbonate.

## SECTION 7: HANDLING AND STORAGE

### Precautions for Safe Handling

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Wash contaminated clothing before reuse.

### Conditions for Safe Storage, Including Any Incompatibilities

**Storage Conditions:** Detached outside storage is preferable.

**Incompatible Materials:** Reducing agents. Organic materials. Alkalies. Moisture.

**Storage Area:** Store in dry, cool area. Store in a well-ventilated place. Keep away from combustible materials.

**Specific End Use(s)** Not available

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

Sulfuric acid (7664-93-9)		
Mexico	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
USA ACGIH	ACGIH TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (TWA) (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m <sup>3</sup> )	15 mg/m <sup>3</sup>

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Alberta	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Alberta	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
British Columbia	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup> (Thoracic, contained in strong inorganic acid mists)
Manitoba	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
New Brunswick	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
New Brunswick	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Nova Scotia	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Nunavut	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Nunavut	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Northwest Territories	OEL STEL (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Northwest Territories	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Ontario	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Prince Edward Island	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Québec	VECD (mg/m <sup>3</sup> )	3 mg/m <sup>3</sup>
Québec	VEMP (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Saskatchewan	OEL STEL (mg/m <sup>3</sup> )	0.6 mg/m <sup>3</sup>
Saskatchewan	OEL TWA (mg/m <sup>3</sup> )	0.2 mg/m <sup>3</sup>
Yukon	OEL STEL (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>
Yukon	OEL TWA (mg/m <sup>3</sup> )	1 mg/m <sup>3</sup>

### Exposure Controls

**Appropriate Engineering Controls:** Ensure adequate ventilation, especially in confined areas.

**Personal Protective Equipment:** Face shield. Gas mask at concentration in the air > > TLV. Corrosionproof clothing.

**Materials for Protective Clothing:** Acid-resistant clothing.

**Hand Protection:** Impermeable protective gloves.

**Eye Protection:** Face shield.

**Skin and Body Protection:** Wear suitable protective clothing. Chemical resistant suit. Rubber apron, boots.

**Respiratory Protection:** Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

**Environmental Exposure Controls:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Clear, Colorless to Amber, Oily
Odor	: Pungent.
Odor Threshold	: Not available
pH	: 0.3
Relative Evaporation Rate (butylacetate=1)	: Not available
Melting Point	: 10.56 °C (51.08 °F)
Freezing Point	: Not available
Boiling Point	: 290 °C (554 °F)
Flash Point	: Not available
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: 0.00027 - 0.16 kPa at 25 °C (77 °F)

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Relative Vapor Density at 20 °C	: 3.4
Relative Density	: Not available
Specific Gravity	: 1.84 g/l
Solubility	: Water: Miscible
Partition coefficient: n-octanol/water	: Not available
Viscosity	: Not available
Explosion Data – Sensitivity to Mechanical Impact	: Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	: Not expected to present an explosion hazard due to static discharge.

## SECTION 10: STABILITY AND REACTIVITY

**Reactivity:** Reacts with water.

**Chemical Stability:** Stable at standard temperature and pressure.

**Possibility of Hazardous Reactions:** Hazardous polymerization can occur in contact with certain incompatible materials.

**Conditions to Avoid:** Protect from moisture.

**Incompatible Materials:** Avoid contact with most metals, carbides, hydrogen sulfide, turpentine, organic acids, combustibles (wood, paper, cotton) and other organic and readily oxidized materials.

**Hazardous Decomposition Products:** Under conditions of fire this material may produce: Sulphur oxides.

## SECTION 11: TOXICOLOGICAL INFORMATION

### Information on Toxicological Effects - Product

**Acute Toxicity:** Fatal if inhaled.

**LD50 and LC50 Data:**

Sulfuric Acid, 70-100%	
ATE US (dust, mist)	0.05000000 mg/l/4h

**Skin Corrosion/Irritation:** Causes severe skin burns and eye damage.

**pH:** 0.3

**Serious Eye Damage/Irritation:** Causes serious eye damage.

**pH:** 0.3

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**Teratogenicity:** Not available

**Carcinogenicity:** May cause cancer.

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** Causes severe respiratory irritation if inhaled. Symptoms may include burning of nose and throat, constriction of airway, difficulty breathing, shortness of breath, bronchial spasms, chest pain, and pink frothy sputum. Contact may cause immediate severe irritation progressing quickly to chemical burns. May cause pulmonary edema. Symptoms may be delayed.

**Symptoms/Injuries After Skin Contact:** Contact may cause immediate severe irritation progressing quickly to chemical burns.

**Symptoms/Injuries After Eye Contact:** Contact may cause immediate severe irritation progressing quickly to chemical burns. Can cause blindness.

**Symptoms/Injuries After Ingestion:** May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Swallowing a small quantity of this material will result in serious health hazard.

**Chronic Symptoms:** Repeated or prolonged inhalation may damage lungs. Prolonged and repeated contact will eventually cause permanent tissue damage.

### Information on Toxicological Effects - Ingredient(s)

**LD50 and LC50 Data:**

Sulfuric acid (7664-93-9)	
LD50 Oral Rat	2140 mg/kg
LC50 Inhalation Rat (mg/l)	510 mg/m <sup>3</sup> (Exposure time: 2 h)

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<b>Sulfuric acid (7664-93-9)</b>	
IARC Group	1

### SECTION 12: ECOLOGICAL INFORMATION

**Toxicity** Not classified

<b>Sulfuric acid (7664-93-9)</b>	
LC50 Fish 1	500 mg/l (Exposure time: 96 h - Species: Brachydanio rerio [static])

#### **Persistence and Degradability**

<b>Sulfuric Acid, 70-100%</b>	
Persistence and Degradability	Product is biodegradable.

#### **Bioaccumulative Potential**

<b>Sulfuric Acid, 70-100%</b>	
Bioaccumulative Potential	Not expected to bioaccumulate.

<b>Sulfuric acid (7664-93-9)</b>	
BCF fish 1	(no bioaccumulation)

**Mobility in Soil** Not available

**Other Adverse Effects** Not available

### SECTION 13: DISPOSAL CONSIDERATIONS

**Sewage Disposal Recommendations:** This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, and international regulations.

### SECTION 14: TRANSPORT INFORMATION

#### 14.1 In Accordance with DOT

**Proper Shipping Name** : SULFURIC ACID with more than 51 percent acid  
**Hazard Class** : 8  
**Identification Number** : UN1830  
**Label Codes** : 8  
**Packing Group** : II  
**ERG Number** : 157



#### 14.2 In Accordance with IMDG

**Proper Shipping Name** : SULPHURIC ACID  
**Hazard Class** : 8  
**Identification Number** : UN1830  
**Packing Group** : II  
**Label Codes** : 8  
**EmS-No. (Fire)** : F-A  
**EmS-No. (Spillage)** : S-B



#### 14.3 In Accordance with IATA

**Proper Shipping Name** : SULPHURIC ACID  
**Packing Group** : II  
**Identification Number** : UN1830  
**Hazard Class** : 8  
**Label Codes** : 8  
**ERG Code (IATA)** : 8L



#### 14.4 In Accordance with TDG

**Proper Shipping Name** : SULPHURIC ACID with more than 51 per cent acid  
**Packing Group** : II  
**Hazard Class** : 8  
**Identification Number** : UN1830





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Label Codes : 8

### SECTION 15: REGULATORY INFORMATION



#### US Federal Regulations

<b>Sulfuric Acid, 70-100%</b>	
<b>SARA Section 311/312 Hazard Classes</b>	Immediate (acute) health hazard Delayed (chronic) health hazard Reactive hazard
<b>Sulfuric acid (7664-93-9)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Listed on SARA Section 302 (Specific toxic chemical listings)	
Listed on SARA Section 313 (Specific toxic chemical listings)	
<b>SARA Section 302 Threshold Planning Quantity (TPQ)</b>	1000
<b>SARA Section 313 - Emission Reporting</b>	1.0 % (acid aerosols including mists, vapors, gas, fog, and other airborne forms of any particle size)

#### US State Regulations

<b>Sulfuric Acid, 70-100%( )</b>	
<b>Sulfuric acid (7664-93-9)</b>	
<b>U.S. - California - Proposition 65 - Carcinogens List</b>	WARNING: This product contains chemicals known to the State of California to cause cancer.
<b>Sulfuric acid (7664-93-9)</b>	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	

#### Canadian Regulations

<b>Sulfuric Acid, 70-100%</b>	
WHMIS Classification	Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class E - Corrosive Material
 	
<b>Sulfuric acid (7664-93-9)</b>	
Listed on the Canadian DSL (Domestic Substances List) inventory.	
Listed on the Canadian Ingredient Disclosure List	
WHMIS Classification	Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class E - Corrosive Material

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

### SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

#### GHS Full Text Phrases:

Acute Tox. 2 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 2
Carc. 1A	Carcinogenicity Category 1A
Eye Dam. 1	Serious eye damage/eye irritation Category 1

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Met. Corr. 1	Corrosive to metals Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H330	Fatal if inhaled
H350	May cause cancer

*Handle product with due care and avoid unnecessary contact. This information is supplied under U.S. OSHA'S "Right to Know" (29 CFR 1910.1200) and Canada's WHMIS regulations. Although certain hazards are described herein, we cannot guarantee these are the only hazards that exist. The information contained herein is based on data available to us and is believed to be true and accurate but it is not offered as a product specification. No warranty, expressed or implied, regarding the accuracy of this data, the hazards connected with the use of the product, or the results to be obtained from the use thereof, is made and Mann Distribution assume no responsibility.*

## **APPENDIX C**

### **National Register of Historic Places and Massachusetts Historical Commission Documentation**

# Massachusetts Cultural Resource Information System

## MACRIS

### MACRIS Search Results

Search Criteria: Town(s): Boston; Street No: 15; Street Name: necco; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year
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## Map Legends

## MHC Inventory Areas

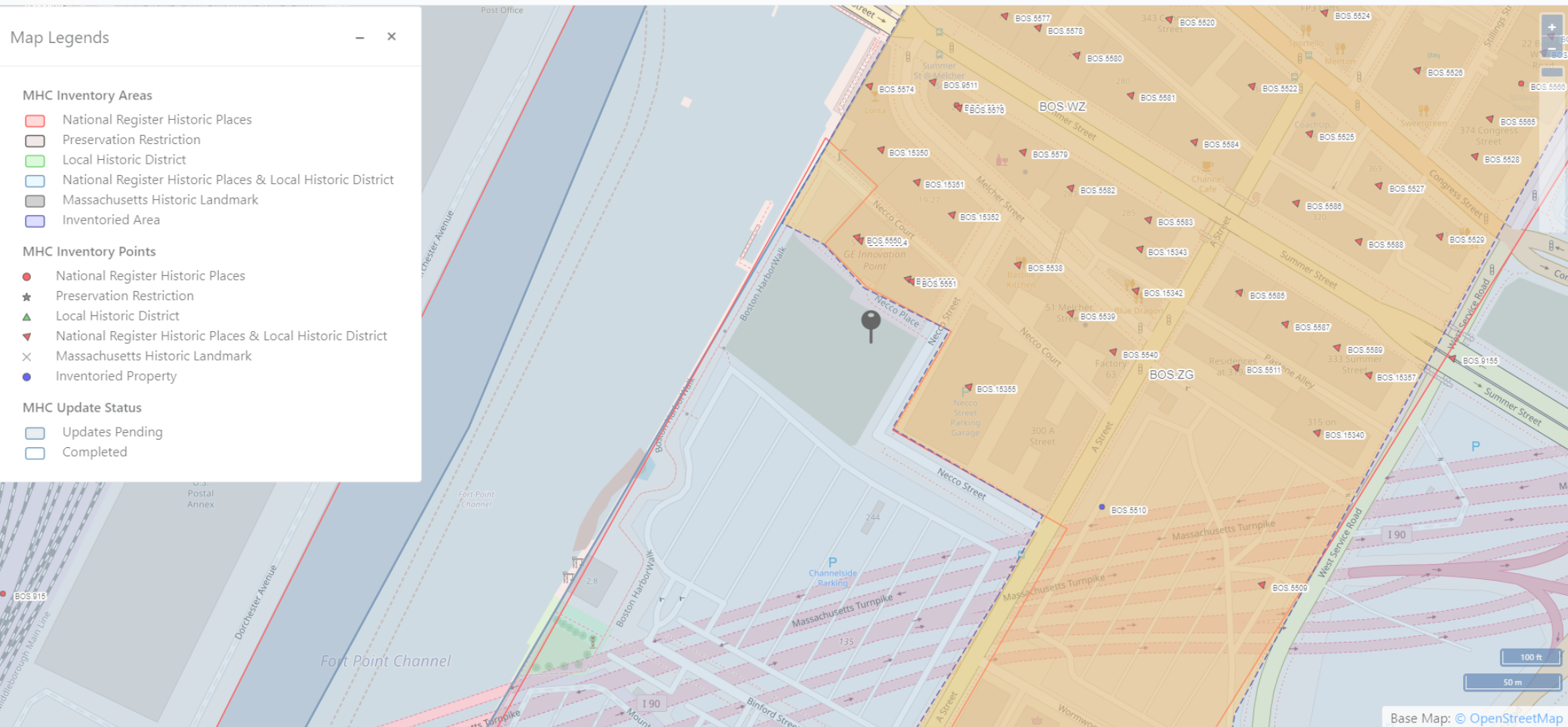
- National Register Historic Places
- Preservation Restriction
- Local Historic District
- National Register Historic Places & Local Historic District
- Massachusetts Historic Landmark
- Inventoried Area

## MHC Inventory Points

- National Register Historic Places
- Preservation Restriction
- Local Historic District
- National Register Historic Places & Local Historic District
- Massachusetts Historic Landmark
- Inventoried Property

## MHC Update Status

- Updates Pending
- Completed



# National Register of Historic Places

National Park Service  
U.S. Department of the Interior

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





Ref#	Property Name	State	County	City	Street & Number
05001530	Charles River Reservation Parkways	MASSACHUSETTS	Middlesex	Boston	Soldiers Field, Nonantum, Leo Birmingham, Arsenal, Greenough, N. Beacon, Charles River, Noru
09000936	Middlesex Canal Historic and Archeological District	MASSACHUSETTS	Middlesex	Boston	Address Restricted
87000885	Abbotsford	MASSACHUSETTS	Suffolk	Boston	300 Walnut Ave.
82004456	Adams-Nervine Asylum	MASSACHUSETTS	Suffolk	Boston	990-1020 Centre St.
71000087	African Meetinghouse	MASSACHUSETTS	Suffolk	Boston	8 Smith St.
80000678	All Saints' Church	MASSACHUSETTS	Suffolk	Boston	211 Ashmont St.
97001377	Allston Congregational Church	MASSACHUSETTS	Suffolk	Boston	31-41 Quint Ave.
14000698	Almont Apartments	MASSACHUSETTS	Suffolk	Boston	Address Restricted
74000382	Ames Building	MASSACHUSETTS	Suffolk	Boston	1 Court St.
77001541	Appleton, Nathan, Residence	MASSACHUSETTS	Suffolk	Boston	39-40 Beacon St.
73000313	Arlington Street Church	MASSACHUSETTS	Suffolk	Boston	Arlington and Boylston Sts.
73000314	Armory of the First Corps of Cadets	MASSACHUSETTS	Suffolk	Boston	97-105 Arlington St. and 130 Columbus Ave.
66000127	Arnold Arboretum	MASSACHUSETTS	Suffolk	Boston	22 Divinity Ave.
100004783	Ascension-Caproni Historic District	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Washington St., Newcomb St, Thorndike St. & Reed St.
87001478	Austin, Francis B., House	MASSACHUSETTS	Suffolk	Boston	58 High St.
05000459	Ayer, Frederick, Mansion	MASSACHUSETTS	Suffolk	Boston	395 Commonwealth Avenue
73001948	Back Bay Historic District	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by the Charles River, Arlington, Providence, Boylston and Newbury Sts., and C
98001381	Baker Congregational Church	MASSACHUSETTS	Suffolk	Boston	760 Saratoga St.
83004285	Baker, Sarah J., School	MASSACHUSETTS	Suffolk	Boston	33 Perrin St.
80000462	Beach-Knapp District	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Harrison Ave., Washington, Kneeland, and Beach Sts.
66000130	Beacon Hill Historic District	MASSACHUSETTS	Suffolk	Boston	Bounded by Beacon St., the Charles River Embankment, and Pinckney, Revere, and Hancock Sts.
79000368	Bedford Building	MASSACHUSETTS	Suffolk	Boston	89-103 Bedford St.
89002251	Bellevue Standpipe	MASSACHUSETTS	Suffolk	Boston	On Bellevue Hill at Washington St. and Roxbury Pkwy.
04000023	Benedict Fenwick School	MASSACHUSETTS	Suffolk	Boston	150 Magnolia St.
100002790	Benjamin Silverman Apartments	MASSACHUSETTS	Suffolk	Boston	50-52 Lorne & 4 Wilson Sts.
02000548	Bennington Street Burying Ground	MASSACHUSETTS	Suffolk	Boston	Bennington St., bet. Swift and harmony Sts.
80000677	Berger Factory	MASSACHUSETTS	Suffolk	Boston	37 Williams St.
85000316	Bigelow School	MASSACHUSETTS	Suffolk	Boston	350 W. 4th St.
73000315	Blackstone Block Historic District	MASSACHUSETTS	Suffolk	Boston	Area bound by Union, Hanover, Blackstone, and North Sts.
14000272	Blake and Amory Building	MASSACHUSETTS	Suffolk	Boston	59 Temple Pl.
74002350	Blake, James, House	MASSACHUSETTS	Suffolk	Boston	735 Columbia Rd.
80004396	Boston African American National Historic Site	MASSACHUSETTS	Suffolk	Boston	Museum of Afro American History, Dudley Station, Box 5
66000132	Boston Athenaeum	MASSACHUSETTS	Suffolk	Boston	10 1/2 Beacon St.
87000760	Boston Common	MASSACHUSETTS	Suffolk	Boston	Beacon, Park, Tremont, Boylston, and Charles St.
72000144	Boston Common and Public Garden	MASSACHUSETTS	Suffolk	Boston	Beacon, Park, Tremont, Boylston, and Arlington Sts.
01001557	Boston Consumptives Hospital	MASSACHUSETTS	Suffolk	Boston	249 River St.
80000453	Boston Edison Electric Illuminating Company	MASSACHUSETTS	Suffolk	Boston	25-39 Boylston St.
100001314	Boston Fish Pier Historic District	MASSACHUSETTS	Suffolk	Boston	212-234 Northern Ave.
85003323	Boston Harbor Islands Archeological District	MASSACHUSETTS	Suffolk	Boston	Address Restricted
66000133	Boston Light	MASSACHUSETTS	Suffolk	Boston	Little Brewster Island, Boston Harbor
15000195	Boston National Historical Park	MASSACHUSETTS	Suffolk	Boston	Charlestown Navy Yard
74002222	Boston National Historical Park	MASSACHUSETTS	Suffolk	Boston	Inner harbor at mouth of Charles River
66000134	Boston Naval Shipyard	MASSACHUSETTS	Suffolk	Boston	E of Chelsea St., Charlestown
15000048	Boston Police Station Number One-Traffic Tunnel Administration	MASSACHUSETTS	Suffolk	Boston	128, 150 North & 130 -140 Richmond St.
87000761	Boston Public Garden	MASSACHUSETTS	Suffolk	Boston	Beacon, Charles, Boylston, and Arlington Sts.
73000317	Boston Public Library	MASSACHUSETTS	Suffolk	Boston	Copley Sq.
07000861	Boston Transit Commission Building	MASSACHUSETTS	Suffolk	Boston	15 Beacon St.
98001082	Boston Young Men's Christian Association	MASSACHUSETTS	Suffolk	Boston	312-320 Huntington Ave.
80000451	Boston Young Men's Christian Union	MASSACHUSETTS	Suffolk	Boston	48 Boylston St.
90001145	Bowditch School	MASSACHUSETTS	Suffolk	Boston	80--82 Greene St.
80000450	Boylston Building	MASSACHUSETTS	Suffolk	Boston	2-22 Boylston St.
01000088	Brighton Center Historic District	MASSACHUSETTS	Suffolk	Boston	Academy Hill R., Chestnut Hill Ave., Dighton, Elko, Henshaw, Leicester, Market, Washington, anc
97000920	Brighton Evangelical Congregational Church	MASSACHUSETTS	Suffolk	Boston	404-410 Washington St.
66000141	Brook Farm	MASSACHUSETTS	Suffolk	Boston	670 Baker St.
85002015	Building at 138--142 Portland Street	MASSACHUSETTS	Suffolk	Boston	138--142 Portland St.
14000561	Buildings at 825-829 Blue Hill Avenue	MASSACHUSETTS	Suffolk	Boston	825-829 Blue Hill Ave.



Ref#	Property Name	State	County	City	Street & Number
86000274	Bulfinch Triangle Historic District	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Canal, Market, Merrimac, and Causeway Sts.
66000138	Bunker Hill Monument	MASSACHUSETTS	Suffolk	Boston	Breed's Hill
87001771	Bunker Hill School	MASSACHUSETTS	Suffolk	Boston	65 Baldwin St.
90001095	Calf Pasture Pumping Station Complex	MASSACHUSETTS	Suffolk	Boston	435 Mount Vernon St.
100005763	Cartoof & Sherman Apartments	MASSACHUSETTS	Suffolk	Boston	31-35 Wales St.
98001361	Cathedral of St. George Historic District	MASSACHUSETTS	Suffolk	Boston	517-523-525 E. Broadway
12001012	Central Congregational Church	MASSACHUSETTS	Suffolk	Boston	67 Newbury St.
80000676	Charles Playhouse	MASSACHUSETTS	Suffolk	Boston	74-78 Warenton St.
10000506	Charles River Reservation (Speedway)-Upper Basin Headquarter	MASSACHUSETTS	Suffolk	Boston	1420-1440 Soldiers Field Rd
83000601	Charles Street African Methodist Episcopal Church	MASSACHUSETTS	Suffolk	Boston	551 Warren St.
97000969	Charlestown Heights	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by St. Martin, Bunker Hill, Medford, and Sackville Sts.
89002271	Chestnut Hill Reservoir Historic District	MASSACHUSETTS	Suffolk	Boston	Beacon St. and Commonwealth Ave.
86000140	Christ Church	MASSACHUSETTS	Suffolk	Boston	1220 River Rd.
99001614	Church Green Buildings Historic District	MASSACHUSETTS	Suffolk	Boston	101-113 Summer St.
74000911	Clapp Houses	MASSACHUSETTS	Suffolk	Boston	199 and 195 Boston St.
83004097	Codman Building	MASSACHUSETTS	Suffolk	Boston	55 Kilby St.
83000602	Codman Square District	MASSACHUSETTS	Suffolk	Boston	Norfolk, Talbot, Epping, Lithgow, Centre, and Moultrie Sts.
05000559	Collins Building	MASSACHUSETTS	Suffolk	Boston	213-217 Washington St.
100001582	Columbia Road-Bellevue Street Historic District	MASSACHUSETTS	Suffolk	Boston	400-500 blk. of Columbia Rd., portions of Bellevue St.
100001315	Columbia Road-Devon Street Historic District	MASSACHUSETTS	Suffolk	Boston	193-231 (odd) & 200-204 (even) Columbia Rd.
100002734	Columbia Road-Strathcona Road Historic District	MASSACHUSETTS	Suffolk	Boston	90-94,102-108, 105-111, 129-135, 137, 143-147, 150-156 Columbia & 16 Strathcona Rds., 114-1
12001162	Commonwealth Pier Five	MASSACHUSETTS	Suffolk	Boston	165 Northern Ave.
08001284	Compton Building	MASSACHUSETTS	Suffolk	Boston	159, 161-175 Devonshire St., 18-20 Arch St.
99001304	Congregation Adath Jeshurun	MASSACHUSETTS	Suffolk	Boston	397 Blue Hill Ave.
87001396	Congress Street Fire Station	MASSACHUSETTS	Suffolk	Boston	344 Congress St.
74000385	Copp's Hill Burial Ground	MASSACHUSETTS	Suffolk	Boston	Charter, Snowhill, and Hull Sts.
90000631	Copp's Hill Terrace	MASSACHUSETTS	Suffolk	Boston	Between Commercial and Charter Sts. W of Jackson Place
100005798	Crawford Street Historic District	MASSACHUSETTS	Suffolk	Boston	5-38 Crawford St., 42 Elm Hill Ave., 621 Warren St.
72000145	Crowninshield House	MASSACHUSETTS	Suffolk	Boston	164 Marlborough St.
73000321	Custom House District	MASSACHUSETTS	Suffolk	Boston	Between J.F.K. Expwy. and Kirby St. and S. Market and High and Battery March Sts.
73000318	Cyclorama Building	MASSACHUSETTS	Suffolk	Boston	543-547 Tremont St.
13000928	Davidson, Sarah, Apartment Block	MASSACHUSETTS	Suffolk	Boston	3 Gaylord St.
00000871	Dearborn School	MASSACHUSETTS	Suffolk	Boston	25 Ambrose St.
80000448	Dill Building	MASSACHUSETTS	Suffolk	Boston	11-25 Stuart St.
80001683	Dillaway School	MASSACHUSETTS	Suffolk	Boston	16-20 Kenilworth St.
85000317	Dimock Community Health Center Complex	MASSACHUSETTS	Suffolk	Boston	41 and 55 Dimock St.
87002549	District 13 Police Station	MASSACHUSETTS	Suffolk	Boston	28 Seaverns Ave.
66000050	Dorchester Heights National Historic Site	MASSACHUSETTS	Suffolk	Boston	South Boston
74000915	Dorchester North Burying Ground	MASSACHUSETTS	Suffolk	Boston	Stroughton St. and Columbia Rd.
08000089	Dorchester Park	MASSACHUSETTS	Suffolk	Boston	Bounded by Dorchester Ave., Richmond, Adams & Richview Sts.
85000318	Dorchester Pottery Works	MASSACHUSETTS	Suffolk	Boston	101-105 Victory Rd.
14000365	Dorchester South Burying Ground	MASSACHUSETTS	Suffolk	Boston	2095 Dorchester Ave.
97001239	Dorchester Temple Baptist Church	MASSACHUSETTS	Suffolk	Boston	670 Washington St.
80000675	Dorchester-Milton Lower Mills Industrial District	MASSACHUSETTS	Suffolk	Boston	Both sides of Neponset River
01000304	Dorchester-Milton Lower Mills Industrial District (Boundary Incre	MASSACHUSETTS	Suffolk	Boston	Roughly: Adams, River, Medway Sts., Millers Lane, Eliot and Adams Sts.
96001063	Douglass, Frederick, Square Historic District	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Hammond St., Cobat St., Windsor St., and Westminster St., Lower Roxbury
85003074	Dudley Station Historic District	MASSACHUSETTS	Suffolk	Boston	Washington, Warren, and Dudley Sts.
98000149	Eagle Hill Historic District	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Border, Lexington, Trenton, and Falcon Sts.
06000127	East Boston High School, Old	MASSACHUSETTS	Suffolk	Boston	127 Marion St.
10000039	EDNA G. shipwreck (Eastern Rig dragger)	MASSACHUSETTS	Suffolk	Boston	Address Restricted
10001066	Egleston Substation	MASSACHUSETTS	Suffolk	Boston	3025 Washington St
74000388	Eliot Burying Ground	MASSACHUSETTS	Suffolk	Boston	Eustis and Washington Sts.
93001587	Eliot Congregational Church	MASSACHUSETTS	Suffolk	Boston	56 Dale St., corner 118--120 Walnut St.
88000959	Eliot Hall	MASSACHUSETTS	Suffolk	Boston	7A Eliot St.
100006078	Elm Hill Park Historic District	MASSACHUSETTS	Suffolk	Boston	2-38 Elm Hill Park, 538-570 Warren St.
85003375	Engine House No. 34	MASSACHUSETTS	Suffolk	Boston	444 Western Ave.

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100003070	Esmond Street Historic District	MASSACHUSETTS	Suffolk	Boston	Bicknell, Bradshaw, Esmond, & Harvard Sts.
66000366	Ether Dome, Massachusetts General Hospital	MASSACHUSETTS	Suffolk	Boston	Fruit St.
09000612	Evergreen Cemetery	MASSACHUSETTS	Suffolk	Boston	2060 Commonwealth Ave.
100005597	Fairview Cemetery (Additional Documentation)	MASSACHUSETTS	Suffolk	Boston	45 Fairview Ave.
66000368	Faneuil Hall	MASSACHUSETTS	Suffolk	Boston	Dock Sq.
94001492	Faneuil, Peter, School	MASSACHUSETTS	Suffolk	Boston	60 Joy St.
12000069	Fenway Park	MASSACHUSETTS	Suffolk	Boston	24, & 2-4 Yawkey Wy., 64-76 Brookline Ave., & 70-80 Lansdowne St.
78000473	Fenway Studios	MASSACHUSETTS	Suffolk	Boston	30 Ipswich St.
84002875	Fenway-Boylston Street District	MASSACHUSETTS	Suffolk	Boston	Fenway, Boylston, Westland, and Hemenway Sts.
81000620	Fields Corner Municipal Building	MASSACHUSETTS	Suffolk	Boston	1 Arcadia St., 195 Adams St.
86001909	Filene's Department Store	MASSACHUSETTS	Suffolk	Boston	426 Washington St.
72000146	First Baptist Church	MASSACHUSETTS	Suffolk	Boston	Commonwealth Ave. and Clarendon St.
88000955	First Church of Jamaica Plain	MASSACHUSETTS	Suffolk	Boston	6 Eliot St.
99001308	First Congregational Church of Hyde Park	MASSACHUSETTS	Suffolk	Boston	6 Webster St.
04001219	Forest Hills Cemetery	MASSACHUSETTS	Suffolk	Boston	95 Forest Hills Ave.
70000921	Fort Independence	MASSACHUSETTS	Suffolk	Boston	Castle Island
04000959	Fort Point Channel Historic District	MASSACHUSETTS	Suffolk	Boston	Necco Court, Thomson Place, A, Binford, Congress, Farnsworth, Melcher, Midway, Sleeper, Stilli
70000540	Fort Warren	MASSACHUSETTS	Suffolk	Boston	Georges Island, Boston Harbor
100005089	Fowler-Clark-Epstein Farmstead	MASSACHUSETTS	Suffolk	Boston	487 Norfolk St.
15000942	Fox, I.J., Building	MASSACHUSETTS	Suffolk	Boston	407 Washington St.
02000081	Frances and Isabella Apartments	MASSACHUSETTS	Suffolk	Boston	430-432 and 434-436 Dudley St.
16000409	Francis Street-Fenwood Road Historic District	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Huntington Ave., Francis, Vining & Fenwood Sts., St. Albans Rd.
73000319	Fulton-Commercial Streets District	MASSACHUSETTS	Suffolk	Boston	Fulton, Commercial, Mercantile, Lewis, and Richmond Sts.
00000160	Fulton-Commercial Streets Historic District (Boundary Increase)	MASSACHUSETTS	Suffolk	Boston	81-95 Richmond St.
83000603	Gardner, Isabella Stewart, Museum	MASSACHUSETTS	Suffolk	Boston	280 The Fenway
66000653	Garrison, William Lloyd, House	MASSACHUSETTS	Suffolk	Boston	125 Highland St.
80000674	Garrison, William Lloyd, School	MASSACHUSETTS	Suffolk	Boston	20 Hutchings St.
01001048	Gibson House	MASSACHUSETTS	Suffolk	Boston	137 Beacon St.
07000510	Goldsmith Block	MASSACHUSETTS	Suffolk	Boston	41 Ruggles St., 746-750 Shawmut Ave.
88000908	Goodwin, Ozias, House	MASSACHUSETTS	Suffolk	Boston	7 Jackson Ave.
16000454	Governor Shirley Square Historic District	MASSACHUSETTS	Suffolk	Boston	Dudley, Hampden, Dunmore & Magazine Sts., Blue Hill & Mt. Pleasant Ave.
88000957	Greek Orthodox Cathedral of New England	MASSACHUSETTS	Suffolk	Boston	520 Parker St.
100006134	Greenville Street Historic District	MASSACHUSETTS	Suffolk	Boston	2, 6-25 Greenville St.
02000154	Greenwood Memorial United Methodist Church	MASSACHUSETTS	Suffolk	Boston	378A-380 Washington St.
14000974	Gridley Street Historic District	MASSACHUSETTS	Suffolk	Boston	Bounded by Congress, High, Pearl & Purchase Sts.
82004453	Haffenreffer Brewery	MASSACHUSETTS	Suffolk	Boston	Germania St.
73000325	Hale, Edward Everett, House	MASSACHUSETTS	Suffolk	Boston	12 Morley St.
66000764	Harding, Chester, House	MASSACHUSETTS	Suffolk	Boston	16 Beacon St.
02001190	Harrison Square Historic District	MASSACHUSETTS	Suffolk	Boston	Bounded by MBTA Braintree line embankment, Park, Everett, Freeport, Mill, Asland, Blanche Sts
86000375	Harriswood Crescent	MASSACHUSETTS	Suffolk	Boston	60--88 Harold St.
83000605	Harvard Avenue Fire Station	MASSACHUSETTS	Suffolk	Boston	16 Harvard Ave.
00000415	Harvard Avenue Historic District	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Linden St., Commonwealth Ave., Harvard Ave., and Park Vale Ave.
87000757	Harvard Stadium	MASSACHUSETTS	Suffolk	Boston	60 N. Harvard St.
04000085	Haskell, Edward H., Home for Nurses	MASSACHUSETTS	Suffolk	Boston	220 Fister Ave., 63 Parker Hill Ave.
80000446	Hayden Building	MASSACHUSETTS	Suffolk	Boston	681-683 Washington St.
66000765	Headquarters House	MASSACHUSETTS	Suffolk	Boston	55 Beacon St.
04000534	Hibernian Hall	MASSACHUSETTS	Suffolk	Boston	182-186 Dudley St.
10000300	Highland Spring Brewery Bottling and Storage Buildings	MASSACHUSETTS	Suffolk	Boston	154-166 Terrace St
05000879	Home for Aged Couples	MASSACHUSETTS	Suffolk	Boston	409, 419 Walnut Ave. and 2055 Columbus Ave.
14000840	Home for Destitute Jewish Children	MASSACHUSETTS	Suffolk	Boston	Address Restricted
93001573	House at 1 Bay Street	MASSACHUSETTS	Suffolk	Boston	1 Bay St.
87001398	House at 17 Cranston Street	MASSACHUSETTS	Suffolk	Boston	17 Cranston St.
74002044	Howe, Samuel Gridley and Julia Ward, House	MASSACHUSETTS	Suffolk	Boston	13 Chestnut St.
87001399	Hoxie, Timothy, House	MASSACHUSETTS	Suffolk	Boston	135 Hillside St.
79000369	International Trust Company Building	MASSACHUSETTS	Suffolk	Boston	39-47 Milk St.
100005783	Intervale Street-Blue Hill Avenue Historic District	MASSACHUSETTS	Suffolk	Boston	Blue Hill Ave. and Intervale St.

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100003470	Intervale Street-Columbia Road Historic District	MASSACHUSETTS	Suffolk	Boston	117-121, 123-127, 129-135, 137-143, 145-159, 161, 162 Intervale St. & 282-284, 286-288 Colum
74000391	John Adams Courthouse	MASSACHUSETTS	Suffolk	Boston	Pemberton Sq.
73000854	John Eliot Square District	MASSACHUSETTS	Suffolk	Boston	John Eliot Sq.
08000793	Joshua Bates School	MASSACHUSETTS	Suffolk	Boston	731 Harrison Ave.
74002045	King's Chapel	MASSACHUSETTS	Suffolk	Boston	Tremont and School Sts.
73000855	Kittredge, Alvah, House	MASSACHUSETTS	Suffolk	Boston	12 Linwood St.
100006127	Lawrence Avenue Historic District	MASSACHUSETTS	Suffolk	Boston	Blue Hill Ave., Lawrence Ave., Coleus Park, Magnolia St., and Intervale St.
83000606	Lawrence Model Lodging Houses	MASSACHUSETTS	Suffolk	Boston	79, 89, 99 and 109 E. Canton St.
83004098	Leather District	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Atlantic Ave., Kneeland, Lincoln, and Essex Sts.
80000460	Liberty Tree District	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Harrison Ave., Washington, Essex and Beach Sts.
86001911	Locke--Ober Restaurant	MASSACHUSETTS	Suffolk	Boston	3--4 Winter Pl.
87001481	Long Island Head Light	MASSACHUSETTS	Suffolk	Boston	Long Island
66000768	Long Wharf and Customhouse Block	MASSACHUSETTS	Suffolk	Boston	Foot of State St.
83000604	Loring, Harrison, House	MASSACHUSETTS	Suffolk	Boston	789 E. Broadway St.
72000544	Loring-Greenough House	MASSACHUSETTS	Suffolk	Boston	12 South St.
94001494	Lower Roxbury Historic District	MASSACHUSETTS	Suffolk	Boston	Roughly, area surrounding Coventry, Cunard, and Walpole Sts.
83004099	LUNA (tugboat)	MASSACHUSETTS	Suffolk	Boston	NDC Pier, Charles River
14000975	Lyman, Theodore, School	MASSACHUSETTS	Suffolk	Boston	30 Gove St.
100006263	Malcolm X-Ella Little Collins House	MASSACHUSETTS	Suffolk	Boston	72 Dale St.
99001302	Mariner's House	MASSACHUSETTS	Suffolk	Boston	11 North Square
70000682	Massachusetts General Hospital	MASSACHUSETTS	Suffolk	Boston	Fruit Street
66000770	Massachusetts Historical Society Building	MASSACHUSETTS	Suffolk	Boston	1154 Boylston St.
93001489	Massachusetts Mental Health Center	MASSACHUSETTS	Suffolk	Boston	74 Fenwood Rd.
89000974	Massachusetts School of Art	MASSACHUSETTS	Suffolk	Boston	364 Brookline Ave.
66000771	Massachusetts Statehouse	MASSACHUSETTS	Suffolk	Boston	Beacon Hill
82004450	McKay, Donald, House	MASSACHUSETTS	Suffolk	Boston	78-80 White St.
80000445	Metropolitan Theatre	MASSACHUSETTS	Suffolk	Boston	252-272 Tremont St.
89001747	Mission Hill Triangle Historic District	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Smith St., Worthington St., Tremont St., and Huntington Ave.
87001128	Monument Square Historic District	MASSACHUSETTS	Suffolk	Boston	Monument Sq.
90001536	Monument Square Historic District	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Jamaicaaway, Pond, Centre and Eliot Sts.
84002890	Moreland Street Historic District	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Kearsarge, Blue Hill Aves., Warren, Waverly, and Winthrop Sts.
04001572	Morton Street, Metropolitan Park System of Greater Boston	MASSACHUSETTS	Suffolk	Boston	Morton St.
100003547	Mount Hope Cemetery	MASSACHUSETTS	Suffolk	Boston	355 Walk Hill St.
89000004	Mount Pleasant Historic District	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Forest St. and Mount Pleasant Ave.
100004784	Nathan Warnick Apartments	MASSACHUSETTS	Suffolk	Boston	57 Bicknell St.
04000426	Nazing Court Apartments	MASSACHUSETTS	Suffolk	Boston	224-236 Seaver St. and 1-8 Nazing Court
76001979	Nell, William C., House	MASSACHUSETTS	Suffolk	Boston	3 Smith Ct.
04001573	Neponset Valley Parkway, Metoropolitan Park System of Greater B	MASSACHUSETTS	Suffolk	Boston	Neponset Valley Parkway
80000672	New England Conservatory of Music	MASSACHUSETTS	Suffolk	Boston	290 Huntington Ave.
87001394	New Riding Club	MASSACHUSETTS	Suffolk	Boston	52 Hemenway St.
83000607	Newspaper Row	MASSACHUSETTS	Suffolk	Boston	322-328 Washington St., 5-23 Milk St., and 11 Hawley St.
04000189	Nix's Mate Daybeacon	MASSACHUSETTS	Suffolk	Boston	Nubble Channel, The Narrows, Boston Harbor
97000971	North Terminal Garage	MASSACHUSETTS	Suffolk	Boston	600 Commercial St.
80000465	Oak Square School	MASSACHUSETTS	Suffolk	Boston	35 Nonantum St.
08000795	Ohabei Shalom Cemetery	MASSACHUSETTS	Suffolk	Boston	147 Wordsworth St.
70000687	Old City Hall	MASSACHUSETTS	Suffolk	Boston	School and Providence Sts.
73000322	Old Corner Bookstore	MASSACHUSETTS	Suffolk	Boston	NW corner of Washington and School Sts.
08000693	Old Harbor Reservation Parkways, Metropolitan Park System of C	MASSACHUSETTS	Suffolk	Boston	William J. Day Blvd., Columbia Rd. between Farragut Rd and Kosciuszko Cir., Old Colony Ave. be
66000776	Old North Church	MASSACHUSETTS	Suffolk	Boston	193 Salem St.
70000690	Old South Church in Boston	MASSACHUSETTS	Suffolk	Boston	645 Boylston St.
66000778	Old South Meetinghouse	MASSACHUSETTS	Suffolk	Boston	Milk and Washington Sts.
66000779	Old State House	MASSACHUSETTS	Suffolk	Boston	Washington and State Sts.
70000691	Old West Church	MASSACHUSETTS	Suffolk	Boston	131 Cambridge St.
70000539	Otis, (First) Harrison Gray, House	MASSACHUSETTS	Suffolk	Boston	141 Cambridge St.
73001955	Otis, (Second) Harrison Gray, House	MASSACHUSETTS	Suffolk	Boston	85 Mt. Vernon St.
02001039	Paine Furniture Building	MASSACHUSETTS	Suffolk	Boston	75-81 Arlington St.

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74000390	Park Street District	MASSACHUSETTS	Suffolk	Boston	Tremont, Park, and Beacon Sts.
66000782	Parkman, Francis, House	MASSACHUSETTS	Suffolk	Boston	50 Chestnut St.
01000872	Peabody, The	MASSACHUSETTS	Suffolk	Boston	195-197 Ashmont St.
74000907	Phipps Street Burying Ground	MASSACHUSETTS	Suffolk	Boston	Phipps St.
80000458	Piano Row District	MASSACHUSETTS	Suffolk	Boston	Boston Common, Park Sq., Boylston Pl. and Tremont St.
74000917	Pierce House	MASSACHUSETTS	Suffolk	Boston	24 Oakton Ave.
68000042	Pierce-Hichborn House	MASSACHUSETTS	Suffolk	Boston	29 North Sq.
13000929	Pilgrim Congregational Church	MASSACHUSETTS	Suffolk	Boston	540-544 Columbia Rd.
03000781	Publicity Building	MASSACHUSETTS	Suffolk	Boston	40-44 Bromfield St.
100001458	Quincy Grammar School	MASSACHUSETTS	Suffolk	Boston	88-90 Tyler St.
66000784	Quincy Market	MASSACHUSETTS	Suffolk	Boston	S. Market St.
66000785	Revere, Paul, House	MASSACHUSETTS	Suffolk	Boston	19 North Sq.
86001504	Richardson Block	MASSACHUSETTS	Suffolk	Boston	113--151 Pearl and 109--119 High Sts.
95001450	Riviera, The	MASSACHUSETTS	Suffolk	Boston	270 Huntington Ave.
97001278	ROSEWAY (schooner)	MASSACHUSETTS	Suffolk	Boston	Boston Harbor
98001330	Roslindale Baptist Church	MASSACHUSETTS	Suffolk	Boston	52 Cummins Hwy.
13000621	Roslindale Substation	MASSACHUSETTS	Suffolk	Boston	4228 Washington St.
82004448	Roughan Hall	MASSACHUSETTS	Suffolk	Boston	15-18 City Sq.
73000856	Roxbury High Fort	MASSACHUSETTS	Suffolk	Boston	Beech Glen St. at Fort Ave.
89000147	Roxbury Highlands Historic District	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Dudley St., Washington St., and Columbus Ave.
89002125	Roxbury Presbyterian Church	MASSACHUSETTS	Suffolk	Boston	328 Warren St.
80000463	Russia Wharf Buildings	MASSACHUSETTS	Suffolk	Boston	518-540 Atlantic Ave., 270 Congress St. and 276-290 Congress St.
87001495	Saint Augustine Chapel and Cemetery	MASSACHUSETTS	Suffolk	Boston	Dorchester St. between W. Sixth and Tudor Sts.
12000783	Saint Mark's Episcopal Church	MASSACHUSETTS	Suffolk	Boston	73 Columbia Rd.
100003471	Samuel Edelman Apartments	MASSACHUSETTS	Suffolk	Boston	97-103 Norfolk St.
03000385	Savin Hill Historic District	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Savin Hill Ave., Morrissey Blvd., Dorchester Bay, and I-93
86001486	Sears' Crescent and Sears' Block	MASSACHUSETTS	Suffolk	Boston	38--68 and 70--72 Cornhill
90001992	Sears Roebuck and Company Mail Order Store	MASSACHUSETTS	Suffolk	Boston	309 Park Dr. and 201 Brookline Ave.
70000731	Sears, David, House	MASSACHUSETTS	Suffolk	Boston	42 Beacon St.
86001913	Second Brazer Building	MASSACHUSETTS	Suffolk	Boston	25--29 State St.
10000391	Second Church in Boston	MASSACHUSETTS	Suffolk	Boston	874, 876, 880 Beacon St
12000978	Sherman Apartments Historic District	MASSACHUSETTS	Suffolk	Boston	544-546 Washington, 4-6, 12-14, 18 Lyndhurst Sts.
80000444	Shubert, Sam S., Theatre	MASSACHUSETTS	Suffolk	Boston	263-265 Tremont St.
05000936	South Boston Boat Clubs Historic District	MASSACHUSETTS	Suffolk	Boston	1793-1849 William J. Day Blvd.
73000324	South End District	MASSACHUSETTS	Suffolk	Boston	South Bay area between Huntington and Harrison Aves.
14001095	South End District (Boundary Increase)	MASSACHUSETTS	Suffolk	Boston	200-224 Northampton St.
75000299	South Station Headhouse	MASSACHUSETTS	Suffolk	Boston	Atlantic Ave. and Summer St.
89002169	St. Joseph's Roman Catholic Church Complex	MASSACHUSETTS	Suffolk	Boston	Bounded by Circuit, Regent, Hulbert, and Fenwick Sts.
97001472	St. Luke's and St. Margaret's Church	MASSACHUSETTS	Suffolk	Boston	5-7 St. Luke's Rd.
98001292	St. Mary's Episcopal Church	MASSACHUSETTS	Suffolk	Boston	14-16 Cushing Ave.
70000730	St. Paul's Church	MASSACHUSETTS	Suffolk	Boston	136 Tremont St.
75000300	St. Stephen's Church	MASSACHUSETTS	Suffolk	Boston	Hanover St. between Clark and Harris Sts.
80000671	Stearns, R. H., House	MASSACHUSETTS	Suffolk	Boston	140 Tremont St.
05001509	Stony Brook Reservation Parkways, Metropolitan Park System of	MASSACHUSETTS	Suffolk	Boston	Dedham, Enneking, Turtle Pond Parkways, Smith Field, Reservation, W. Border Rds.
97000970	Students House	MASSACHUSETTS	Suffolk	Boston	96 The Fenway
80000670	Suffolk County Jail	MASSACHUSETTS	Suffolk	Boston	215 Charles St.
87001889	Sumner Hill Historic District	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Seaverns Ave., Everett St., Carolina Ave., & Newbern St.
73001953	Sumner, Charles, House	MASSACHUSETTS	Suffolk	Boston	20 Hancock St.
75000301	Symphony and Horticultural Halls	MASSACHUSETTS	Suffolk	Boston	Massachusetts and Huntington Aves.
99000633	Symphony Hall	MASSACHUSETTS	Suffolk	Boston	301 Massachusetts Avenue
88000427	Temple Place Historic District	MASSACHUSETTS	Suffolk	Boston	11--55, 26--58 Temple Pl.
12000099	Terminal Storage Warehouse District	MASSACHUSETTS	Suffolk	Boston	267-281 Medford St., 40 & 50 Terminal St.
90001757	Textile District	MASSACHUSETTS	Suffolk	Boston	Roughly, Essex St. from Phillips Sq. to Columbia St. and Chauncy St. from Phillips Sq. to Rowe Pl.
100005782	Thane Street Historic District	MASSACHUSETTS	Suffolk	Boston	70-78 Harvard St, 22-24, 26-28, 30-32 Thane St
100005313	Theodore Parker Unitarian Universalist Church	MASSACHUSETTS	Suffolk	Boston	1859 Centre St.
73000850	Town Hill District	MASSACHUSETTS	Suffolk	Boston	Bounded roughly by Rutherford Ave. and Main and Warren Sts.

Ref#	Property Name	State	County	City	Street & Number
66000788	Tremont Street Subway	MASSACHUSETTS	Suffolk	Boston	Beneath Tremont, Boylston, and Washington Sts.
70000733	Trinity Church	MASSACHUSETTS	Suffolk	Boston	Copley Sq.
92000356	Trinity Neighborhood House	MASSACHUSETTS	Suffolk	Boston	406 Meridian St.
72000150	Trinity Rectory	MASSACHUSETTS	Suffolk	Boston	Clarendon and Newbury Sts.
04001430	Truman Parkway-Metropolitan Park System of Greater Boston	MASSACHUSETTS	Suffolk	Boston	Truman Parkway
66000789	U.S.S. CONSTITUTION	MASSACHUSETTS	Suffolk	Boston	Boston Naval Shipyard
03000645	Union Oyster House	MASSACHUSETTS	Suffolk	Boston	41-43 Union Street
80000669	Union Wharf	MASSACHUSETTS	Suffolk	Boston	295-353 Commercial St.
80000668	United Shoe Machinery Corporation Building	MASSACHUSETTS	Suffolk	Boston	138-164 Federal St.
11000160	United State Post Office, Courthouse, and Federal Building	MASSACHUSETTS	Suffolk	Boston	5 Post Office Square
90001537	Upham's Corner Market	MASSACHUSETTS	Suffolk	Boston	600 Columbia Rd.
86000084	USS CASSIN YOUNG (destroyer)	MASSACHUSETTS	Suffolk	Boston	Charlestown Navy Yard
84000421	Vermont Building	MASSACHUSETTS	Suffolk	Boston	6-12 Thacher St.
04001432	VFW Parkway, Metropolitan Park System of Greater Boston	MASSACHUSETTS	Suffolk	Boston	VFW Parkway, bet. Spring And Centre Sts.
13000930	Walton and Roslin Halls	MASSACHUSETTS	Suffolk	Boston	702-708 & 710-726 Washington St., 3-5 Walton St.
79000370	Washington Street Theatre District	MASSACHUSETTS	Suffolk	Boston	511-559 Washington St.
80000455	West Street District	MASSACHUSETTS	Suffolk	Boston	West St.
82000486	Wigglesworth Building	MASSACHUSETTS	Suffolk	Boston	89-83 Franklin St.
80000443	Wilbur Theatre	MASSACHUSETTS	Suffolk	Boston	244-250 Tremont St.
74000392	Winthrop Building	MASSACHUSETTS	Suffolk	Boston	7 Water St.
80000442	Wirth, Jacob, Buildings	MASSACHUSETTS	Suffolk	Boston	31-39 Stuart St.
99000593	Woodbourne Historic District	MASSACHUSETTS	Suffolk	Boston	Roughly bounded by Walk Hill, Goodway, and Wachusett Sts.
74000393	Youth's Companion Building	MASSACHUSETTS	Suffolk	Boston	209 Columbus Ave.
04000119	YWCA Boston	MASSACHUSETTS	Suffolk	Boston	140 Clarendon St.
03000574	Blue Hills Parkway	MASSACHUSETTS	Norfolk	Boston Milton	Blue Hills Parkway

## **APPENDIX D**

### **Endangered Species Act Documentation**



## 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:

March 01, 2021

Consultation Code: 05E1NE00-2021-SLI-1555

Event Code: 05E1NE00-2021-E-04966

Project Name: 15 Necco Street

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

### To Whom It May Concern:

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

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

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

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

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

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

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

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at:

<http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>;

<http://www.towerkill.com>; and

[http://](http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html)

[www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html](http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html).

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

Attachment(s):

- Official Species List
-



## Official Species List

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

This species list is provided by:

**New England Ecological Services Field Office**

70 Commercial Street, Suite 300

Concord, NH 03301-5094

(603) 223-2541

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## Project Summary

Consultation Code: 05E1NE00-2021-SLI-1555

Event Code: 05E1NE00-2021-E-04966

Project Name: 15 Necco Street

Project Type: DEVELOPMENT

Project Description: The proposed development is planned to consist of a 12-story new lab/office building with 1 level of below-grade space within a portion (7,300 sq ft) of the building. The building will be supported by deep foundations bearing in bedrock.

A portion of the building's heating and cooling needs will be from a series of geothermal wells which will comprise a ground source heat exchange (GSHE) system. Construction is expected to start in April 2021 and continue for approximately 18 months.

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.34922485,-71.05169736679774,14z>



Counties: Suffolk County, Massachusetts

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## Endangered Species Act Species

There is a total of 0 threatened, endangered, or candidate species on this species list.

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

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, 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.

## Critical habitats

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

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## **APPENDIX E**

### **BWSC Permit**



HALEY & ALDRICH, INC.  
465 Medford St.  
Suite 2200  
Boston, MA 02129  
617.886.7400

19 April 2021  
File No. 133860-003

Boston Water and Sewer Commission  
Engineering Customer Services  
900 Harrison Avenue  
Boston, MA 02119

Attention: Matthew Tuttle

Subject: Request for Approval of Temporary Construction Dewatering  
15 Necco Street  
Boston, Massachusetts

Dear Mr. Tuttle:

On behalf of our client, ARE-MA Region No. 74 LLC, this letter submits the Dewatering Discharge Permit Application in support of the proposed 15 Necco project, located in Boston, Massachusetts.

Dewatering is necessary to enable construction excavations in-the-dry and is anticipated to begin in May 2021 and continue for up to 18 months. Prior to discharge, collected water will be routed through a sedimentation tank, bag filter, and pH treatment at minimum to remove suspended solids and undissolved chemical constituents and reduce pH. The proposed dewatering discharge route and BWSC outfall locations are shown on Figure 1.

A submittal was provided to USEPA for discharge of the dewatering effluent under the Remediation General Permit (RGP). A copy of the submitted RGP application is attached. If you have any questions, please feel free to contact the undersigned at 617-886-7400.

Sincerely yours,  
HALEY & ALDRICH, INC.

A handwritten signature in black ink that reads 'Katelyn M. Tripp'.

Katelyn M. Tripp  
Senior Project Manager

Attachments:  
Dewatering Discharge Permit Application  
Figure 1 – Proposed Discharge Route  
Copy of NPDES RGP Permit Application



**Boston Water and  
Sewer Commission**  
980 Harrison Avenue  
Boston, MA 02119-2540

## DEWATERING DISCHARGE PERMIT APPLICATION

### OWNER / AUTHORIZED APPLICANT PROVIDE INFORMATION HERE:

Company Name: ARE-MA Region No. 74, LLC Address: 400 Technology Square, Suite 101, Cambridge, MA 02139  
Phone Number: 617-252-4964 Fax number: \_\_\_\_\_  
Contact person name: Dante Angelucci Title: Senior Vice President - Development  
Cell number: ~~617-252-4964~~ 857-248-7446 Email address: dangelucci@are.com

Permit Request (check one): ☒ New Application ☐ Permit Extension ☐ Other (Specify): \_\_\_\_\_

### Owner's Information (if different from above):

Owner of property being dewatered: \_\_\_\_\_

Owner's mailing address: \_\_\_\_\_ Phone number: \_\_\_\_\_

### Location of Discharge & Proposed Treatment System(s):

Street number and name: 15 Necco Street Neighborhood Seaport Boston

Discharge is to a: ☐ Sanitary Sewer ☐ Combined Sewer ☒ Storm Drain ☐ Other (specify): \_\_\_\_\_  
Sedimentation Tank, Bag Filter, and any other components as necessary

Describe Proposed Pre-Treatment System(s): (refer to attached RGP Application)

BWSC Outfall No. SD0580 Receiving Waters Fort Point Channel

**Temporary Discharges** (Provide Anticipated Dates of Discharge): From May 2021 To December 2022

<input type="checkbox"/> Groundwater Remediation	<input type="checkbox"/> Tank Removal/Installation	<input checked="" type="checkbox"/> Foundation Excavation
<input type="checkbox"/> Utility/Manhole Pumping	<input type="checkbox"/> Test Pipe	<input checked="" type="checkbox"/> Trench Excavation
<input checked="" type="checkbox"/> Accumulated Surface Water	<input type="checkbox"/> Hydrogeologic Testing	<input type="checkbox"/> Other _____

### Permanent Discharges

<input type="checkbox"/> Foundation Drainage	<input type="checkbox"/> Crawl Space/Footing Drain
<input type="checkbox"/> Accumulated Surface Water	<input type="checkbox"/> Non-contact/Uncontaminated Cooling
<input type="checkbox"/> Non-contact/Uncontaminated Process	<input type="checkbox"/> Other; _____

1. Attach a Site Plan showing the source of the discharge and the location of the point of discharge (i.e. the sewer pipe or catch basin). Include meter type, meter number, size, make and start reading. Note: All discharges to the Commission's sewer system will be assessed current sewer charges.
2. If discharging to a sanitary or combined sewer, attach a copy of MWRA's Sewer Use Discharge permit or application.
3. If discharging to a separate storm drain, attach a copy of EPA's NPDES Permit or NOI application, or NPDES Permit exclusion letter for the discharge, as well as other relevant information.
4. Dewatering Drainage Permit will be denied or revoked if applicant fails to obtain the necessary permits from MWRA or EPA.

**Submit Completed Application to:** Boston Water and Sewer Commission  
Engineering Customer Services  
980 Harrison Avenue, Boston, MA 02119  
Attn: Matthew Tuttle, Engineering Customer Service  
E-mail: [tuttlem@bwsc.org](mailto:tuttlem@bwsc.org)  
Phone: 617-989-7204 Fax: 617-989-7716

Signature of Authorized Representative for Property Owner: [Signature]

Date: 4/19/2021

## **APPENDIX F**

### **Laboratory Data Reports**



## ANALYTICAL REPORT

Lab Number:	L1611471
Client:	AECOM 1155 Elm Street Manchester, NH 03101
ATTN:	Judith LeClair
Phone:	(603) 893-0616
Project Name:	GE DUE DILIGENCE
Project Number:	60492342/5.1
Report Date:	05/05/16

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

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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





**Project Name:** GE DUE DILIGENCE  
**Project Number:** 60492342/5.1

**Lab Number:** L1611471  
**Report Date:** 05/05/16

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1611471-01	TRIP BLANK	WATER	NECCO ST., SO. BOSTON	04/18/16 00:00	04/19/16
L1611471-02	MW-104	WATER	NECCO ST., SO. BOSTON	04/18/16 08:20	04/19/16
L1611471-03	MW-102	WATER	NECCO ST., SO. BOSTON	04/18/16 10:00	04/19/16
L1611471-04	MW-106	WATER	NECCO ST., SO. BOSTON	04/18/16 11:30	04/19/16
L1611471-05	MW-106/DUP	WATER	NECCO ST., SO. BOSTON	04/18/16 11:30	04/19/16
L1611471-06	MW-105	WATER	NECCO ST., SO. BOSTON	04/18/16 12:55	04/19/16

Project Name: GE DUE DILIGENCE

Lab Number: L1611471

Project Number: 60492342/5.1

Report Date: 05/05/16

**MADEP MCP Response Action Analytical Report Certification**

**This form provides certifications for all samples performed by MCP methods. Please refer to the Sample Results and Container Information sections of this report for specification of MCP methods used for each analysis. The following questions pertain only to MCP Analytical Methods.**

<b>An affirmative response to questions A through F is required for "Presumptive Certainty" status</b>		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	NO
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	YES
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	YES
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?"	YES
E a.	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	YES
E b.	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	N/A
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	YES
<b>A response to questions G, H and I is required for "Presumptive Certainty" status</b>		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	NO
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	NO
<b>For any questions answered "No", please refer to the case narrative section on the following page(s).</b>		

**Please note that sample matrix information is located in the Sample Results section of this report.**



**Project Name:** GE DUE DILIGENCE  
**Project Number:** 60492342/5.1

**Lab Number:** L1611471  
**Report Date:** 05/05/16

### 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. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated 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.

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 table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

Please see the associated ADEx data file for a comparison of laboratory reporting limits that were achieved with the regulatory Numerical Standards requested on the Chain of Custody.

#### 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 Client Service Representative 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 Client Services at 800-624-9220 with any questions.

**Project Name:** GE DUE DILIGENCE  
**Project Number:** 60492342/5.1

**Lab Number:** L1611471  
**Report Date:** 05/05/16

### Case Narrative (continued)

#### Report Submission

This report replaces the report issued on April 21, 2016. TICs have been reported for the Volatile Organics analysis.

#### MCP Related Narratives

##### Sample Receipt

In reference to question A:

L1611471-04, -05, and -06: The sample was received above the appropriate pH for the EPH analysis. The laboratory added additional HCl to a pH <2.

#### Volatile Organics

L1611471-06: The sample has elevated detection limits due to the dilution required by the sample matrix (foamy).

In reference to question G:

L1611471-06: One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question H:

The initial calibration, associated with L1611471-01, -03, and -05, did not meet the method required minimum response factor on the lowest calibration standard for 2-butanone (0.07707) and 1,4-dioxane (0.00186), as well as the average response factor for 2-butanone and 1,4-dioxane .

The initial calibration, associated with L1611471-02, -04, and -06, did not meet the method required minimum response factor on the lowest calibration standard for 4-methyl-2-pentanone (0.07234) and 1,4-dioxane (0.00207), as well as the average response factor for 4-methyl-2-pentanone and 1,4-dioxane. The initial calibration verification is outside acceptance criteria for acetone (65%), but within overall method criteria.

The continuing calibration standards, associated with L1611471-1 through -06, are outside the acceptance criteria for several compounds; however, they are within overall method allowances. Copies of the continuing calibration standards are included as an addendum to this report.

**Project Name:** GE DUE DILIGENCE  
**Project Number:** 60492342/5.1

**Lab Number:** L1611471  
**Report Date:** 05/05/16

**Case Narrative (continued)**

VPH

In reference to question I:

All samples were analyzed for a subset of MCP analytes per the Chain of Custody.

EPH

In reference to question G:

One or more of the target analytes did not achieve the requested CAM reporting limits.

Metals

In reference to question I:

All samples were analyzed for a subset of MCP analytes per the Chain of Custody.

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 Cripps

Title: Technical Director/Representative

Date: 05/05/16

# ORGANICS

# **VOLATILES**

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS**

**Lab ID:** L1611471-01  
**Client ID:** TRIP BLANK  
**Sample Location:** NECCO ST., SO. BOSTON  
**Matrix:** Water  
**Analytical Method:** 97,8260C  
**Analytical Date:** 04/21/16 07:06  
**Analyst:** MM

**Date Collected:** 04/18/16 00:00  
**Date Received:** 04/19/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1



**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS****Lab ID:** L1611471-01**Date Collected:** 04/18/16 00:00**Client ID:** TRIP BLANK**Date Received:** 04/19/16**Sample Location:** NECCO ST., SO. BOSTON**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylene (Total)	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethene (total)	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS****Lab ID:** L1611471-01**Date Collected:** 04/18/16 00:00**Client ID:** TRIP BLANK**Date Received:** 04/19/16**Sample Location:** NECCO ST., SO. BOSTON**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	ND		ug/l	2.0	--	1
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

## Tentatively Identified Compounds

No Tentatively Identified Compounds	ND	ug/l	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	101		70-130

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS**

**Lab ID:** L1611471-02  
**Client ID:** MW-104  
**Sample Location:** NECCO ST., SO. BOSTON  
**Matrix:** Water  
**Analytical Method:** 97,8260C  
**Analytical Date:** 04/21/16 07:22  
**Analyst:** MM

**Date Collected:** 04/18/16 08:20  
**Date Received:** 04/19/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: GE DUE DILIGENCE

Lab Number: L1611471

Project Number: 60492342/5.1

Report Date: 05/05/16

## SAMPLE RESULTS

Lab ID: L1611471-02

Date Collected: 04/18/16 08:20

Client ID: MW-104

Date Received: 04/19/16

Sample Location: NECCO ST., SO. BOSTON

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylene (Total)	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethene (total)	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS****Lab ID:** L1611471-02**Date Collected:** 04/18/16 08:20**Client ID:** MW-104**Date Received:** 04/19/16**Sample Location:** NECCO ST., SO. BOSTON**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	ND		ug/l	2.0	--	1
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

## Tentatively Identified Compounds

Sulfur Dioxide	16	NJ	ug/l	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	129		70-130
Dibromofluoromethane	105		70-130

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS**

**Lab ID:** L1611471-03  
**Client ID:** MW-102  
**Sample Location:** NECCO ST., SO. BOSTON  
**Matrix:** Water  
**Analytical Method:** 97,8260C  
**Analytical Date:** 04/21/16 07:38  
**Analyst:** MM

**Date Collected:** 04/18/16 10:00  
**Date Received:** 04/19/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS****Lab ID:** L1611471-03**Date Collected:** 04/18/16 10:00**Client ID:** MW-102**Date Received:** 04/19/16**Sample Location:** NECCO ST., SO. BOSTON**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylene (Total)	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethene (total)	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	4.4		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS****Lab ID:** L1611471-03**Date Collected:** 04/18/16 10:00**Client ID:** MW-102**Date Received:** 04/19/16**Sample Location:** NECCO ST., SO. BOSTON**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	ND		ug/l	2.0	--	1
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

## Tentatively Identified Compounds

No Tentatively Identified Compounds	ND	ug/l	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	98		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	97		70-130
Dibromofluoromethane	97		70-130



**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS**

**Lab ID:** L1611471-04  
**Client ID:** MW-106  
**Sample Location:** NECCO ST., SO. BOSTON  
**Matrix:** Water  
**Analytical Method:** 97,8260C  
**Analytical Date:** 04/21/16 07:55  
**Analyst:** MM

**Date Collected:** 04/18/16 11:30  
**Date Received:** 04/19/16  
**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS****Lab ID:** L1611471-04**Date Collected:** 04/18/16 11:30**Client ID:** MW-106**Date Received:** 04/19/16**Sample Location:** NECCO ST., SO. BOSTON**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylene (Total)	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethene (total)	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS****Lab ID:** L1611471-04**Date Collected:** 04/18/16 11:30**Client ID:** MW-106**Date Received:** 04/19/16**Sample Location:** NECCO ST., SO. BOSTON**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	ND		ug/l	2.0	--	1
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

## Tentatively Identified Compounds

No Tentatively Identified Compounds	ND	ug/l	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	120		70-130
Dibromofluoromethane	101		70-130

Project Name: GE DUE DILIGENCE

Lab Number: L1611471

Project Number: 60492342/5.1

Report Date: 05/05/16

## SAMPLE RESULTS

Lab ID: L1611471-05  
 Client ID: MW-106/DUP  
 Sample Location: NECCO ST., SO. BOSTON  
 Matrix: Water  
 Analytical Method: 97,8260C  
 Analytical Date: 04/21/16 08:11  
 Analyst: MM

Date Collected: 04/18/16 11:30  
 Date Received: 04/19/16  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: GE DUE DILIGENCE

Lab Number: L1611471

Project Number: 60492342/5.1

Report Date: 05/05/16

## SAMPLE RESULTS

Lab ID: L1611471-05

Date Collected: 04/18/16 11:30

Client ID: MW-106/DUP

Date Received: 04/19/16

Sample Location: NECCO ST., SO. BOSTON

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylene (Total)	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethene (total)	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS****Lab ID:** L1611471-05**Date Collected:** 04/18/16 11:30**Client ID:** MW-106/DUP**Date Received:** 04/19/16**Sample Location:** NECCO ST., SO. BOSTON**Field Prep:** Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	ND		ug/l	2.0	--	1
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

## Tentatively Identified Compounds

No Tentatively Identified Compounds	ND	ug/l	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	89		70-130
Toluene-d8	99		70-130
4-Bromofluorobenzene	99		70-130
Dibromofluoromethane	95		70-130

Project Name: GE DUE DILIGENCE

Lab Number: L1611471

Project Number: 60492342/5.1

Report Date: 05/05/16

## SAMPLE RESULTS

Lab ID: L1611471-06 D  
 Client ID: MW-105  
 Sample Location: NECCO ST., SO. BOSTON  
 Matrix: Water  
 Analytical Method: 97,8260C  
 Analytical Date: 04/21/16 08:27  
 Analyst: MM

Date Collected: 04/18/16 12:55  
 Date Received: 04/19/16  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	10	--	5
1,1-Dichloroethane	ND		ug/l	5.0	--	5
Chloroform	ND		ug/l	5.0	--	5
Carbon tetrachloride	ND		ug/l	5.0	--	5
1,2-Dichloropropane	ND		ug/l	5.0	--	5
Dibromochloromethane	ND		ug/l	5.0	--	5
1,1,2-Trichloroethane	ND		ug/l	5.0	--	5
Tetrachloroethene	ND		ug/l	5.0	--	5
Chlorobenzene	ND		ug/l	5.0	--	5
Trichlorofluoromethane	ND		ug/l	10	--	5
1,2-Dichloroethane	ND		ug/l	5.0	--	5
1,1,1-Trichloroethane	ND		ug/l	5.0	--	5
Bromodichloromethane	ND		ug/l	5.0	--	5
trans-1,3-Dichloropropene	ND		ug/l	2.5	--	5
cis-1,3-Dichloropropene	ND		ug/l	2.5	--	5
1,3-Dichloropropene, Total	ND		ug/l	2.5	--	5
1,1-Dichloropropene	ND		ug/l	10	--	5
Bromoform	ND		ug/l	10	--	5
1,1,2,2-Tetrachloroethane	ND		ug/l	5.0	--	5
Benzene	ND		ug/l	2.5	--	5
Toluene	ND		ug/l	5.0	--	5
Ethylbenzene	ND		ug/l	5.0	--	5
Chloromethane	ND		ug/l	10	--	5
Bromomethane	ND		ug/l	10	--	5
Vinyl chloride	ND		ug/l	5.0	--	5
Chloroethane	ND		ug/l	10	--	5
1,1-Dichloroethene	ND		ug/l	5.0	--	5
trans-1,2-Dichloroethene	ND		ug/l	5.0	--	5
Trichloroethene	ND		ug/l	5.0	--	5
1,2-Dichlorobenzene	ND		ug/l	5.0	--	5

Project Name: GE DUE DILIGENCE

Lab Number: L1611471

Project Number: 60492342/5.1

Report Date: 05/05/16

## SAMPLE RESULTS

Lab ID: L1611471-06 D  
 Client ID: MW-105  
 Sample Location: NECCO ST., SO. BOSTON

Date Collected: 04/18/16 12:55  
 Date Received: 04/19/16  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	5.0	--	5
1,4-Dichlorobenzene	ND		ug/l	5.0	--	5
Methyl tert butyl ether	ND		ug/l	10	--	5
p/m-Xylene	ND		ug/l	10	--	5
o-Xylene	ND		ug/l	5.0	--	5
Xylene (Total)	ND		ug/l	5.0	--	5
cis-1,2-Dichloroethene	ND		ug/l	5.0	--	5
1,2-Dichloroethene (total)	ND		ug/l	5.0	--	5
Dibromomethane	ND		ug/l	10	--	5
1,2,3-Trichloropropane	ND		ug/l	10	--	5
Styrene	ND		ug/l	5.0	--	5
Dichlorodifluoromethane	ND		ug/l	10	--	5
Acetone	ND		ug/l	25	--	5
Carbon disulfide	ND		ug/l	10	--	5
2-Butanone	ND		ug/l	25	--	5
4-Methyl-2-pentanone	ND		ug/l	25	--	5
2-Hexanone	ND		ug/l	25	--	5
Bromochloromethane	ND		ug/l	10	--	5
Tetrahydrofuran	ND		ug/l	10	--	5
2,2-Dichloropropane	ND		ug/l	10	--	5
1,2-Dibromoethane	ND		ug/l	10	--	5
1,3-Dichloropropane	ND		ug/l	10	--	5
1,1,1,2-Tetrachloroethane	ND		ug/l	5.0	--	5
Bromobenzene	ND		ug/l	10	--	5
n-Butylbenzene	ND		ug/l	10	--	5
sec-Butylbenzene	ND		ug/l	10	--	5
tert-Butylbenzene	ND		ug/l	10	--	5
o-Chlorotoluene	ND		ug/l	10	--	5
p-Chlorotoluene	ND		ug/l	10	--	5
1,2-Dibromo-3-chloropropane	ND		ug/l	10	--	5
Hexachlorobutadiene	ND		ug/l	3.0	--	5
Isopropylbenzene	ND		ug/l	10	--	5
p-Isopropyltoluene	ND		ug/l	10	--	5
Naphthalene	ND		ug/l	10	--	5
n-Propylbenzene	ND		ug/l	10	--	5
1,2,3-Trichlorobenzene	ND		ug/l	10	--	5
1,2,4-Trichlorobenzene	ND		ug/l	10	--	5
1,3,5-Trimethylbenzene	ND		ug/l	10	--	5
1,2,4-Trimethylbenzene	ND		ug/l	10	--	5



**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS**

Lab ID: L1611471-06 D  
 Client ID: MW-105  
 Sample Location: NECCO ST., SO. BOSTON

Date Collected: 04/18/16 12:55  
 Date Received: 04/19/16  
 Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	ND		ug/l	10	--	5
Isopropyl Ether	ND		ug/l	10	--	5
Ethyl-Tert-Butyl-Ether	ND		ug/l	10	--	5
Tertiary-Amyl Methyl Ether	ND		ug/l	10	--	5
1,4-Dioxane	ND		ug/l	1200	--	5

## Tentatively Identified Compounds

No Tentatively Identified Compounds	ND	ug/l	5
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	90		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	<b>133</b>	Q	70-130
Dibromofluoromethane	99		70-130

Project Name: GE DUE DILIGENCE

Lab Number: L1611471

Project Number: 60492342/5.1

Report Date: 05/05/16

### Method Blank Analysis Batch Quality Control

Analytical Method: 97,8260C  
 Analytical Date: 04/21/16 06:00  
 Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01,03,05 Batch: WG885829-3					
Methylene chloride	ND		ug/l	2.0	--
1,1-Dichloroethane	ND		ug/l	1.0	--
Chloroform	ND		ug/l	1.0	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,2-Dichloropropane	ND		ug/l	1.0	--
Dibromochloromethane	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.0	--
Tetrachloroethene	ND		ug/l	1.0	--
Chlorobenzene	ND		ug/l	1.0	--
Trichlorofluoromethane	ND		ug/l	2.0	--
1,2-Dichloroethane	ND		ug/l	1.0	--
1,1,1-Trichloroethane	ND		ug/l	1.0	--
Bromodichloromethane	ND		ug/l	1.0	--
trans-1,3-Dichloropropene	ND		ug/l	0.50	--
cis-1,3-Dichloropropene	ND		ug/l	0.50	--
1,3-Dichloropropene, Total	ND		ug/l	0.50	--
1,1-Dichloropropene	ND		ug/l	2.0	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--
Benzene	ND		ug/l	0.50	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Chloromethane	ND		ug/l	2.0	--
Bromomethane	ND		ug/l	2.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	2.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
trans-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--

Project Name: GE DUE DILIGENCE

Lab Number: L1611471

Project Number: 60492342/5.1

Report Date: 05/05/16

### Method Blank Analysis Batch Quality Control

Analytical Method: 97,8260C  
 Analytical Date: 04/21/16 06:00  
 Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01,03,05 Batch: WG885829-3					
1,2-Dichlorobenzene	ND		ug/l	1.0	--
1,3-Dichlorobenzene	ND		ug/l	1.0	--
1,4-Dichlorobenzene	ND		ug/l	1.0	--
Methyl tert butyl ether	ND		ug/l	2.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-Xylene	ND		ug/l	1.0	--
Xylene (Total)	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
1,2-Dichloroethene (total)	ND		ug/l	1.0	--
Dibromomethane	ND		ug/l	2.0	--
1,2,3-Trichloropropane	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	2.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	2.0	--
2-Butanone	ND		ug/l	5.0	--
4-Methyl-2-pentanone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.0	--
Tetrahydrofuran	ND		ug/l	2.0	--
2,2-Dichloropropane	ND		ug/l	2.0	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--
Bromobenzene	ND		ug/l	2.0	--
n-Butylbenzene	ND		ug/l	2.0	--
sec-Butylbenzene	ND		ug/l	2.0	--
tert-Butylbenzene	ND		ug/l	2.0	--
o-Chlorotoluene	ND		ug/l	2.0	--

Project Name: GE DUE DILIGENCE

Lab Number: L1611471

Project Number: 60492342/5.1

Report Date: 05/05/16

### Method Blank Analysis Batch Quality Control

Analytical Method: 97,8260C  
 Analytical Date: 04/21/16 06:00  
 Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01,03,05 Batch: WG885829-3					
p-Chlorotoluene	ND		ug/l	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--
Hexachlorobutadiene	ND		ug/l	0.60	--
Isopropylbenzene	ND		ug/l	2.0	--
p-Isopropyltoluene	ND		ug/l	2.0	--
Naphthalene	ND		ug/l	2.0	--
n-Propylbenzene	ND		ug/l	2.0	--
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--
Ethyl ether	ND		ug/l	2.0	--
Isopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

#### Tentatively Identified Compounds

No Tentatively Identified Compounds      ND      ug/l

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 97,8260C  
Analytical Date: 04/21/16 06:00  
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01,03,05 Batch: WG885829-3					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	100		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	99		70-130

Project Name: GE DUE DILIGENCE

Lab Number: L1611471

Project Number: 60492342/5.1

Report Date: 05/05/16

### Method Blank Analysis Batch Quality Control

Analytical Method: 97,8260C  
 Analytical Date: 04/21/16 06:17  
 Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 02,04,06 Batch: WG885832-3					
Methylene chloride	ND		ug/l	2.0	--
1,1-Dichloroethane	ND		ug/l	1.0	--
Chloroform	ND		ug/l	1.0	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,2-Dichloropropane	ND		ug/l	1.0	--
Dibromochloromethane	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.0	--
Tetrachloroethene	ND		ug/l	1.0	--
Chlorobenzene	ND		ug/l	1.0	--
Trichlorofluoromethane	ND		ug/l	2.0	--
1,2-Dichloroethane	ND		ug/l	1.0	--
1,1,1-Trichloroethane	ND		ug/l	1.0	--
Bromodichloromethane	ND		ug/l	1.0	--
trans-1,3-Dichloropropene	ND		ug/l	0.50	--
cis-1,3-Dichloropropene	ND		ug/l	0.50	--
1,3-Dichloropropene, Total	ND		ug/l	0.50	--
1,1-Dichloropropene	ND		ug/l	2.0	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--
Benzene	ND		ug/l	0.50	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Chloromethane	ND		ug/l	2.0	--
Bromomethane	ND		ug/l	2.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	2.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
trans-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--

Project Name: GE DUE DILIGENCE

Lab Number: L1611471

Project Number: 60492342/5.1

Report Date: 05/05/16

### Method Blank Analysis Batch Quality Control

Analytical Method: 97,8260C  
 Analytical Date: 04/21/16 06:17  
 Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 02,04,06 Batch: WG885832-3					
1,2-Dichlorobenzene	ND		ug/l	1.0	--
1,3-Dichlorobenzene	ND		ug/l	1.0	--
1,4-Dichlorobenzene	ND		ug/l	1.0	--
Methyl tert butyl ether	ND		ug/l	2.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-Xylene	ND		ug/l	1.0	--
Xylene (Total)	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
1,2-Dichloroethene (total)	ND		ug/l	1.0	--
Dibromomethane	ND		ug/l	2.0	--
1,2,3-Trichloropropane	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	2.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	2.0	--
2-Butanone	ND		ug/l	5.0	--
4-Methyl-2-pentanone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.0	--
Tetrahydrofuran	ND		ug/l	2.0	--
2,2-Dichloropropane	ND		ug/l	2.0	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--
Bromobenzene	ND		ug/l	2.0	--
n-Butylbenzene	ND		ug/l	2.0	--
sec-Butylbenzene	ND		ug/l	2.0	--
tert-Butylbenzene	ND		ug/l	2.0	--
o-Chlorotoluene	ND		ug/l	2.0	--



Project Name: GE DUE DILIGENCE

Lab Number: L1611471

Project Number: 60492342/5.1

Report Date: 05/05/16

### Method Blank Analysis Batch Quality Control

Analytical Method: 97,8260C  
 Analytical Date: 04/21/16 06:17  
 Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 02,04,06 Batch: WG885832-3					
p-Chlorotoluene	ND		ug/l	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--
Hexachlorobutadiene	ND		ug/l	0.60	--
Isopropylbenzene	ND		ug/l	2.0	--
p-Isopropyltoluene	ND		ug/l	2.0	--
Naphthalene	ND		ug/l	2.0	--
n-Propylbenzene	ND		ug/l	2.0	--
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--
Ethyl ether	ND		ug/l	2.0	--
Isopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

#### Tentatively Identified Compounds

No Tentatively Identified Compounds      ND      ug/l

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 97,8260C

Analytical Date: 04/21/16 06:17

Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 02,04,06 Batch: WG885832-3					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	92		70-130
Toluene-d8	92		70-130
4-Bromofluorobenzene	136	Q	70-130
Dibromofluoromethane	98		70-130

# Lab Control Sample Analysis

## Batch Quality Control

Project Name: GE DUE DILIGENCE

Project Number: 60492342/5.1

Lab Number: L1611471

Report Date: 05/05/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01,03,05 Batch: WG885829-1 WG885829-2								
Methylene chloride	102		97		70-130	5		20
1,1-Dichloroethane	107		104		70-130	3		20
Chloroform	99		96		70-130	3		20
Carbon tetrachloride	98		97		70-130	1		20
1,2-Dichloropropane	104		101		70-130	3		20
Dibromochloromethane	82		83		70-130	1		20
1,1,2-Trichloroethane	107		102		70-130	5		20
Tetrachloroethene	105		104		70-130	1		20
Chlorobenzene	97		95		70-130	2		20
Trichlorofluoromethane	104		97		70-130	7		20
1,2-Dichloroethane	101		96		70-130	5		20
1,1,1-Trichloroethane	100		100		70-130	0		20
Bromodichloromethane	93		90		70-130	3		20
trans-1,3-Dichloropropene	82		85		70-130	4		20
cis-1,3-Dichloropropene	91		90		70-130	1		20
1,1-Dichloropropene	101		96		70-130	5		20
Bromoform	83		85		70-130	2		20
1,1,2,2-Tetrachloroethane	101		97		70-130	4		20
Benzene	103		98		70-130	5		20
Toluene	102		96		70-130	6		20
Ethylbenzene	98		95		70-130	3		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: GE DUE DILIGENCE

Project Number: 60492342/5.1

Lab Number: L1611471

Report Date: 05/05/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01,03,05 Batch: WG885829-1 WG885829-2								
Chloromethane	105		92		70-130	13		20
Bromomethane	84		78		70-130	7		20
Vinyl chloride	107		103		70-130	4		20
Chloroethane	97		93		70-130	4		20
1,1-Dichloroethene	109		102		70-130	7		20
trans-1,2-Dichloroethene	106		101		70-130	5		20
Trichloroethene	98		95		70-130	3		20
1,2-Dichlorobenzene	102		98		70-130	4		20
1,3-Dichlorobenzene	95		91		70-130	4		20
1,4-Dichlorobenzene	100		95		70-130	5		20
Methyl tert butyl ether	101		96		70-130	5		20
p/m-Xylene	99		93		70-130	6		20
o-Xylene	97		93		70-130	4		20
cis-1,2-Dichloroethene	109		103		70-130	6		20
Dibromomethane	99		99		70-130	0		20
1,2,3-Trichloropropane	98		99		70-130	1		20
Styrene	97		96		70-130	1		20
Dichlorodifluoromethane	104		96		70-130	8		20
Acetone	109		105		70-130	4		20
Carbon disulfide	88		92		70-130	4		20
2-Butanone	112		105		70-130	6		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: GE DUE DILIGENCE

Project Number: 60492342/5.1

Lab Number: L1611471

Report Date: 05/05/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01,03,05 Batch: WG885829-1 WG885829-2								
4-Methyl-2-pentanone	88		90		70-130	2		20
2-Hexanone	93		91		70-130	2		20
Bromochloromethane	101		96		70-130	5		20
Tetrahydrofuran	106		100		70-130	6		20
2,2-Dichloropropane	104		102		70-130	2		20
1,2-Dibromoethane	102		102		70-130	0		20
1,3-Dichloropropane	109		103		70-130	6		20
1,1,1,2-Tetrachloroethane	95		93		70-130	2		20
Bromobenzene	101		100		70-130	1		20
n-Butylbenzene	85		82		70-130	4		20
sec-Butylbenzene	83		81		70-130	2		20
tert-Butylbenzene	86		86		70-130	0		20
o-Chlorotoluene	94		92		70-130	2		20
p-Chlorotoluene	97		94		70-130	3		20
1,2-Dibromo-3-chloropropane	96		102		70-130	6		20
Hexachlorobutadiene	100		100		70-130	0		20
Isopropylbenzene	96		94		70-130	2		20
p-Isopropyltoluene	82		82		70-130	0		20
Naphthalene	98		98		70-130	0		20
n-Propylbenzene	90		90		70-130	0		20
1,2,3-Trichlorobenzene	100		98		70-130	2		20

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** GE DUE DILIGENCE

**Project Number:** 60492342/5.1

**Lab Number:** L1611471

**Report Date:** 05/05/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01,03,05 Batch: WG885829-1 WG885829-2								
1,2,4-Trichlorobenzene	99		99		70-130	0		20
1,3,5-Trimethylbenzene	91		89		70-130	2		20
1,2,4-Trimethylbenzene	94		92		70-130	2		20
Ethyl ether	98		93		70-130	5		20
Isopropyl Ether	100		92		70-130	8		20
Ethyl-Tert-Butyl-Ether	102		97		70-130	5		20
Tertiary-Amyl Methyl Ether	95		92		70-130	3		20
1,4-Dioxane	88		89		70-130	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	93		88		70-130
Toluene-d8	102		101		70-130
4-Bromofluorobenzene	103		99		70-130
Dibromofluoromethane	95		95		70-130

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** GE DUE DILIGENCE

**Project Number:** 60492342/5.1

**Lab Number:** L1611471

**Report Date:** 05/05/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02,04,06 Batch: WG885832-1 WG885832-2								
Methylene chloride	110		104		70-130	6		20
1,1-Dichloroethane	97		95		70-130	2		20
Chloroform	90		89		70-130	1		20
Carbon tetrachloride	89		87		70-130	2		20
1,2-Dichloropropane	100		95		70-130	5		20
Dibromochloromethane	91		91		70-130	0		20
1,1,2-Trichloroethane	96		92		70-130	4		20
Tetrachloroethene	86		82		70-130	5		20
Chlorobenzene	89		88		70-130	1		20
Trichlorofluoromethane	89		86		70-130	3		20
1,2-Dichloroethane	96		93		70-130	3		20
1,1,1-Trichloroethane	89		90		70-130	1		20
Bromodichloromethane	93		93		70-130	0		20
trans-1,3-Dichloropropene	85		86		70-130	1		20
cis-1,3-Dichloropropene	99		97		70-130	2		20
1,1-Dichloropropene	91		90		70-130	1		20
Bromoform	110		108		70-130	2		20
1,1,2,2-Tetrachloroethane	103		98		70-130	5		20
Benzene	92		88		70-130	4		20
Toluene	83		82		70-130	1		20
Ethylbenzene	87		86		70-130	1		20

# Lab Control Sample Analysis

## Batch Quality Control

Project Name: GE DUE DILIGENCE

Project Number: 60492342/5.1

Lab Number: L1611471

Report Date: 05/05/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02,04,06 Batch: WG885832-1 WG885832-2								
Chloromethane	78		73		70-130	7		20
Bromomethane	100		91		70-130	9		20
Vinyl chloride	99		98		70-130	1		20
Chloroethane	108		102		70-130	6		20
1,1-Dichloroethene	93		89		70-130	4		20
trans-1,2-Dichloroethene	92		92		70-130	0		20
Trichloroethene	90		88		70-130	2		20
1,2-Dichlorobenzene	98		92		70-130	6		20
1,3-Dichlorobenzene	91		87		70-130	4		20
1,4-Dichlorobenzene	90		89		70-130	1		20
Methyl tert butyl ether	96		93		70-130	3		20
p/m-Xylene	85		84		70-130	1		20
o-Xylene	82		81		70-130	1		20
cis-1,2-Dichloroethene	93		91		70-130	2		20
Dibromomethane	96		91		70-130	5		20
1,2,3-Trichloropropane	107		105		70-130	2		20
Styrene	89		89		70-130	0		20
Dichlorodifluoromethane	90		91		70-130	1		20
Acetone	112		102		70-130	9		20
Carbon disulfide	88		89		70-130	1		20
2-Butanone	98		94		70-130	4		20



# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** GE DUE DILIGENCE

**Project Number:** 60492342/5.1

**Lab Number:** L1611471

**Report Date:** 05/05/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02,04,06 Batch: WG885832-1 WG885832-2								
4-Methyl-2-pentanone	106		103		70-130	3		20
2-Hexanone	99		93		70-130	6		20
Bromochloromethane	98		92		70-130	6		20
Tetrahydrofuran	101		98		70-130	3		20
2,2-Dichloropropane	94		93		70-130	1		20
1,2-Dibromoethane	95		92		70-130	3		20
1,3-Dichloropropane	94		92		70-130	2		20
1,1,1,2-Tetrachloroethane	94		91		70-130	3		20
Bromobenzene	106		105		70-130	1		20
n-Butylbenzene	62	Q	58	Q	70-130	7		20
sec-Butylbenzene	70		69	Q	70-130	1		20
tert-Butylbenzene	77		75		70-130	3		20
o-Chlorotoluene	91		88		70-130	3		20
p-Chlorotoluene	96		91		70-130	5		20
1,2-Dibromo-3-chloropropane	87		85		70-130	2		20
Hexachlorobutadiene	77		71		70-130	8		20
Isopropylbenzene	101		98		70-130	3		20
p-Isopropyltoluene	69	Q	66	Q	70-130	4		20
Naphthalene	85		81		70-130	5		20
n-Propylbenzene	88		86		70-130	2		20
1,2,3-Trichlorobenzene	85		78		70-130	9		20

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: GE DUE DILIGENCE

Project Number: 60492342/5.1

Lab Number: L1611471

Report Date: 05/05/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02,04,06 Batch: WG885832-1 WG885832-2								
1,2,4-Trichlorobenzene	83		80		70-130	4		20
1,3,5-Trimethylbenzene	84		80		70-130	5		20
1,2,4-Trimethylbenzene	85		83		70-130	2		20
Ethyl ether	98		96		70-130	2		20
Isopropyl Ether	95		96		70-130	1		20
Ethyl-Tert-Butyl-Ether	95		95		70-130	0		20
Tertiary-Amyl Methyl Ether	96		92		70-130	4		20
1,4-Dioxane	88		82		70-130	7		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	95		95		70-130
Toluene-d8	94		92		70-130
4-Bromofluorobenzene	113		110		70-130
Dibromofluoromethane	101		99		70-130

# **PETROLEUM HYDROCARBONS**

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS**

**Lab ID:** L1611471-02  
**Client ID:** MW-104  
**Sample Location:** NECCO ST., SO. BOSTON  
**Matrix:** Water  
**Analytical Method:** 100, VPH-04-1.1  
**Analytical Date:** 04/20/16 18:38  
**Analyst:** KD

**Date Collected:** 04/18/16 08:20  
**Date Received:** 04/19/16  
**Field Prep:** Not Specified

**Quality Control Information**

**Condition of sample received:** Satisfactory  
**Aqueous Preservative:** Laboratory Provided Preserved Container  
**Sample Temperature upon receipt:** Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	97		70-130
2,5-Dibromotoluene-FID	113		70-130

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS**

**Lab ID:** L1611471-02  
**Client ID:** MW-104  
**Sample Location:** NECCO ST., SO. BOSTON  
**Matrix:** Water  
**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 04/21/16 01:39  
**Analyst:** SR

**Date Collected:** 04/18/16 08:20  
**Date Received:** 04/19/16  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 04/19/16 21:57  
**Cleanup Method1:** EPH-04-1  
**Cleanup Date1:** 04/20/16

**Quality Control Information**

Condition of sample received:	Satisfactory
Aqueous Preservative:	Laboratory Provided Preserved Container
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1



**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS**

Lab ID: L1611471-02

Date Collected: 04/18/16 08:20

Client ID: MW-104

Date Received: 04/19/16

Sample Location: NECCO ST., SO. BOSTON

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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**Extractable Petroleum Hydrocarbons - Westborough Lab**

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	68		40-140
o-Terphenyl	67		40-140
2-Fluorobiphenyl	71		40-140
2-Bromonaphthalene	77		40-140

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS**

**Lab ID:** L1611471-03  
**Client ID:** MW-102  
**Sample Location:** NECCO ST., SO. BOSTON  
**Matrix:** Water  
**Analytical Method:** 100, VPH-04-1.1  
**Analytical Date:** 04/20/16 19:19  
**Analyst:** KD

**Date Collected:** 04/18/16 10:00  
**Date Received:** 04/19/16  
**Field Prep:** Not Specified

**Quality Control Information**

**Condition of sample received:** Satisfactory  
**Aqueous Preservative:** Laboratory Provided Preserved Container  
**Sample Temperature upon receipt:** Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	102		70-130
2,5-Dibromotoluene-FID	117		70-130

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS**

**Lab ID:** L1611471-03  
**Client ID:** MW-102  
**Sample Location:** NECCO ST., SO. BOSTON  
**Matrix:** Water  
**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 04/21/16 00:54  
**Analyst:** SR

**Date Collected:** 04/18/16 10:00  
**Date Received:** 04/19/16  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 04/19/16 21:57  
**Cleanup Method1:** EPH-04-1  
**Cleanup Date1:** 04/20/16

**Quality Control Information**

Condition of sample received:	Satisfactory
Aqueous Preservative:	Laboratory Provided Preserved Container
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1





**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS**

Lab ID: L1611471-03

Date Collected: 04/18/16 10:00

Client ID: MW-102

Date Received: 04/19/16

Sample Location: NECCO ST., SO. BOSTON

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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**Extractable Petroleum Hydrocarbons - Westborough Lab**

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	66		40-140
o-Terphenyl	69		40-140
2-Fluorobiphenyl	79		40-140
2-Bromonaphthalene	85		40-140

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS**

**Lab ID:** L1611471-04  
**Client ID:** MW-106  
**Sample Location:** NECCO ST., SO. BOSTON  
**Matrix:** Water  
**Analytical Method:** 100, VPH-04-1.1  
**Analytical Date:** 04/20/16 19:59  
**Analyst:** KD

**Date Collected:** 04/18/16 11:30  
**Date Received:** 04/19/16  
**Field Prep:** Not Specified

**Quality Control Information**

**Condition of sample received:** Satisfactory  
**Aqueous Preservative:** Laboratory Provided Preserved Container  
**Sample Temperature upon receipt:** Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	106		70-130
2,5-Dibromotoluene-FID	122		70-130

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS**

**Lab ID:** L1611471-04  
**Client ID:** MW-106  
**Sample Location:** NECCO ST., SO. BOSTON  
**Matrix:** Water  
**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 04/21/16 00:09  
**Analyst:** SR

**Date Collected:** 04/18/16 11:30  
**Date Received:** 04/19/16  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 04/19/16 21:57  
**Cleanup Method1:** EPH-04-1  
**Cleanup Date1:** 04/20/16

**Quality Control Information**

Condition of sample received:	Unsatisfactory
Aqueous Preservative:	Laboratory Provided Preserved Container
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1



**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS**

Lab ID: L1611471-04

Date Collected: 04/18/16 11:30

Client ID: MW-106

Date Received: 04/19/16

Sample Location: NECCO ST., SO. BOSTON

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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**Extractable Petroleum Hydrocarbons - Westborough Lab**

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	63		40-140
o-Terphenyl	72		40-140
2-Fluorobiphenyl	77		40-140
2-Bromonaphthalene	80		40-140

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS**

**Lab ID:** L1611471-05  
**Client ID:** MW-106/DUP  
**Sample Location:** NECCO ST., SO. BOSTON  
**Matrix:** Water  
**Analytical Method:** 100, VPH-04-1.1  
**Analytical Date:** 04/20/16 20:40  
**Analyst:** KD

**Date Collected:** 04/18/16 11:30  
**Date Received:** 04/19/16  
**Field Prep:** Not Specified

**Quality Control Information**

**Condition of sample received:** Satisfactory  
**Aqueous Preservative:** Laboratory Provided Preserved Container  
**Sample Temperature upon receipt:** Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	98		70-130
2,5-Dibromotoluene-FID	114		70-130

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS**

**Lab ID:** L1611471-05  
**Client ID:** MW-106/DUP  
**Sample Location:** NECCO ST., SO. BOSTON  
**Matrix:** Water  
**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 04/20/16 23:23  
**Analyst:** SR

**Date Collected:** 04/18/16 11:30  
**Date Received:** 04/19/16  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 04/19/16 21:57  
**Cleanup Method1:** EPH-04-1  
**Cleanup Date1:** 04/20/16

**Quality Control Information**

Condition of sample received:	Unsatisfactory
Aqueous Preservative:	Laboratory Provided Preserved Container
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1



**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS**

Lab ID: L1611471-05

Date Collected: 04/18/16 11:30

Client ID: MW-106/DUP

Date Received: 04/19/16

Sample Location: NECCO ST., SO. BOSTON

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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**Extractable Petroleum Hydrocarbons - Westborough Lab**

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	66		40-140
o-Terphenyl	66		40-140
2-Fluorobiphenyl	70		40-140
2-Bromonaphthalene	76		40-140

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS**

**Lab ID:** L1611471-06  
**Client ID:** MW-105  
**Sample Location:** NECCO ST., SO. BOSTON  
**Matrix:** Water  
**Analytical Method:** 100,VPH-04-1.1  
**Analytical Date:** 04/20/16 21:20  
**Analyst:** KD

**Date Collected:** 04/18/16 12:55  
**Date Received:** 04/19/16  
**Field Prep:** Not Specified

**Quality Control Information**

**Condition of sample received:** Satisfactory  
**Aqueous Preservative:** Laboratory Provided Preserved Container  
**Sample Temperature upon receipt:** Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Volatile Petroleum Hydrocarbons - Westborough Lab</b>						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	55.1		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	55.1		ug/l	50.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	106		70-130
2,5-Dibromotoluene-FID	122		70-130



**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS**

**Lab ID:** L1611471-06  
**Client ID:** MW-105  
**Sample Location:** NECCO ST., SO. BOSTON  
**Matrix:** Water  
**Analytical Method:** 98,EPH-04-1.1  
**Analytical Date:** 04/20/16 22:38  
**Analyst:** SR

**Date Collected:** 04/18/16 12:55  
**Date Received:** 04/19/16  
**Field Prep:** Not Specified  
**Extraction Method:** EPA 3510C  
**Extraction Date:** 04/19/16 21:57  
**Cleanup Method1:** EPH-04-1  
**Cleanup Date1:** 04/20/16

**Quality Control Information**

Condition of sample received:	Unsatisfactory
Aqueous Preservative:	Laboratory Provided Preserved Container
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
<b>Extractable Petroleum Hydrocarbons - Westborough Lab</b>						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1



**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**SAMPLE RESULTS**

Lab ID: L1611471-06

Date Collected: 04/18/16 12:55

Client ID: MW-105

Date Received: 04/19/16

Sample Location: NECCO ST., SO. BOSTON

Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
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**Extractable Petroleum Hydrocarbons - Westborough Lab**

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	66		40-140
o-Terphenyl	72		40-140
2-Fluorobiphenyl	74		40-140
2-Bromonaphthalene	83		40-140

Project Name: GE DUE DILIGENCE

Lab Number: L1611471

Project Number: 60492342/5.1

Report Date: 05/05/16

### Method Blank Analysis Batch Quality Control

Analytical Method: 98,EPH-04-1.1

Analytical Date: 04/21/16 03:54

Analyst: SR

Extraction Method: EPA 3510C

Extraction Date: 04/19/16 21:57

Cleanup Method: EPH-04-1

Cleanup Date: 04/20/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 02-06 Batch: WG885276-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	77		40-140
o-Terphenyl	70		40-140
2-Fluorobiphenyl	76		40-140
2-Bromonaphthalene	81		40-140



Project Name: GE DUE DILIGENCE

Lab Number: L1611471

Project Number: 60492342/5.1

Report Date: 05/05/16

### Method Blank Analysis Batch Quality Control

Analytical Method: 100, VPH-04-1.1

Analytical Date: 04/20/16 09:52

Analyst: KD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 02-06 Batch: WG885792-3					
C5-C8 Aliphatics	ND		ug/l	50.0	--
C9-C12 Aliphatics	ND		ug/l	50.0	--
C9-C10 Aromatics	ND		ug/l	50.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	89		70-130
2,5-Dibromotoluene-FID	104		70-130

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** GE DUE DILIGENCE

**Project Number:** 60492342/5.1

**Lab Number:** L1611471

**Report Date:** 05/05/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 02-06 Batch: WG885276-2 WG885276-3								
C9-C18 Aliphatics	65		65		40-140	0		25
C19-C36 Aliphatics	81		81		40-140	0		25
C11-C22 Aromatics	70		75		40-140	7		25
Naphthalene	63		68		40-140	8		25
2-Methylnaphthalene	67		72		40-140	7		25
Acenaphthylene	63		68		40-140	8		25
Acenaphthene	66		71		40-140	7		25
Fluorene	67		73		40-140	9		25
Phenanthrene	68		75		40-140	10		25
Anthracene	66		72		40-140	9		25
Fluoranthene	69		76		40-140	10		25
Pyrene	71		78		40-140	9		25
Benzo(a)anthracene	68		74		40-140	8		25
Chrysene	69		76		40-140	10		25
Benzo(b)fluoranthene	69		75		40-140	8		25
Benzo(k)fluoranthene	69		75		40-140	8		25
Benzo(a)pyrene	61		66		40-140	8		25
Indeno(1,2,3-cd)Pyrene	68		72		40-140	6		25
Dibenzo(a,h)anthracene	59		63		40-140	7		25
Benzo(ghi)perylene	67		72		40-140	7		25
Nonane (C9)	45		49		30-140	9		25

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** GE DUE DILIGENCE

**Project Number:** 60492342/5.1

**Lab Number:** L1611471

**Report Date:** 05/05/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 02-06 Batch: WG885276-2 WG885276-3								
Decane (C10)	56		59		40-140	5		25
Dodecane (C12)	65		63		40-140	3		25
Tetradecane (C14)	68		66		40-140	3		25
Hexadecane (C16)	70		70		40-140	0		25
Octadecane (C18)	75		75		40-140	0		25
Nonadecane (C19)	76		76		40-140	0		25
Eicosane (C20)	77		78		40-140	1		25
Docosane (C22)	79		79		40-140	0		25
Tetracosane (C24)	79		79		40-140	0		25
Hexacosane (C26)	79		80		40-140	1		25
Octacosane (C28)	79		80		40-140	1		25
Triacontane (C30)	79		79		40-140	0		25
Hexatriacontane (C36)	76		74		40-140	3		25

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Chloro-Octadecane	72		74		40-140
o-Terphenyl	69		74		40-140
2-Fluorobiphenyl	71		77		40-140
2-Bromonaphthalene	76		83		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

# Lab Control Sample Analysis

## Batch Quality Control

Project Name: GE DUE DILIGENCE

Project Number: 60492342/5.1

Lab Number: L1611471

Report Date: 05/05/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 02-06 Batch: WG885792-1 WG885792-2								
C5-C8 Aliphatics	90		88		70-130	2		25
C9-C12 Aliphatics	97		95		70-130	2		25
C9-C10 Aromatics	93		91		70-130	1		25
Benzene	85		84		70-130	2		25
Toluene	86		84		70-130	2		25
Ethylbenzene	91		89		70-130	2		25
p/m-Xylene	90		88		70-130	2		25
o-Xylene	89		87		70-130	2		25
Methyl tert butyl ether	89		87		70-130	2		25
Naphthalene	93		92		70-130	2		25
1,2,4-Trimethylbenzene	93		91		70-130	1		25
Pentane	85		83		70-130	3		25
2-Methylpentane	94		92		70-130	2		25
2,2,4-Trimethylpentane	92		90		70-130	3		25
n-Nonane	92		89		30-130	3		25
n-Decane	92		91		70-130	1		25
n-Butylcyclohexane	95		93		70-130	3		25

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
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Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 02-06 Batch: WG885792-1 WG885792-2

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
2,5-Dibromotoluene-PID	95		92		70-130
2,5-Dibromotoluene-FID	109		103		70-130



## METALS

Project Name: GE DUE DILIGENCE

Lab Number: L1611471

Project Number: 60492342/5.1

Report Date: 05/05/16

## SAMPLE RESULTS

Lab ID: L1611471-02

Date Collected: 04/18/16 08:20

Client ID: MW-104

Date Received: 04/19/16

Sample Location: NECCO ST., SO. BOSTON

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	ND		mg/l	0.0050	--	1	04/20/16 09:05	04/21/16 01:06	EPA 3005A	97,6010C	PS
Barium, Total	0.084		mg/l	0.010	--	1	04/20/16 09:05	04/21/16 01:06	EPA 3005A	97,6010C	PS
Cadmium, Total	ND		mg/l	0.004	--	1	04/20/16 09:05	04/21/16 01:06	EPA 3005A	97,6010C	PS
Chromium, Total	ND		mg/l	0.01	--	1	04/20/16 09:05	04/21/16 01:06	EPA 3005A	97,6010C	PS
Lead, Total	ND		mg/l	0.010	--	1	04/20/16 09:05	04/21/16 01:06	EPA 3005A	97,6010C	PS
Mercury, Total	ND		mg/l	0.0002	--	1	04/20/16 09:27	04/20/16 12:39	EPA 7470A	97,7470A	JH
Selenium, Total	ND		mg/l	0.010	--	1	04/20/16 09:05	04/21/16 01:06	EPA 3005A	97,6010C	PS
Silver, Total	ND		mg/l	0.007	--	1	04/20/16 09:05	04/21/16 01:06	EPA 3005A	97,6010C	PS



Project Name: GE DUE DILIGENCE

Lab Number: L1611471

Project Number: 60492342/5.1

Report Date: 05/05/16

## SAMPLE RESULTS

Lab ID: L1611471-03

Date Collected: 04/18/16 10:00

Client ID: MW-102

Date Received: 04/19/16

Sample Location: NECCO ST., SO. BOSTON

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	ND		mg/l	0.005	--	1	04/20/16 09:05	04/21/16 01:11	EPA 3005A	97,6010C	PS
Barium, Total	0.384		mg/l	0.010	--	1	04/20/16 09:05	04/21/16 01:11	EPA 3005A	97,6010C	PS
Cadmium, Total	ND		mg/l	0.004	--	1	04/20/16 09:05	04/21/16 01:11	EPA 3005A	97,6010C	PS
Chromium, Total	ND		mg/l	0.0100	--	1	04/20/16 09:05	04/21/16 01:11	EPA 3005A	97,6010C	PS
Lead, Total	ND		mg/l	0.010	--	1	04/20/16 09:05	04/21/16 01:11	EPA 3005A	97,6010C	PS
Mercury, Total	ND		mg/l	0.0002	--	1	04/20/16 09:27	04/20/16 12:41	EPA 7470A	97,7470A	JH
Selenium, Total	ND		mg/l	0.010	--	1	04/20/16 09:05	04/21/16 01:11	EPA 3005A	97,6010C	PS
Silver, Total	ND		mg/l	0.007	--	1	04/20/16 09:05	04/21/16 01:11	EPA 3005A	97,6010C	PS



Project Name: GE DUE DILIGENCE

Lab Number: L1611471

Project Number: 60492342/5.1

Report Date: 05/05/16

## SAMPLE RESULTS

Lab ID: L1611471-04

Date Collected: 04/18/16 11:30

Client ID: MW-106

Date Received: 04/19/16

Sample Location: NECCO ST., SO. BOSTON

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	ND		mg/l	0.005	--	1	04/20/16 09:05	04/21/16 01:16	EPA 3005A	97,6010C	PS
Barium, Total	0.945		mg/l	0.010	--	1	04/20/16 09:05	04/21/16 01:16	EPA 3005A	97,6010C	PS
Cadmium, Total	ND		mg/l	0.004	--	1	04/20/16 09:05	04/21/16 01:16	EPA 3005A	97,6010C	PS
Chromium, Total	ND		mg/l	0.01	--	1	04/20/16 09:05	04/21/16 01:16	EPA 3005A	97,6010C	PS
Lead, Total	ND		mg/l	0.010	--	1	04/20/16 09:05	04/21/16 01:16	EPA 3005A	97,6010C	PS
Mercury, Total	ND		mg/l	0.0002	--	1	04/20/16 09:27	04/20/16 12:43	EPA 7470A	97,7470A	JH
Selenium, Total	ND		mg/l	0.010	--	1	04/20/16 09:05	04/21/16 01:16	EPA 3005A	97,6010C	PS
Silver, Total	ND		mg/l	0.007	--	1	04/20/16 09:05	04/21/16 01:16	EPA 3005A	97,6010C	PS



Project Name: GE DUE DILIGENCE

Lab Number: L1611471

Project Number: 60492342/5.1

Report Date: 05/05/16

## SAMPLE RESULTS

Lab ID: L1611471-05

Date Collected: 04/18/16 11:30

Client ID: MW-106/DUP

Date Received: 04/19/16

Sample Location: NECCO ST., SO. BOSTON

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	ND		mg/l	0.005	--	1	04/20/16 09:05	04/21/16 01:21	EPA 3005A	97,6010C	PS
Barium, Total	0.930		mg/l	0.010	--	1	04/20/16 09:05	04/21/16 01:21	EPA 3005A	97,6010C	PS
Cadmium, Total	ND		mg/l	0.004	--	1	04/20/16 09:05	04/21/16 01:21	EPA 3005A	97,6010C	PS
Chromium, Total	ND		mg/l	0.01	--	1	04/20/16 09:05	04/21/16 01:21	EPA 3005A	97,6010C	PS
Lead, Total	ND		mg/l	0.010	--	1	04/20/16 09:05	04/21/16 01:21	EPA 3005A	97,6010C	PS
Mercury, Total	ND		mg/l	0.0002	--	1	04/20/16 09:27	04/20/16 12:45	EPA 7470A	97,7470A	JH
Selenium, Total	ND		mg/l	0.010	--	1	04/20/16 09:05	04/21/16 01:21	EPA 3005A	97,6010C	PS
Silver, Total	ND		mg/l	0.007	--	1	04/20/16 09:05	04/21/16 01:21	EPA 3005A	97,6010C	PS



Project Name: GE DUE DILIGENCE

Lab Number: L1611471

Project Number: 60492342/5.1

Report Date: 05/05/16

## SAMPLE RESULTS

Lab ID: L1611471-06

Date Collected: 04/18/16 12:55

Client ID: MW-105

Date Received: 04/19/16

Sample Location: NECCO ST., SO. BOSTON

Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Westborough Lab											
Arsenic, Total	0.012		mg/l	0.005	--	1	04/20/16 09:05	04/21/16 01:25	EPA 3005A	97,6010C	PS
Barium, Total	0.329		mg/l	0.010	--	1	04/20/16 09:05	04/21/16 01:25	EPA 3005A	97,6010C	PS
Cadmium, Total	ND		mg/l	0.004	--	1	04/20/16 09:05	04/21/16 01:25	EPA 3005A	97,6010C	PS
Chromium, Total	ND		mg/l	0.01	--	1	04/20/16 09:05	04/21/16 01:25	EPA 3005A	97,6010C	PS
Lead, Total	ND		mg/l	0.010	--	1	04/20/16 09:05	04/21/16 01:25	EPA 3005A	97,6010C	PS
Mercury, Total	ND		mg/l	0.0002	--	1	04/20/16 09:27	04/20/16 12:46	EPA 7470A	97,7470A	JH
Selenium, Total	ND		mg/l	0.010	--	1	04/20/16 09:05	04/21/16 01:25	EPA 3005A	97,6010C	PS
Silver, Total	ND		mg/l	0.007	--	1	04/20/16 09:05	04/21/16 01:25	EPA 3005A	97,6010C	PS



Project Name: GE DUE DILIGENCE

Lab Number: L1611471

Project Number: 60492342/5.1

Report Date: 05/05/16

## Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 02-06 Batch: WG885384-1										
Arsenic, Total	ND		mg/l	0.005	--	1	04/20/16 09:05	04/21/16 00:08	97,6010C	PS
Barium, Total	ND		mg/l	0.010	--	1	04/20/16 09:05	04/21/16 00:08	97,6010C	PS
Cadmium, Total	ND		mg/l	0.004	--	1	04/20/16 09:05	04/21/16 00:08	97,6010C	PS
Chromium, Total	ND		mg/l	0.01	--	1	04/20/16 09:05	04/21/16 00:08	97,6010C	PS
Lead, Total	ND		mg/l	0.010	--	1	04/20/16 09:05	04/21/16 00:08	97,6010C	PS
Selenium, Total	ND		mg/l	0.010	--	1	04/20/16 09:05	04/21/16 00:08	97,6010C	PS
Silver, Total	ND		mg/l	0.007	--	1	04/20/16 09:05	04/21/16 00:08	97,6010C	PS

### Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Westborough Lab for sample(s): 02-06 Batch: WG885429-1										
Mercury, Total	ND		mg/l	0.0002	--	1	04/20/16 09:27	04/20/16 12:25	97,7470A	JH

### Prep Information

Digestion Method: EPA 7470A



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** GE DUE DILIGENCE

**Project Number:** 60492342/5.1

**Lab Number:** L1611471

**Report Date:** 05/05/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Total Metals - Westborough Lab Associated sample(s): 02-06 Batch: WG885384-2 WG885384-3								
Arsenic, Total	109		108		80-120	1		20
Barium, Total	99		100		80-120	1		20
Cadmium, Total	110		109		80-120	1		20
Chromium, Total	100		95		80-120	5		20
Lead, Total	107		106		80-120	1		20
Selenium, Total	112		111		80-120	1		20
Silver, Total	101		101		80-120	0		20

MCP Total Metals - Westborough Lab Associated sample(s): 02-06 Batch: WG885429-2 WG885429-3								
Mercury, Total	103		105		80-120	2		20



Project Name: GE DUE DILIGENCE

Project Number: 60492342/5.1

Lab Number: L1611471

Report Date: 05/05/16

## Sample Receipt and Container Information

Were project specific reporting limits specified? YES

## Cooler Information Custody Seal

Cooler

A Absent

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1611471-01A	Vial HCl preserved	A	N/A	2.1	Y	Absent	MCP-8260-10(14)
L1611471-01B	Vial HCl preserved	A	N/A	2.1	Y	Absent	MCP-8260-10(14)
L1611471-01H	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1611471-01I	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-MS-10(14),EPHD-GC-10(14)
L1611471-02A	Vial HCl preserved	A	N/A	2.1	Y	Absent	MCP-8260-10(14)
L1611471-02B	Vial HCl preserved	A	N/A	2.1	Y	Absent	MCP-8260-10(14)
L1611471-02C	Vial HCl preserved	A	N/A	2.1	Y	Absent	MCP-8260-10(14)
L1611471-02D	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-10(14)
L1611471-02E	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-10(14)
L1611471-02F	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-10(14)
L1611471-02G	Plastic 250ml HNO3 preserved	A	<2	2.1	Y	Absent	MCP-CR-6010T-10(180),MCP-7470T-10(28),MCP-AS-6010T-10(180),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-PB-6010T-10(180)
L1611471-02H	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-MS-10(14),EPH-DELUX-10(14),EPHD-GC-10(14)
L1611471-02I	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-MS-10(14),EPH-DELUX-10(14),EPHD-GC-10(14)
L1611471-03A	Vial HCl preserved	A	N/A	2.1	Y	Absent	MCP-8260-10(14)
L1611471-03B	Vial HCl preserved	A	N/A	2.1	Y	Absent	MCP-8260-10(14)
L1611471-03C	Vial HCl preserved	A	N/A	2.1	Y	Absent	MCP-8260-10(14)
L1611471-03D	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-10(14)
L1611471-03E	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-10(14)
L1611471-03F	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-10(14)
L1611471-03G	Plastic 250ml HNO3 preserved	A	<2	2.1	Y	Absent	MCP-CR-6010T-10(180),MCP-7470T-10(28),MCP-AS-6010T-10(180),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-PB-6010T-10(180)

\*Values in parentheses indicate holding time in days



Project Name: GE DUE DILIGENCE

Project Number: 60492342/5.1

Lab Number: L1611471

Report Date: 05/05/16

## Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1611471-03H	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-MS-10(14),EPH-DELUX-10(14),EPHD-GC-10(14)
L1611471-03I	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-MS-10(14),EPH-DELUX-10(14),EPHD-GC-10(14)
L1611471-04A	Vial HCl preserved	A	N/A	2.1	Y	Absent	MCP-8260-10(14)
L1611471-04B	Vial HCl preserved	A	N/A	2.1	Y	Absent	MCP-8260-10(14)
L1611471-04C	Vial HCl preserved	A	N/A	2.1	Y	Absent	MCP-8260-10(14)
L1611471-04D	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-10(14)
L1611471-04E	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-10(14)
L1611471-04F	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-10(14)
L1611471-04G	Plastic 250ml HNO3 preserved	A	<2	2.1	Y	Absent	MCP-CR-6010T-10(180),MCP-7470T-10(28),MCP-AS-6010T-10(180),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-PB-6010T-10(180)
L1611471-04H	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-MS-10(14),EPH-DELUX-10(14),EPHD-GC-10(14)
L1611471-04I	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-MS-10(14),EPH-DELUX-10(14),EPHD-GC-10(14)
L1611471-05A	Vial HCl preserved	A	N/A	2.1	Y	Absent	MCP-8260-10(14)
L1611471-05B	Vial HCl preserved	A	N/A	2.1	Y	Absent	MCP-8260-10(14)
L1611471-05C	Vial HCl preserved	A	N/A	2.1	Y	Absent	MCP-8260-10(14)
L1611471-05D	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-10(14)
L1611471-05E	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-10(14)
L1611471-05F	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-10(14)
L1611471-05G	Plastic 250ml HNO3 preserved	A	<2	2.1	Y	Absent	MCP-CR-6010T-10(180),MCP-7470T-10(28),MCP-AS-6010T-10(180),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-PB-6010T-10(180)
L1611471-05H	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-MS-10(14),EPH-DELUX-10(14),EPHD-GC-10(14)
L1611471-05I	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-MS-10(14),EPH-DELUX-10(14),EPHD-GC-10(14)
L1611471-06A	Vial HCl preserved	A	N/A	2.1	Y	Absent	MCP-8260-10(14)
L1611471-06B	Vial HCl preserved	A	N/A	2.1	Y	Absent	MCP-8260-10(14)
L1611471-06C	Vial HCl preserved	A	N/A	2.1	Y	Absent	MCP-8260-10(14)
L1611471-06D	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-10(14)
L1611471-06E	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-10(14)
L1611471-06F	Vial HCl preserved	A	N/A	2.1	Y	Absent	VPH-10(14)

\*Values in parentheses indicate holding time in days



**Project Name:** GE DUE DILIGENCE**Project Number:** 60492342/5.1**Lab Number:** L1611471**Report Date:** 05/05/16**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Analysis(*)</b>
L1611471-06G	Plastic 250ml HNO3 preserved	A	<2	2.1	Y	Absent	MCP-CR-6010T-10(180),MCP-7470T-10(28),MCP-AS-6010T-10(180),MCP-CD-6010T-10(180),MCP-AG-6010T-10(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),MCP-PB-6010T-10(180)
L1611471-06H	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-MS-10(14),EPH-DELUX-10(14),EPHD-GC-10(14)
L1611471-06I	Amber 1000ml HCl preserved	A	<2	2.1	Y	Absent	EPH-MS-10(14),EPH-DELUX-10(14),EPHD-GC-10(14)

\*Values in parentheses indicate holding time in days



**Project Name:** GE DUE DILIGENCE  
**Project Number:** 60492342/5.1

**Lab Number:** L1611471  
**Report Date:** 05/05/16

## GLOSSARY

### Acronyms

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).
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.
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.
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.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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.
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.

### 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

**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.

**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.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- 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).

**Report Format:** Data Usability Report



**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16**Data Qualifiers**

- 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.
- 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.
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where 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.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- ND** - Not detected at the reporting limit (RL) for the sample.

**Project Name:** GE DUE DILIGENCE**Lab Number:** L1611471**Project Number:** 60492342/5.1**Report Date:** 05/05/16

## REFERENCES

- 97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.
- 98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.
- 100 Method for the Determination of Volatile Petroleum Hydrocarbons (VPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of VPH under the Massachusetts Contingency Plan, WSC-CAM-IVA, July 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 524.2:** 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene

**EPA 624:** 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene

**EPA 625:** Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.

**EPA 1010A:** NPW: Ignitability

**EPA 6010C:** NPW: Strontium; SCM: Strontium

**EPA 8151A:** NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP

**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

**EPA 8270D:** NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene, 1,4-Diphenylhydrazine.

**EPA 9010:** NPW: Amenable Cyanide Distillation, Total Cyanide Distillation

**EPA 9038:** NPW: Sulfate

**EPA 9050A:** NPW: Specific Conductance

**EPA 9056:** NPW: Chloride, Nitrate, Sulfate

**EPA 9065:** NPW: Phenols

**EPA 9251:** NPW: Chloride

**SM3500:** NPW: Ferrous Iron

**SM4500:** NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

**SM5310C:** DW: Dissolved Organic Carbon

### Mansfield Facility

**EPA 8270D:** NPW: Biphenyl; SCM: Biphenyl, Caprolactam

**EPA 8270D-SIM Isotope Dilution:** SCM: 1,4-Dioxane

**SM 2540D:** TSS

**SM2540G:** SCM: Percent Solids

**EPA 1631E:** SCM: Mercury

**EPA 7474:** SCM: Mercury

**EPA 8081B:** NPW and SCM: Mirex, Hexachlorobenzene.

**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.

**EPA 8270-SIM:** NPW and SCM: Alkylated PAHs.

**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, n-Butylbenzene, n-Propylbenzene, sec-Butylbenzene, tert-Butylbenzene.

**Biological Tissue Matrix:** **8270D-SIM; 3050B; 3051A; 7471B; 8081B; 8082A; 6020A:** Lead; **8270D:** bis(2-ethylhexyl)phthalate, Butylbenzylphthalate, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Di-n-octyl phthalate, Fluoranthene, Pentachlorophenol.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

### Drinking Water

**EPA 200.8:** Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, Ti; **EPA 200.7:** Ba, Be, Ca, Cd, Cr, Cu, Na; **EPA 245.1:** Mercury;

**EPA 300.0:** 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, SM4500CI-D, SM2320B, SM2540C, SM4500H-B**

**EPA 332:** Perchlorate.

**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

### Non-Potable Water

**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, Ti, Zn;

**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, Ti, Tl, V, Zn;

**EPA 245.1, SM4500H-B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, EPA**

**350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **SM4500NO3-F,**

**EPA 353.2:** Nitrate-N, **SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D,**

**EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**

**EPA 624:** Volatile Halocarbons & Aromatics,

**EPA 608:** 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:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF.**

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





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

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

# CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 4/19/16

ALPHA Job #: L 1611471

## Project Information

Project Name: BE Due Diligence  
Project Location: Necco St, So. Boston  
Project #: 60492342/ 5.1  
Project Manager: J. Leclair  
ALPHA Quote #:

## Turn-Around Time

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

Date Due: 48 HR

## 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

## Client Information

Client: AECOM  
Address: 1155 Elm St Suite 401  
Manchester, NH 03101  
Phone: (603) 606-4800  
Email: jrdith.leclair@aecom.com

Additional Project Information:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials	ANALYSIS													TOTAL # BOTTLES																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
		Date	Time			VOC: <input checked="" type="checkbox"/>	SVOC: <input type="checkbox"/>	METALS: <input type="checkbox"/>	METALS: <input type="checkbox"/>	EPH: <input checked="" type="checkbox"/>	VPH: <input type="checkbox"/>	PCB: <input type="checkbox"/>	TPH: <input type="checkbox"/>																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															

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<sub>3</sub>  
D= H<sub>2</sub>SO<sub>4</sub>  
E= NaOH  
F= MeOH  
G= NaHSO<sub>4</sub>  
H= Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>  
I= Ascorbic Acid  
J= NH<sub>4</sub>Cl  
K= Zn Acetate  
O= Other

Container Type V

PAV

Preservative B

CB B

Relinquished By:

Date/Time

Received By:

Date/Time

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

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







7A  
Volatile Organics CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1611471

Instrument ID: Jack.i Calibration Date: 21-APR-2016 Time: 04:39

Lab File ID: 0421A02 Init. Calib. Date(s): 13-APR-2 14-APR-2

Sample No: CCAL-2 Init. Calib. Times : 21:00 00:16

Compound	RRF	RRF	MIN RRF	%D	MAX %D	
=====	=====	=====	=====	=====	=====	
dichlorodifluoromethane	.35451	.3174	.1	-10	20	
chloromethane	.28658	.22269	.1	-22	20	F
vinyl chloride	.33848	.33529	.1	-1	20	
bromomethane	.25584	.25469	.1	0	20	
chloroethane	.20364	.21967	.1	8	20	
trichlorofluoromethane	.80864	.72247	.1	-11	20	
ethyl ether	.21118	.20806	.05	-1	20	
1,1,-dichloroethene	.45144	.41853	.1	-7	20	
carbon disulfide	.98373	.86705	.1	-12	20	
freon-113	.51074	.5031	.1	-1	20	
iodomethane	.48808	.26162	.05	-46	20	F
acrolein	.03528	.04145	.05	17	20	F
methylene chloride	.32761	.35942	.1	10	20	
acetone	100	112	.1	12	20	
trans-1,2-dichloroethene	.48793	.44636	.1	-9	20	
methyl acetate	.17934	.19742	.1	10	20	
methyl tert butyl ether	1.0048	.96333	.1	-4	20	
tert butyl alcohol	.02216	.02255	.05	2	20	F
Diisopropyl Ether	1.4026	1.3351	.01	-5	20	
1,1-dichloroethane	.70979	.68809	.2	-3	20	
acrylonitrile	.08395	.09276	.05	10	20	
Halothane	.42287	.36671	.05	-13	20	
Ethyl-Tert-Butyl-Ether	1.1270	1.0707	.05	-5	20	
vinyl acetate	.7493	.816	.05	9	20	
cis-1,2-dichloroethene	.49258	.4589	.1	-7	20	
2,2-dichloropropane	.53141	.49912	.05	-6	20	
cyclohexane	.73788	.66641	.01	-10	30	
bromochloromethane	.24882	.24501	.05	-2	20	
chloroform	.75947	.68085	.2	-10	20	
carbontetrachloride	.67366	.59852	.1	-11	20	
tetrahydrofuran	.09524	.09618	.05	1	20	
ethyl acetate	.28492	.28122	.05	-1	20	
1,1,1-trichloroethane	.73265	.65487	.1	-11	20	
1,1-dichloropropene	.54567	.49684	.05	-9	20	
2-butanone	.11956	.11717	.1	-2	20	
benzene	1.7184	1.5748	.5	-8	20	
Tertiary-Amyl Methyl Ether	.93537	.90047	.05	-4	20	
1,2-dichloroethane	.45878	.44176	.1	-4	20	

FORM VII MCP-8260-10

7A  
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1611471

Instrument ID: Jack.i Calibration Date: 21-APR-2016 Time: 04:39

Lab File ID: 0421A02 Init. Calib. Date(s): 13-APR-2 14-APR-2

Sample No: CCAL-2 Init. Calib. Times : 21:00 00:16

Compound	RRF	RRF	MIN RRF	%D	MAX %D	
=====	=====	=====	=====	=====	=====	
methyl cyclohexane	.80733	.63671	.01	-21	30	
trichloroethene	.48139	.43466	.2	-10	20	
dibromomethane	.22171	.21176	.05	-4	20	
1,2-dichloropropane	.36675	.36532	.1	0	20	
bromodichloromethane	.48339	.44967	.2	-7	20	
1,4-dioxane	.00207	.00182	.05	-12	20	F
2-chloroethylvinyl ether	.18762	.18436	.05	-2	20	
cis-1,3-dichloropropene	.53067	.52633	.2	-1	20	
toluene	1.8340	1.5255	.4	-17	20	
tetrachloroethene	.91482	.78364	.2	-14	20	
4-methyl-2-pentanone	.07816	.08327	.1	7	20	F
trans-1,3-dichloropropene	.70061	.59683	.1	-15	20	
1,1,2-trichloroethane	.38436	.36707	.1	-4	20	
ethyl-methacrylate	.5166	.49061	.01	-5	30	
chlorodibromomethane	.57701	.52262	.1	-9	20	
1,3-dichloropropane	.74354	.70022	.05	-6	20	
1,2-dibromoethane	.47261	.4471	.1	-5	20	
2-hexanone	.22429	.22153	.1	-1	20	
chlorobenzene	1.6390	1.4520	.5	-11	20	
ethyl benzene	2.4622	2.1499	.1	-13	20	
1,1,1,2-tetrachloroethane	.59173	.55596	.05	-6	20	
p/m xylene	1.0073	.85381	.1	-15	20	
o xylene	.93725	.76986	.3	-18	20	
bromoform	.52355	.57834	.1	10	20	
styrene	1.3451	1.2026	.3	-11	20	
isopropylbenzene	5.0779	5.1456	.1	1	20	
bromobenzene	1.2004	1.2735	.05	6	20	
1,4-dichlorobutane	100	125	.01	25	0	F
n-propylbenzene	5.1777	4.5672	.05	-12	20	
1,1,2,2,-tetrachloroethane	.70089	.72461	.3	3	20	
4-ethyltoluene	4.9339	4.1807	.05	-15	20	
2-chlorotoluene	3.5549	3.2237	.05	-9	20	
1,2,3-trichloropropane	.53874	.57533	.05	7	20	
1,3,5-trimethybenzene	3.9808	3.3465	.05	-16	20	
trans-1,4-dichloro-2-butene	.18904	.18192	.05	-4	20	
4-chlorotoluene	2.9951	2.8799	.05	-4	20	
tert-butylbenzene	3.6898	2.8282	.05	-23	20	F
1,2,4-trimethylbenzene	3.6759	3.1178	.05	-15	20	

FORM VII MCP-8260-10



7A  
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1611471

Instrument ID: Jack.i Calibration Date: 21-APR-2016 Time: 04:22

Lab File ID: 0421A01 Init. Calib. Date(s): 13-APR-2 14-APR-2

Sample No: CCAL-1 Init. Calib. Times : 20:44 00:00

Compound	RRF	RRF	MIN RRF	%D	MAX %D	
=====	=====	=====	=====	=====	=====	
dichlorodifluoromethane	.33636	.34914	.1	4	20	
chloromethane	.36585	.38579	.1	5	20	
vinyl chloride	.33904	.36376	.1	7	20	
bromomethane	100	84.478	.1	-16	20	
chloroethane	.24687	.23976	.1	-3	20	
trichlorofluoromethane	.57479	.59588	.1	4	20	
ethyl ether	.1433	.14084	.05	-2	20	
1,1,-dichloroethene	.3405	.37194	.1	9	20	
carbon disulfide	.86113	.76237	.1	-11	20	
freon-113	.37655	.42571	.1	13	20	
iodomethane	.67898	.29449	.05	-57	20	F
acrolein	.03051	.03395	.05	11	20	F
methylene chloride	.34362	.35221	.1	3	20	
acetone	100	109	.1	9	20	
trans-1,2-dichloroethene	.37139	.39445	.1	6	20	
methyl acetate	.12592	.13395	.1	6	20	
methyl tert butyl ether	.64046	.64576	.1	1	20	
tert butyl alcohol	.01475	.0139	.05	-6	20	F
Diisopropyl Ether	1.1207	1.1172	.01	0	20	
1,1-dichloroethane	.54876	.58741	.2	7	20	
acrylonitrile	100	104	.05	4	20	
Halothane	.3139	.32064	.05	2	20	
Ethyl-Tert-Butyl-Ether	.77367	.79118	.05	2	20	
vinyl acetate	.53932	.53746	.05	0	20	
cis-1,2-dichloroethene	.37155	.40633	.1	9	20	
2,2-dichloropropane	.42429	.44012	.05	4	20	
cyclohexane	.57737	.58846	.01	2	30	
bromochloromethane	.18624	.18872	.05	1	20	
chloroform	.5891	.58375	.2	-1	20	
carbontetrachloride	.51204	.50279	.1	-2	20	
tetrahydrofuran	100	106	.05	6	20	
ethyl acetate	.17004	.17018	.05	0	20	
1,1,1-trichloroethane	.56866	.57141	.1	0	20	
1,1-dichloropropene	.43859	.44252	.05	1	20	
2-butanone	.07148	.08007	.1	12	20	F
benzene	1.3895	1.4274	.5	3	20	
Tertiary-Amyl Methyl Ether	.66296	.62856	.05	-5	20	
1,2-dichloroethane	.34104	.34613	.1	1	20	

FORM VII MCP-8260-10

7A  
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1611471

Instrument ID: Jack.i Calibration Date: 21-APR-2016 Time: 04:22

Lab File ID: 0421A01 Init. Calib. Date(s): 13-APR-2 14-APR-2

Sample No: CCAL-1 Init. Calib. Times : 20:44 00:00

Compound	RRF	RRF	MIN RRF	%D	MAX %D
=====	=====	=====	=====	=====	=====
methyl cyclohexane	.70431	.65501	.01	-7	30
trichloroethene	.41579	.40759	.2	-2	20
dibromomethane	.17028	.16855	.05	-1	20
1,2-dichloropropane	.30361	.31434	.1	4	20
bromodichloromethane	.41813	.39065	.2	-7	20
1,4-dioxane	.00242	.00213	.05	-12	20
2-chloroethylvinyl ether	.14943	.13006	.05	-13	20
cis-1,3-dichloropropene	.47546	.43415	.2	-9	20
toluene	1.0700	1.0919	.4	2	20
tetrachloroethene	.57604	.6037	.2	5	20
4-methyl-2-pentanone	100	88.294	.1	-12	20
trans-1,3-dichloropropene	100	81.940	.1	-18	20
1,1,2-trichloroethane	.20317	.21666	.1	7	20
ethyl-methacrylate	.26016	.24864	.01	-4	30
chlorodibromomethane	100	81.728	.1	-18	20
1,3-dichloropropane	.38318	.4189	.05	9	20
1,2-dibromoethane	.2719	.27881	.1	3	20
2-hexanone	.11915	.11098	.1	-7	20
chlorobenzene	1.4114	1.3745	.5	-3	20
ethyl benzene	2.2361	2.2026	.1	-2	20
1,1,1,2-tetrachloroethane	.45374	.43132	.05	-5	20
p/m xylene	.99855	.98729	.1	-1	20
o xylene	.97971	.94995	.3	-3	20
bromoform	100	83.366	.1	-17	20
styrene	1.5423	1.4953	.3	-3	20
isopropylbenzene	3.9756	3.8052	.1	-4	20
bromobenzene	.99675	1.0089	.05	1	20
1,4-dichlorobutane	.70334	.66343	.01	-6	30
n-propylbenzene	4.3924	3.9535	.05	-10	20
1,1,2,2,-tetrachloroethane	.48226	.48888	.3	1	20
4-ethyltoluene	4.2588	3.9074	.05	-8	20
2-chlorotoluene	2.9432	2.7685	.05	-6	20
1,2,3-trichloropropane	.3576	.3495	.05	-2	20
1,3,5-trimethylbenzene	3.3869	3.0674	.05	-9	20
trans-1,4-dichloro-2-butene	.12951	.11402	.05	-12	20
4-chlorotoluene	2.5547	2.4670	.05	-3	20
tert-butylbenzene	3.0935	2.6716	.05	-14	20
1,2,4-trimethylbenzene	3.3559	3.1690	.05	-6	20

F

FORM VII MCP-8260-10







## ANALYTICAL REPORT

Lab Number:	L2101624
Client:	Haley & Aldrich, Inc. 465 Medford Street, Suite 2200 Charlestown, MA 02129-1400
ATTN:	Lee Penwell
Phone:	(617) 886-7359
Project Name:	15 NECCO
Project Number:	133860-003
Report Date:	01/18/21

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

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

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



**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L2101624-01	OW-22_2021_0112	WATER	BOSTON, MA	01/12/21 13:40	01/12/21

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

### 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.

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**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

### Case Narrative (continued)

#### Microextractables

The WG1454467-2 LCS recovery for 1,2-dibromoethane (78%), associated with L2101624-01 (OW-22\_2021\_0112), is outside Alpha's acceptance criteria, but within the acceptance criteria specified in the method.

The WG1454467-3 MS recovery for 1,2-dibromoethane (73%), performed on L2101624-01 (OW-22\_2021\_0112), is outside Alpha's acceptance criteria, but within the acceptance criteria specified in the method.

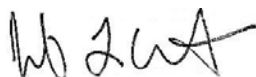
#### Total Metals

L2101624-01 (OW-22\_2021\_0112): The sample has elevated detection limits for all elements analyzed by Method 200.8 due to the dilution required by the high concentrations of non-target elements.

The WG1454429-1 Method Blank, associated with L2101624-01 (OW-22\_2021\_0112), has a concentration above the reporting limit for iron. Since the associated sample concentration is greater than 10x the blank concentration for this analyte, no corrective action is required.

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

Authorized Signature:



Jennifer L. Clements

Title: Technical Director/Representative

Date: 01/18/21

# ORGANICS

# **VOLATILES**

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

**SAMPLE RESULTS**

**Lab ID:** L2101624-01  
**Client ID:** OW-22\_2021\_0112  
**Sample Location:** BOSTON, MA

**Date Collected:** 01/12/21 13:40  
**Date Received:** 01/12/21  
**Field Prep:** Refer to COC

**Sample Depth:**

**Matrix:** Water  
**Analytical Method:** 128,624.1  
**Analytical Date:** 01/17/21 15:59  
**Analyst:** AJK

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:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

**SAMPLE RESULTS**

**Lab ID:** L2101624-01  
**Client ID:** OW-22\_2021\_0112  
**Sample Location:** BOSTON, MA

**Date Collected:** 01/12/21 13:40  
**Date Received:** 01/12/21  
**Field Prep:** Refer to COC

**Sample Depth:**

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	98		60-140
Fluorobenzene	75		60-140
4-Bromofluorobenzene	97		60-140



**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

**SAMPLE RESULTS**

**Lab ID:** L2101624-01  
**Client ID:** OW-22\_2021\_0112  
**Sample Location:** BOSTON, MA

**Date Collected:** 01/12/21 13:40  
**Date Received:** 01/12/21  
**Field Prep:** Refer to COC

**Sample Depth:**

**Matrix:** Water  
**Analytical Method:** 128,624.1-SIM  
**Analytical Date:** 01/17/21 15:59  
**Analyst:** AJK

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

1,4-Dioxane	ND		ug/l	50	--	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	78		60-140
4-Bromofluorobenzene	103		60-140

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

**SAMPLE RESULTS**

**Lab ID:** L2101624-01  
**Client ID:** OW-22\_2021\_0112  
**Sample Location:** BOSTON, MA

**Date Collected:** 01/12/21 13:40  
**Date Received:** 01/12/21  
**Field Prep:** Refer to COC

**Sample Depth:**

**Matrix:** Water  
**Analytical Method:** 14,504.1  
**Analytical Date:** 01/13/21 11:11  
**Analyst:** AMM

**Extraction Method:** EPA 504.1  
**Extraction Date:** 01/13/21 09:37

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

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 14,504.1  
Analytical Date: 01/13/21 10:56  
Analyst: AMM

Extraction Method: EPA 504.1  
Extraction Date: 01/13/21 09:37

Parameter	Result	Qualifier	Units	RL	MDL
Microextractables by GC - Westborough Lab for sample(s): 01 Batch: WG1454467-1					
1,2-Dibromoethane	ND		ug/l	0.010	-- B

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

### Method Blank Analysis Batch Quality Control

Analytical Method: 128,624.1-SIM  
 Analytical Date: 01/17/21 15:22  
 Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1456095-4					
1,4-Dioxane	ND		ug/l	50	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	78		60-140
4-Bromofluorobenzene	107		60-140

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

### Method Blank Analysis Batch Quality Control

Analytical Method: 128,624.1  
 Analytical Date: 01/17/21 15:22  
 Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1456098-4					
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:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 128,624.1  
 Analytical Date: 01/17/21 15:22  
 Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1456098-4					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	96		60-140
Fluorobenzene	75		60-140
4-Bromofluorobenzene	98		60-140

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>	<b>Column</b>
Microextractables by GC - Westborough Lab Associated sample(s): 01 Batch: WG1454467-2									
1,2-Dibromoethane	78	Q	-		80-120	-			B

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** 15 NECCO**Project Number:** 133860-003**Lab Number:** L2101624**Report Date:** 01/18/21

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1456095-3								
1,4-Dioxane	76		-		60-140	-		20

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
Fluorobenzene	76				60-140
4-Bromofluorobenzene	104				60-140



# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** 15 NECCO

**Project Number:** 133860-003

**Lab Number:** L2101624

**Report Date:** 01/18/21

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: WG1456098-3								
Methylene chloride	95		-		60-140	-		28
1,1-Dichloroethane	95		-		50-150	-		49
Carbon tetrachloride	90		-		70-130	-		41
1,1,2-Trichloroethane	100		-		70-130	-		45
Tetrachloroethene	115		-		70-130	-		39
1,2-Dichloroethane	80		-		70-130	-		49
1,1,1-Trichloroethane	90		-		70-130	-		36
Benzene	80		-		65-135	-		61
Toluene	110		-		70-130	-		41
Ethylbenzene	110		-		60-140	-		63
Vinyl chloride	70		-		5-195	-		66
1,1-Dichloroethene	85		-		50-150	-		32
cis-1,2-Dichloroethene	100		-		60-140	-		30
Trichloroethene	70		-		65-135	-		48
1,2-Dichlorobenzene	95		-		65-135	-		57
1,3-Dichlorobenzene	90		-		70-130	-		43
1,4-Dichlorobenzene	90		-		65-135	-		57
p/m-Xylene	108		-		60-140	-		30
o-xylene	100		-		60-140	-		30
Acetone	76		-		40-160	-		30
Methyl tert butyl ether	80		-		60-140	-		30
Tert-Butyl Alcohol	82		-		60-140	-		30
Tertiary-Amyl Methyl Ether	60		-		60-140	-		30

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1456098-3								

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
Pentafluorobenzene	96				60-140
Fluorobenzene	74				60-140
4-Bromofluorobenzene	97				60-140

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

<i>Parameter</i>	<i>Native Sample</i>	<i>MS Added</i>	<i>MS Found</i>	<i>MS %Recovery</i>	<i>Qual</i>	<i>MSD Found</i>	<i>MSD %Recovery</i>	<i>Qual</i>	<i>Recovery Limits</i>	<i>RPD</i>	<i>Qual</i>	<i>RPD Limits</i>	<i>Column</i>
Microextractables by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1454467-3 QC Sample: L2101624-01 Client ID: OW-22_2021_0112													
1,2-Dibromoethane	ND	0.246	0.179	73	Q	-	-		80-120	-		20	B

# SEMIVOLATILES

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

**SAMPLE RESULTS**

**Lab ID:** L2101624-01  
**Client ID:** OW-22\_2021\_0112  
**Sample Location:** BOSTON, MA

**Date Collected:** 01/12/21 13:40  
**Date Received:** 01/12/21  
**Field Prep:** Refer to COC

**Sample Depth:**

**Matrix:** Water  
**Analytical Method:** 129,625.1  
**Analytical Date:** 01/14/21 00:16  
**Analyst:** SZ

**Extraction Method:** EPA 625.1  
**Extraction Date:** 01/12/21 23:48

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	67		42-122
2-Fluorobiphenyl	69		46-121
4-Terphenyl-d14	71		47-138

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

**SAMPLE RESULTS**

**Lab ID:** L2101624-01  
**Client ID:** OW-22\_2021\_0112  
**Sample Location:** BOSTON, MA

**Date Collected:** 01/12/21 13:40  
**Date Received:** 01/12/21  
**Field Prep:** Refer to COC

**Sample Depth:**

**Matrix:** Water  
**Analytical Method:** 129,625.1-SIM  
**Analytical Date:** 01/14/21 14:21  
**Analyst:** DV

**Extraction Method:** EPA 625.1  
**Extraction Date:** 01/12/21 23:48

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	53		25-87
Phenol-d6	45		16-65
Nitrobenzene-d5	80		42-122
2-Fluorobiphenyl	81		46-121
2,4,6-Tribromophenol	93		45-128
4-Terphenyl-d14	87		47-138

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 129,625.1  
 Analytical Date: 01/13/21 23:50  
 Analyst: SZ

Extraction Method: EPA 625.1  
 Extraction Date: 01/12/21 23:48

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1454310-1					
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	65		42-122
2-Fluorobiphenyl	68		46-121
4-Terphenyl-d14	73		47-138

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 129,625.1-SIM  
**Analytical Date:** 01/14/21 14:05  
**Analyst:** DV

**Extraction Method:** EPA 625.1  
**Extraction Date:** 01/12/21 23:48

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1454311-1					
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	49		25-87
Phenol-d6	40		16-65
Nitrobenzene-d5	82		42-122
2-Fluorobiphenyl	82		46-121
2,4,6-Tribromophenol	88		45-128
4-Terphenyl-d14	93		47-138



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

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: WG1454310-2								
Bis(2-ethylhexyl)phthalate	103		-		29-137	-		82
Butyl benzyl phthalate	89		-		1-140	-		60
Di-n-butylphthalate	92		-		8-120	-		47
Di-n-octylphthalate	98		-		19-132	-		69
Diethyl phthalate	88		-		1-120	-		100
Dimethyl phthalate	88		-		1-120	-		183

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	94				42-122
2-Fluorobiphenyl	84				46-121
4-Terphenyl-d14	82				47-138

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** 15 NECCO

**Project Number:** 133860-003

**Lab Number:** L2101624

**Report Date:** 01/18/21

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1454311-2								
Acenaphthene	84		-		60-132	-		30
Fluoranthene	90		-		43-121	-		30
Naphthalene	78		-		36-120	-		30
Benzo(a)anthracene	96		-		42-133	-		30
Benzo(a)pyrene	86		-		32-148	-		30
Benzo(b)fluoranthene	90		-		42-140	-		30
Benzo(k)fluoranthene	92		-		25-146	-		30
Chrysene	85		-		44-140	-		30
Acenaphthylene	96		-		54-126	-		30
Anthracene	88		-		43-120	-		30
Benzo(ghi)perylene	88		-		1-195	-		30
Fluorene	85		-		70-120	-		30
Phenanthrene	84		-		65-120	-		30
Dibenzo(a,h)anthracene	91		-		1-200	-		30
Indeno(1,2,3-cd)pyrene	97		-		1-151	-		30
Pyrene	89		-		70-120	-		30
Pentachlorophenol	55		-		38-152	-		30

# **Lab Control Sample Analysis** **Batch Quality Control**

**Project Name:** 15 NECCO

**Project Number:** 133860-003

**Lab Number:** L2101624

**Report Date:** 01/18/21

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
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Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1454311-2

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
2-Fluorophenol	54				25-87
Phenol-d6	44				16-65
Nitrobenzene-d5	86				42-122
2-Fluorobiphenyl	84				46-121
2,4,6-Tribromophenol	94				45-128
4-Terphenyl-d14	90				47-138

# PCBS

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

**SAMPLE RESULTS**

**Lab ID:** L2101624-01  
**Client ID:** OW-22\_2021\_0112  
**Sample Location:** BOSTON, MA

**Date Collected:** 01/12/21 13:40  
**Date Received:** 01/12/21  
**Field Prep:** Refer to COC

**Sample Depth:**

**Matrix:** Water  
**Analytical Method:** 127,608.3  
**Analytical Date:** 01/13/21 22:02  
**Analyst:** CW

**Extraction Method:** EPA 608.3  
**Extraction Date:** 01/13/21 02:48  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 01/13/21  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 01/13/21

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	72		37-123	B
Decachlorobiphenyl	71		38-114	B
2,4,5,6-Tetrachloro-m-xylene	67		37-123	A
Decachlorobiphenyl	61		38-114	A

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

### Method Blank Analysis Batch Quality Control

Analytical Method: 127,608.3  
 Analytical Date: 01/13/21 13:59  
 Analyst: CW

Extraction Method: EPA 608.3  
 Extraction Date: 01/12/21 15:17  
 Cleanup Method: EPA 3665A  
 Cleanup Date: 01/12/21  
 Cleanup Method: EPA 3660B  
 Cleanup Date: 01/13/21

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG1454182-1						
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	64		37-123	B
Decachlorobiphenyl	73		38-114	B
2,4,5,6-Tetrachloro-m-xylene	60		37-123	A
Decachlorobiphenyl	60		38-114	A

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>	<b>Column</b>
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG1454182-2									
Aroclor 1016	62		-		50-140	-		36	A
Aroclor 1260	62		-		8-140	-		38	A

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>	<b>Column</b>
2,4,5,6-Tetrachloro-m-xylene	56				37-123	B
Decachlorobiphenyl	73				38-114	B
2,4,5,6-Tetrachloro-m-xylene	53				37-123	A
Decachlorobiphenyl	61				38-114	A

## METALS



**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

**SAMPLE RESULTS**

Lab ID: L2101624-01  
 Client ID: OW-22\_2021\_0112  
 Sample Location: BOSTON, MA

Date Collected: 01/12/21 13:40  
 Date Received: 01/12/21  
 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
<b>Total Metals - Mansfield Lab</b>											
Antimony, Total	ND		mg/l	0.04000	--	10	01/13/21 08:42	01/13/21 12:27	EPA 3005A	3,200.8	AM
Arsenic, Total	ND		mg/l	0.01000	--	10	01/13/21 08:42	01/13/21 12:27	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00200	--	10	01/13/21 08:42	01/13/21 12:27	EPA 3005A	3,200.8	AM
Chromium, Total	ND		mg/l	0.01000	--	10	01/13/21 08:42	01/13/21 12:27	EPA 3005A	3,200.8	AM
Copper, Total	ND		mg/l	0.01000	--	10	01/13/21 08:42	01/13/21 12:27	EPA 3005A	3,200.8	AM
Iron, Total	0.901		mg/l	0.050	--	1	01/13/21 08:42	01/15/21 10:30	EPA 3005A	19,200.7	EW
Lead, Total	ND		mg/l	0.01000	--	10	01/13/21 08:42	01/13/21 12:27	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	01/13/21 09:26	01/14/21 21:45	EPA 245.1	3,245.1	VW
Nickel, Total	ND		mg/l	0.02000	--	10	01/13/21 08:42	01/13/21 12:27	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.05000	--	10	01/13/21 08:42	01/13/21 12:27	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00400	--	10	01/13/21 08:42	01/13/21 12:27	EPA 3005A	3,200.8	AM
Zinc, Total	ND		mg/l	0.1000	--	10	01/13/21 08:42	01/13/21 12:27	EPA 3005A	3,200.8	AM
<b>General Chemistry - Mansfield Lab</b>											
Chromium, Trivalent	ND		mg/l	0.010	--	1		01/13/21 12:27	NA	107,-	



**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

## 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: WG1454428-1										
Antimony, Total	ND		mg/l	0.00400	--	1	01/13/21 08:42	01/13/21 11:58	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	01/13/21 08:42	01/13/21 11:58	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	01/13/21 08:42	01/13/21 11:58	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	01/13/21 08:42	01/13/21 11:58	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	01/13/21 08:42	01/13/21 11:58	3,200.8	AM
Lead, Total	ND		mg/l	0.00100	--	1	01/13/21 08:42	01/13/21 11:58	3,200.8	AM
Nickel, Total	ND		mg/l	0.00200	--	1	01/13/21 08:42	01/13/21 11:58	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	01/13/21 08:42	01/13/21 11:58	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	01/13/21 08:42	01/13/21 11:58	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	01/13/21 08:42	01/13/21 11:58	3,200.8	AM

### 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: WG1454429-1										
Iron, Total	0.066		mg/l	0.050	--	1	01/13/21 08:42	01/15/21 10:20	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: WG1454433-1										
Mercury, Total	ND		mg/l	0.00020	--	1	01/13/21 09:26	01/14/21 21:39	3,245.1	VW

### Prep Information

Digestion Method: EPA 245.1



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1454428-2								
Antimony, Total	95		-		85-115	-		
Arsenic, Total	95		-		85-115	-		
Cadmium, Total	96		-		85-115	-		
Chromium, Total	88		-		85-115	-		
Copper, Total	89		-		85-115	-		
Lead, Total	96		-		85-115	-		
Nickel, Total	88		-		85-115	-		
Selenium, Total	94		-		85-115	-		
Silver, Total	91		-		85-115	-		
Zinc, Total	94		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1454429-2								
Iron, Total	99		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1454433-2								
Mercury, Total	101		-		85-115	-		

# **Matrix Spike Analysis** **Batch Quality Control**

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

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 QC Batch ID: WG1454428-3 QC Sample: L2101624-01 Client ID: OW-22_2021_0112												
Antimony, Total	ND	0.5	0.4836	97		-	-		70-130	-		20
Arsenic, Total	ND	0.12	0.1293	108		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.04698	92		-	-		70-130	-		20
Chromium, Total	ND	0.2	0.1861	93		-	-		70-130	-		20
Copper, Total	ND	0.25	0.2432	97		-	-		70-130	-		20
Lead, Total	ND	0.51	0.6096	120		-	-		70-130	-		20
Nickel, Total	ND	0.5	0.4558	91		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.09027	75		-	-		70-130	-		20
Silver, Total	ND	0.05	0.04835	97		-	-		70-130	-		20
Zinc, Total	ND	0.5	0.4571	91		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1454429-3 QC Sample: L2101624-01 Client ID: OW-22_2021_0112												
Iron, Total	0.901	1	1.77	87		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1454433-3 QC Sample: L2101624-01 Client ID: OW-22_2021_0112												
Mercury, Total	ND	0.005	0.00461	92		-	-		70-130	-		20

# Lab Duplicate Analysis

*Batch Quality Control*

Project Name: 15 NECCO

Project Number: 133860-003

Lab Number: L2101624

Report Date: 01/18/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1454428-4 QC Sample: L2101624-01 Client ID: OW-22_2021_0112						
Antimony, Total	ND	ND	mg/l	NC		20
Arsenic, Total	ND	ND	mg/l	NC		20
Cadmium, Total	ND	ND	mg/l	NC		20
Chromium, Total	ND	ND	mg/l	NC		20
Copper, Total	ND	ND	mg/l	NC		20
Lead, Total	ND	ND	mg/l	NC		20
Nickel, Total	ND	ND	mg/l	NC		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1454429-4 QC Sample: L2101624-01 Client ID: OW-22_2021_0112						
Iron, Total	0.901	0.822	mg/l	9		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1454433-4 QC Sample: L2101624-01 Client ID: OW-22_2021_0112						
Mercury, Total	ND	ND	mg/l	NC		20

# **INORGANICS & MISCELLANEOUS**

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

### SAMPLE RESULTS

**Lab ID:** L2101624-01  
**Client ID:** OW-22\_2021\_0112  
**Sample Location:** BOSTON, MA

**Date Collected:** 01/12/21 13:40  
**Date Received:** 01/12/21  
**Field Prep:** Refer to COC

**Sample Depth:**  
**Matrix:** Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Solids, Total Suspended	15.		mg/l	5.0	NA	1	-	01/13/21 14:35	121,2540D	AC
Cyanide, Total	ND		mg/l	0.005	--	1	01/12/21 22:30	01/13/21 10:57	121,4500CN-CE	CR
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	01/12/21 23:22	121,4500CL-D	AS
Nitrogen, Ammonia	3.67		mg/l	0.075	--	1	01/13/21 10:30	01/13/21 21:30	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.40	--	1.1	01/14/21 18:30	01/14/21 19:30	74,1664A	TL
Phenolics, Total	ND		mg/l	0.030	--	1	01/13/21 07:15	01/13/21 11:32	4,420.1	KP
Chromium, Hexavalent	ND		mg/l	0.010	--	1	01/13/21 04:40	01/13/21 05:04	1,7196A	AW
<b>Anions by Ion Chromatography - Westborough Lab</b>										
Chloride	11600		mg/l	125	--	250	-	01/13/21 20:10	44,300.0	AT



**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

**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: WG1454291-1										
Cyanide, Total	ND		mg/l	0.005	--	1	01/12/21 22:30	01/13/21 10:50	121,4500CN-CE	CR
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1454295-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	01/12/21 23:22	121,4500CL-D	AS
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1454354-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	01/13/21 04:40	01/13/21 05:02	1,7196A	AW
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1454388-1										
Phenolics, Total	ND		mg/l	0.030	--	1	01/13/21 07:15	01/13/21 11:26	4,420.1	KP
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1454461-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	01/13/21 14:35	121,2540D	AC
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1454571-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	01/13/21 10:30	01/13/21 21:16	121,4500NH3-BH	AT
Anions by Ion Chromatography - Westborough Lab for sample(s): 01 Batch: WG1454771-1										
Chloride	ND		mg/l	0.500	--	1	-	01/13/21 17:12	44,300.0	AT
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1455100-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	01/14/21 18:30	01/14/21 19:30	74,1664A	TL





## Lab Control Sample Analysis

### Batch Quality Control

Project Name: 15 NECCO

Project Number: 133860-003

Lab Number: L2101624

Report Date: 01/18/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1454291-2								
Cyanide, Total	98		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1454295-2								
Chlorine, Total Residual	108		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1454354-2								
Chromium, Hexavalent	101		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1454388-2								
Phenolics, Total	113		-		70-130	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1454461-2								
Solids, Total Suspended	101		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1454571-2								
Nitrogen, Ammonia	100		-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 Batch: WG1454771-2								
Chloride	107		-		90-110	-		

**Lab Control Sample Analysis**  
Batch Quality Control

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1455100-2					
TPH	100	-	64-132	-	34

# **Matrix Spike Analysis** **Batch Quality Control**

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

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: WG1454291-4 QC Sample: L2101256-01 Client ID: MS Sample												
Cyanide, Total	ND	0.2	0.214	107		-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1454295-4 QC Sample: L2101505-02 Client ID: MS Sample												
Chlorine, Total Residual	ND	0.25	0.25	100		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1454354-4 QC Sample: L2101624-01 Client ID: OW-22_2021_0112												
Chromium, Hexavalent	ND	0.1	0.103	103		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1454388-4 QC Sample: L2101624-01 Client ID: OW-22_2021_0112												
Phenolics, Total	ND	0.4	0.41	102		-	-		70-130	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1454571-4 QC Sample: L2100807-02 Client ID: MS Sample												
Nitrogen, Ammonia	5.23	4	9.08	96		-	-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1454771-3 QC Sample: L2101685-01 Client ID: MS Sample												
Chloride	31.6	4	33.4	46	Q	-	-		90-110	-		18
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1455100-4 QC Sample: L2101323-02 Client ID: MS Sample												
TPH	ND	40.8	28.3	69		-	-		64-132	-		34

# Lab Duplicate Analysis

Batch Quality Control

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1454291-3 QC Sample: L2101256-01 Client ID: DUP Sample						
Cyanide, Total	ND	ND	mg/l	NC		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1454295-3 QC Sample: L2101505-01 Client ID: DUP Sample						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1454354-3 QC Sample: L2101624-01 Client ID: OW-22_2021_0112						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1454388-3 QC Sample: L2101624-01 Client ID: OW-22_2021_0112						
Phenolics, Total	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1454461-3 QC Sample: L2101347-01 Client ID: DUP Sample						
Solids, Total Suspended	400	420	mg/l	5		29
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1454571-3 QC Sample: L2100807-02 Client ID: DUP Sample						
Nitrogen, Ammonia	5.23	5.27	mg/l	1		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1454771-4 QC Sample: L2101685-01 Client ID: DUP Sample						
Chloride	31.6	30.5	mg/l	4		18
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1455100-3 QC Sample: L2101323-01 Client ID: DUP Sample						
TPH	ND	ND	mg/l	NC		34

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Serial\_No:**01182116:55  
**Lab Number:** L2101624  
**Report Date:** 01/18/21

### 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(*)
L2101624-01A	Vial Na2S2O3 preserved	A	NA		3.8	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2101624-01A1	Vial Na2S2O3 preserved	A	NA		3.8	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2101624-01B	Vial Na2S2O3 preserved	A	NA		3.8	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2101624-01B1	Vial Na2S2O3 preserved	A	NA		3.8	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2101624-01C	Vial Na2S2O3 preserved	A	NA		3.8	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2101624-01C1	Vial Na2S2O3 preserved	A	NA		3.8	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L2101624-01D	Vial Na2S2O3 preserved	A	NA		3.8	Y	Absent		504(14)
L2101624-01E	Vial Na2S2O3 preserved	A	NA		3.8	Y	Absent		504(14)
L2101624-01F	Plastic 250ml NaOH preserved	A	>12	>12	3.8	Y	Absent		TCN-4500(14)
L2101624-01G	Plastic 250ml NaOH preserved	A	>12	>12	3.8	Y	Absent		HOLD-WETCHEM()
L2101624-01H	Plastic 250ml HNO3 preserved	A	<2	<2	3.8	Y	Absent		HOLD-METAL-DISSOLVED(180)
L2101624-01I	Plastic 250ml HNO3 preserved	A	<2	<2	3.8	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),AG-2008T(180),HG-U(28),SE-2008T(180),AS-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L2101624-01J	Plastic 500ml H2SO4 preserved	A	<2	<2	3.8	Y	Absent		NH3-4500(28)
L2101624-01K	Plastic 950ml unpreserved	A	7	7	3.8	Y	Absent		HEXCR-7196(1),CL-300(28),TRC-4500(1)
L2101624-01L	Plastic 950ml unpreserved	A	7	7	3.8	Y	Absent		TSS-2540(7)
L2101624-01M	Amber 950ml H2SO4 preserved	A	<2	<2	3.8	Y	Absent		TPHENOL-420(28)
L2101624-01N	Amber 1000ml Na2S2O3	A	7	7	3.8	Y	Absent		PCB-608.3(365)
L2101624-01O	Amber 1000ml Na2S2O3	A	7	7	3.8	Y	Absent		PCB-608.3(365)
L2101624-01P	Amber 1000ml Na2S2O3	A	7	7	3.8	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L2101624-01Q	Amber 1000ml Na2S2O3	A	7	7	3.8	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L2101624-01R	Amber 1000ml HCl preserved	A	NA		3.8	Y	Absent		TPH-1664(28)

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

Serial\_No:01182116:55  
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**Report Date:** 01/18/21

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2101624-01S	Amber 1000ml HCl preserved	A	NA		3.8	Y	Absent		TPH-1664(28)

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

## 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:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

### Footnotes

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

### Terms

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

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

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

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

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

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

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

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

**Report Format:** Data Usability Report





**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

**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.

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101624  
**Report Date:** 01/18/21

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.
- 3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.
- 4 Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. Revised March 1983.
- 14 Methods for the Determination of Organic Compounds in Finished Drinking Water and Raw Source Water. EPA/600/4-88/039, Revised July 1991.
- 19 Inductively Coupled Plasma Atomic Emission Spectrometric Method for Trace Element Analysis of Water and Wastes. Appendix C, Part 136, 40 CFR (Code of Federal Regulations). July 1, 1999 edition.
- 44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.
- 74 Method 1664, Revision A: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-98-002, February 1999.
- 107 Alpha Analytical - In-house calculation method.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.
- 127 Method 608.3: Organochlorine Pesticides and PCBs by GC/HSD, EPA 821-R-16-009, December 2016.
- 128 Method 624.1: Purgeables by GC/MS, EPA 821-R-16-008, December 2016.
- 129 Method 625.1: Base/Neutrals and Acids by GC/MS, EPA 821-R-16-007, December 2016.

## LIMITATION OF LIABILITIES

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

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



**Alpha Analytical, Inc.**Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

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**Certification Information**


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

**Westborough Facility****EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.**EPA TO-12** Non-methane organics**EPA 3C** Fixed gases**Biological Tissue Matrix:** EPA 3050B

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

**Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg. **EPA 522.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1** Hg.**SM2340B**

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

 <b>CHAIN OF CUSTODY</b>		<b>Service Centers</b> Brewer, ME 04412    Portsmouth, NH 03801    Mahwah, NJ 07430    Albany, NY 12228 Tonawanda, NY 14150    Holmes, PA 19643		Page <u>1</u> of <u>1</u>		Date Rec'd in Lab <u>1/12/21</u>		ALPHA Job # <u>L2101029</u>							
Westborough, MA 01581    8 Walpole Dr. TEL: 508-850-9220    FAX: 508-850-9193 Mansfield, MA 02048    320 Forbes Blvd. TEL: 508-822-9300    FAX: 508-822-3288		<b>Project Information</b> Project Name: <u>15 Necco</u> Project Location: <u>Boston, MA</u> Project # <u>133860-003</u> (Use Project name as Project #)		<b>Deliverables</b> <input checked="" type="checkbox"/> Email <input type="checkbox"/> Fax <input checked="" type="checkbox"/> EQUS (1 File) <input type="checkbox"/> EQUS (4 File) <input type="checkbox"/> Other:		<b>Billing Information</b> <input checked="" type="checkbox"/> Same as Client Info PO #		<b>H&amp;A Information</b> H&A Client: <u>ARE-MA Region No. 74 LLC</u> H&A Address <u>455 Medford St</u> <u>Boston, MA 0212-1400</u> H&A Phone: <u>617-888-7400</u> H&A Fax: <u>ewhite@haleyaldrich.com</u> H&A Email: <u>lpenwell@haleyaldrich.com</u>							
H&A Address <u>455 Medford St</u> <u>Boston, MA 0212-1400</u> H&A Phone: <u>617-888-7400</u> H&A Fax: <u>ewhite@haleyaldrich.com</u> H&A Email: <u>lpenwell@haleyaldrich.com</u>		<b>Turn-Around Time</b> Standard <input checked="" type="checkbox"/> Due Date: (only if pre approved) <input type="checkbox"/> # of Days:		<b>Regulatory Requirements (Program/Criteria)</b> MA NPDES RGP NOI MA MCP Note: Select State from menu & identify criteria.		<b>Disposal Site Information</b> Please identify below location of applicable disposal facilities: Disposal Facility: <input type="checkbox"/> NJ <input type="checkbox"/> NY <input type="checkbox"/> Other:									
These samples have been previously analyzed by Alpha <input type="checkbox"/>		<b>Other project specific requirements/comments:</b> 3. HOLD PACN & ACN    10. RGP Metals: Ag, As, Cd, Cr, Cu, Ni, Pb, Sb, Se, Zn, Fe, Hg 11. Dissolved Metals ON HOLD (Field Filtered) Please sample per EPA Approved 2017 RGP Permit methods Please specify Metals or TAL.		<b>ANALYSIS</b>		<b>Sample Filtration</b> <input type="checkbox"/> Done <input type="checkbox"/> Lab to do <input type="checkbox"/> Preservation <input type="checkbox"/> Lab to do (Please Specify below)		<b>Sample Specific Comments</b>							
ALPHA Lab ID (Lab Use Only)		Sample ID		Collection Date    Time		Sample Matrix		Sampler's Initials		1. ISS - 2540 2. TRC-4500 3. TCN-4500 HOLD PACN & ACN 4. 504 5. 624, 1-RGP and 624 1-SIM RGP 6. HEXCER-7196 & Trivalent Chromium 7. TPHENOL-420 8. 825 1 RGP and 825 1-SIM RGP 9. CL-300 10. Total Metals - Ag, As, Cd, Cr, Cu, Ni, Pb, Sb, Se, Zn, Fe, Hg 11. HOLD Dissolved Metals - Ag, As, Ammonia 12. Ammonia 13. TPH-1654 14. PCB-608		pH (field): <u>7.08</u> Temp (field): <u>13.18</u>		22	
Preservative Code: A = None B = HCl C = HNO <sub>3</sub> D = H <sub>2</sub> SO <sub>4</sub> E = NaOH F = MeOH G = NaHSO <sub>4</sub> H = Na <sub>2</sub> S <sub>2</sub> O <sub>8</sub> K/E = Zn Ac/NaOH O = Other		Container Code: P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MA015		Container Type Preservative		P P P V A V A P A V A P P P A A		Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. Alpha Analytical's services under this Chain of Custody shall be performed in accordance with terms and conditions within Blanket Service Agreement # 2015-18 Alpha Analytical by and between Haley & Aldrich, Inc., its subsidiaries and affiliates and Alpha Analytical.					
Document ID: 20455 Rev 1 (1/28/2016)		Relinquished By: <u>[Signature]</u> Date/Time: <u>1/12/21 1710</u>		Received By: <u>[Signature]</u> Date/Time: <u>1/12/21 1542</u> <u>1/12/21 1710</u>		PLUM ASL 1/10/21 1542 1/12/21 1710		PLUM ASL 1/10/21 1542 1/12/21 1710		PLUM ASL 1/10/21 1542 1/12/21 1710					



## ANALYTICAL REPORT

Lab Number:	L2101634
Client:	Haley & Aldrich, Inc. 465 Medford Street, Suite 2200 Charlestown, MA 02129-1400
ATTN:	Lee Penwell
Phone:	(617) 886-7359
Project Name:	15 NECCO
Project Number:	133860-003
Report Date:	01/18/21

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

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

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



**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101634  
**Report Date:** 01/18/21

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L2101634-01	FORT POINT_2021_0112	WATER	BOSTON, MA	01/12/21 14:30	01/12/21

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101634  
**Report Date:** 01/18/21

### 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.

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**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101634  
**Report Date:** 01/18/21


**Case Narrative (continued)**

Sample Receipt

L2101634-01: A sample container for Hexavalent Chromium analysis was received for the "FORT POINT\_2021\_0112" sample, but was not listed on the chain of custody. At the client's request, the analysis was not performed.

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:

 Michelle M. Morris

Title: Technical Director/Representative

Date: 01/18/21



# **INORGANICS & MISCELLANEOUS**

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101634  
**Report Date:** 01/18/21

### SAMPLE RESULTS

**Lab ID:** L2101634-01  
**Client ID:** FORT POINT\_2021\_0112  
**Sample Location:** BOSTON, MA

**Date Collected:** 01/12/21 14:30  
**Date Received:** 01/12/21  
**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										
SALINITY	27		SU	2.0	--	1	-	01/15/21 17:56	121,2520B	AS
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	01/13/21 10:30	01/13/21 21:31	121,4500NH3-BH	AT



**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101634  
**Report Date:** 01/18/21

**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: WG1454571-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	01/13/21 10:30	01/13/21 21:16	121,4500NH3-BH	AT



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101634  
**Report Date:** 01/18/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1454571-2								
Nitrogen, Ammonia	100		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1455571-1								
SALINITY	102		-			-		

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101634  
**Report Date:** 01/18/21

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: WG1454571-4 QC Sample: L2100807-02 Client ID: MS Sample												
Nitrogen, Ammonia	5.23	4	9.08	96		-	-		80-120	-		20

# **Lab Duplicate Analysis** *Batch Quality Control*

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101634  
**Report Date:** 01/18/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1454571-3 QC Sample: L2100807-02 Client ID: DUP Sample						
Nitrogen, Ammonia	5.23	5.27	mg/l	1		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1455571-2 QC Sample: L2101634-01 Client ID: FORT POINT_2021_0112						
SALINITY	27	27	SU	0		

**Project Name:** 15 NECCO**Lab Number:** L2101634**Project Number:** 133860-003**Report Date:** 01/18/21**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information****Cooler**                      **Custody Seal**

A                                  Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L2101634-01A	Amber 120ml unpreserved	A	7	7	3.8	Y	Absent		SALINITY(28)
L2101634-01B	Plastic 250ml unpreserved	A	7	7	3.8	Y	Absent		HOLD-WETCHEM()
L2101634-01C	Plastic 500ml H2SO4 preserved	A	<2	<2	3.8	Y	Absent		NH3-4500(28)

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101634  
**Report Date:** 01/18/21

## 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:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101634  
**Report Date:** 01/18/21

### Footnotes

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

### Terms

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

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

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

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

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

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

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

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

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

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- F** - The ratio of quantifier ion response to qualifier ion response falls outside of the laboratory criteria. Results are considered to be an estimated maximum concentration.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the reporting limit (RL) for the sample.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where

**Report Format:** Data Usability Report



**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101634  
**Report Date:** 01/18/21

**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.

**Project Name:** 15 NECCO  
**Project Number:** 133860-003

**Lab Number:** L2101634  
**Report Date:** 01/18/21

## REFERENCES

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

## 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.



**Alpha Analytical, Inc.**Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

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**Certification Information**

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

**Westborough Facility****EPA 624/624.1:** m/p-xylene, o-xylene, Naphthalene**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.**EPA TO-12** Non-methane organics**EPA 3C** Fixed gases**Biological Tissue Matrix:** EPA 3050B

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

**Westborough Facility:****Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:** Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.****Mansfield Facility:****Drinking Water****EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1** Hg.**EPA 522.****Non-Potable Water****EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.**EPA 245.1** Hg.**SM2340B**

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

