NOTICE OF INTENT FOR DISCHARGE PURSUANT TO MASSACHUSETTS REMEDIATION GENERAL PERMIT MAG9100000

58 CHARLES STREET
CAMBRIDGE, MASSACHUSETTS

DECEMBER 19, 2021

Prepared For:

United States Environmental Protection Agency
OFFICE OF ECOSYSTEM PROTECTION
5 POST OFFICE SQUARE, SUITE 100
MAIL CODE OEP06-01
BOSTON, MA 02109-3912

On Behalf Of:

The Richmond Group
77 Main Street
Hopkinton, MA 01748

PROJECT NO. 6864

2269 Massachusetts Avenue
Cambridge, MA 02140
www.mcphailgeo.com
(617) 868-1420

RS

December 19, 2021

United States Environmental Protection Agency
Office of Ecosystem Protection
5 Post Office Square, Suite 100
Mail Code OEP06-01
Boston, MA 02109-3912

Attention: EPA RGP Applications Coordinator

Reference: 58 Charles Street; Cambridge, MA
Notice of Intent for Temporary Construction Dewatering Discharge;
Massachusetts Remediation General Permit MAG910000

Ladies and Gentlemen:

On behalf of the Richmond Group, McPhail Associates, LLC (McPhail) has prepared the attached Notice of Intent (NOI) for coverage under the Remediation General Permit (RGP) MAG910000 for the temporary discharge of construction dewatering effluent into the Lechmere Canal via the off-site storm drainage system. The temporary construction dewatering discharge began on **December 6, 2021** as an emergency discharge for the property located at 58 Charles Street in Cambridge, Massachusetts (subject site). Refer to **Figure 1** for the general site locus.

These services were performed and this permit application was prepared in accordance with the authorization of BMR-58 Charles Street, LLC. These services are subject to the limitations contained in **Appendix A**.

This project is considered Activity Category III-G as defined in the RGP. Category III-G is defined as Contaminated Site Dewatering from Sites with Known Contamination. Based on current groundwater analysis completed at the subject site, the constituents of concern (COCs) are those identified under subcategory A (inorganics). The required Notice of Intent (NOI) Form contained in the RGP permit is included in **Appendix B**.

Applicant/Operator

The applicant for the Notice of Intent-Remediation General Permit is:

The Richmond Group
77 Main Street
Hopkinton, MA 01748

Attention: Mr. Tom Leduc

Existing Conditions

Fronting onto Charles Street to the north, the approximate 38,728-square foot subject site is bounded by Second Street to the east, and commercial properties to the south and west. Currently, the subject site is occupied by a 3-story brick and wood-framed structure that was constructed in 1911 that is surrounded by paved surface parking lots. The boundaries of the subject site, which define the limits of our work, are shown on the enclosed **Figure 2**.

The ongoing renovations to the existing building are understood to include the following:

- Construction of a new freight elevator with a bottom of pit slab extending about 8 feet below the existing lowest floor slab.
- The possible addition of a new sump pit to the existing passenger elevator pit.
- The addition of an expanded loading dock area.

During performance of the above referenced renovations during November 2021, on-site recharge from the well point system was causing water infiltration through the building foundation wall and flooding in the elevator pit excavation, thereby posting a risk to the structural integrity of the building elements under construction. Consequently, the renovation activities were stopped, and the elevator construction was temporarily suspended.

As a result, it was determined that the above referenced situation met the definition of emergency discharge, "a discharge that is a result of remediation or dewatering activities conducted in response to a public emergency and the discharge requires immediate authorization to avoid imminent endangerment to human health, public safety, or the environment, or to reestablish essential public services." Accordingly, a written request for provisional approval for emergency off-site discharge was submitted to the EPA on November 30, 2021.

Subsequent to retaining Lockwood Remediation Technologies, LLC (LRT) as a subcontractor to install the dewatering system detailed below, EPA was notified, and off-site discharge began on **December 6, 2021**. Pursuant to the provisions of the RGP, samples of the groundwater, influent, and effluent were obtained and submitted for laboratory analysis for the parameters in accordance with Activity Category III-G, as is further detailed below.

Site and Release History

During February 2021, McPhail completed a preliminary subsurface exploration program consisting of one soil boring and installation of a groundwater monitoring well to assess subsurface conditions. Additionally, one (1) composite sample of the fill material obtained from a depth range of 0 to 8 feet below ground surface was submitted for laboratory analysis for the presence of constituents typically required by off-site receiving facilities. The results of the laboratory analysis identified the presence of total mercury in the composite sample at a concentration which exceeds the applicable RCS-1 reporting threshold. Specifically, total mercury was identified at a concentration of 63.6 milligrams per kilogram

(mg/kg) which is above the applicable RCS-1 reporting threshold of 20 mg/kg. In order to further evaluate the nature and extent of the mercury contamination, McPhail conducted a supplemental subsurface exploration program that consisted to seven (7) geoprobes. In summary, the results of the supplemental exploration program indicated that the mercury release was limited to an approximate 10 foot by 11-foot area that extended from 2.5 to 5 feet below ground surface. Based on this information, a Limited Removal Action (LRA) consisting of the excavation and removal of about 10.5 cubic yards of mercury impacted fill material was conducted in July 2021. Further, given that groundwater was encountered at a depth of 8.5 feet below ground surface, which is below the bottom of the fill material observed at the site, the groundwater is not considered to be affected by the release of total mercury.

Site Environmental Setting and Surrounding Historical Places

Based on an online edition of the Massachusetts Department of Environmental Protection (DEP) Phase I Site Assessment Map viewed on December 3, 2021, the subject site is not located within the boundaries of a Sole Source Aquifer, Potentially Productive Aquifer or within a Zone II, Interim Wellhead Protection Area as defined by the Massachusetts Department of Environmental Protection. Further, there are no public drinking water supply wells, no Areas of Critical Environmental Concern, no fish habitats, no habitats of Species of Special Concern or Threatened or Endangered Species within specified distances of the subject site. The Resource Map indicates that there are no water bodies or wetland areas at the subject site. The closest body of water is the Charles River located approximately 1,300 feet to the east of the subject site. No areas designated as solid waste sites (landfills) are noted as being located within 1,000 feet of the site. A copy of the Massachusetts DEP Phase I Site Assessment Map is included in **Appendix C**.

A review of information provided by the U.S. Fish and Wildlife Service in an Information for Planning and Conservation (IPaC) Trust Resource Report for the subject site did not identify the presence of threatened or endangered species at or in the vicinity of the discharge location and/or discharge outfall. Further, the Trust Resource Report did not identify the presence of a critical habitat in the vicinity of the discharge outfall and/or discharge location. Based upon the above, the site is considered a Criterion A pursuant to Appendix IV of the RGP. A copy of the IPaC Trust Resource Report and U.S. Fish and Wildlife Service's Nationwide Standard Conservation Measures are included in **Appendix C**.

The subject site is not listed on the State or National Register of Historical Places. A copy of the State of Massachusetts MACRIS reports is included in **Appendix C**.

Currently, treated construction dewatering effluent is being temporarily discharged into the City of Cambridge storm drain system that flows into the Lechmere Canal. Based on the anticipated duration of construction dewatering and the location of its discharge into the subsurface structures that lead to the Lechmere Canal, construction dewatering activities are not considered to affect elements of historical listings. Hence, the site meets Permit Eligibility Criterion B in accordance with Appendix III of the RGP.

Construction Site Dewatering

As indicated above, the on-site recharge of groundwater that was pumped from the well point system was causing water infiltration through the building foundation wall and flooding in the elevator pit excavation. Accordingly, LRT was retained to install a temporary construction dewatering system that consists of a 6-inch wellpoint discharge that feeds an 8,000-gallon weir tank with a bag filter skid that flows into an on-site catch basin. The rate of construction dewatering ranges from approximately 25 to 50 gallons per minute (gpm).

A review of relevant stormwater drainage plans provided by the City of Cambridge Department of Public Works indicates that the on-site catch basin flows beneath the subject site to Charles Street, then in a northerly direction beneath First Street and then in an easterly direction to the discharge into the Lechmere Canal. The locations of relevant catch basins with relation to the subject site and the route of the storm drains to the Lechmere Canal are indicated on **Figure 2**.

Summary of Groundwater Analysis

On December 1, 2021, McPhail obtained a sample of groundwater from a tank that was filled with groundwater pumped from extraction wells at the central portion of the subject site. The groundwater sample was submitted to a certified laboratory for analysis for the presence of compounds required under the RGP application, including total suspended solids (TSS), total residual chlorine, total petroleum hydrocarbons (TPH), non-halogenated volatile organic compounds (VOCs) including BTEX and benzene, fuels parameters, and total recoverable metals. The results of the laboratory analysis are summarized in **Table 1**, and laboratory data reports are included in **Appendix D**. The results of laboratory testing did not detect concentrations of the tested compounds in excess of the applicable RGP Effluent Limitations – Technology Based Effluent Limitations (TBELs) or Water Quality Based Effluent Limitations (WQBELs).

Pursuant to Section 4.2.2 of the EPA 2017 RGP, a receiving water sample was obtained from the Lechmere Canal (42°22’08.9"N 71°04'34.9"W), which is located approximately 100 feet upstream of the discharge location on December 1, 2021. The receiving water sample was analyzed for the presence of pH, hardness, and ammonia. The results of the surface water testing are summarized on **Table 2** and the laboratory data report is included in the enclosed **Appendix D**.

Groundwater Treatment

Based upon the anticipated rates of construction dewatering in conjunction with the results of the above referenced groundwater analyses, one 8,000-gallon capacity settling tank with bag filters has been installed to settle out and remove particulate matter in the effluent to meet allowable discharge limits established by the EPA prior to discharge. A schematic of the treatment system is shown on **Figure 4**.

A Best Management Practices Plan (BMPP) has been prepared as **Appendix E** and is posted at the site during the temporary construction dewatering at the site.

In accordance with Part 4 of the RGP, influent and effluent monitoring has been performed. On Day 1 and Day 3 of discharge, influent and effluent samples were obtained and submitted for laboratory analysis for the parameters included in Section A. The results which are summarized on the enclosed **Table 3**, did not identify the presence of the tested constituents at concentrations that would be indicative of a reportable release condition or warrant changes to the construction dewatering system in place. The laboratory data reports are included in the enclosed **Appendix D**.

Summary and Conclusions

The purpose of this report is to summarize site environmental conditions and groundwater data to support a Notice of Intent to discharge under the Remediation General Permit for the off-site discharge of dewatered groundwater from the property located at 58 Charles Street in Cambridge, Massachusetts that was initiated as an Emergency Discharge on December 6, 2021.

The construction dewatering effluent treatment system consists of one 8,000-gallon capacity settling tank with bag filters. Should the effluent monitoring results identify concentrations of contaminants that are in excess of the limits established by the RGP, additional mitigative measures will be implemented to meet the allowable discharge limits.

We trust that the above satisfies your present requirements. Should you have any questions or comments concerning the above, please do not hesitate to contact us.

Sincerely,

McPHAIL ASSOCIATES, LLC

Kathryn E. Hanrahan

William J. Burns, L.S.P., L.E.P.

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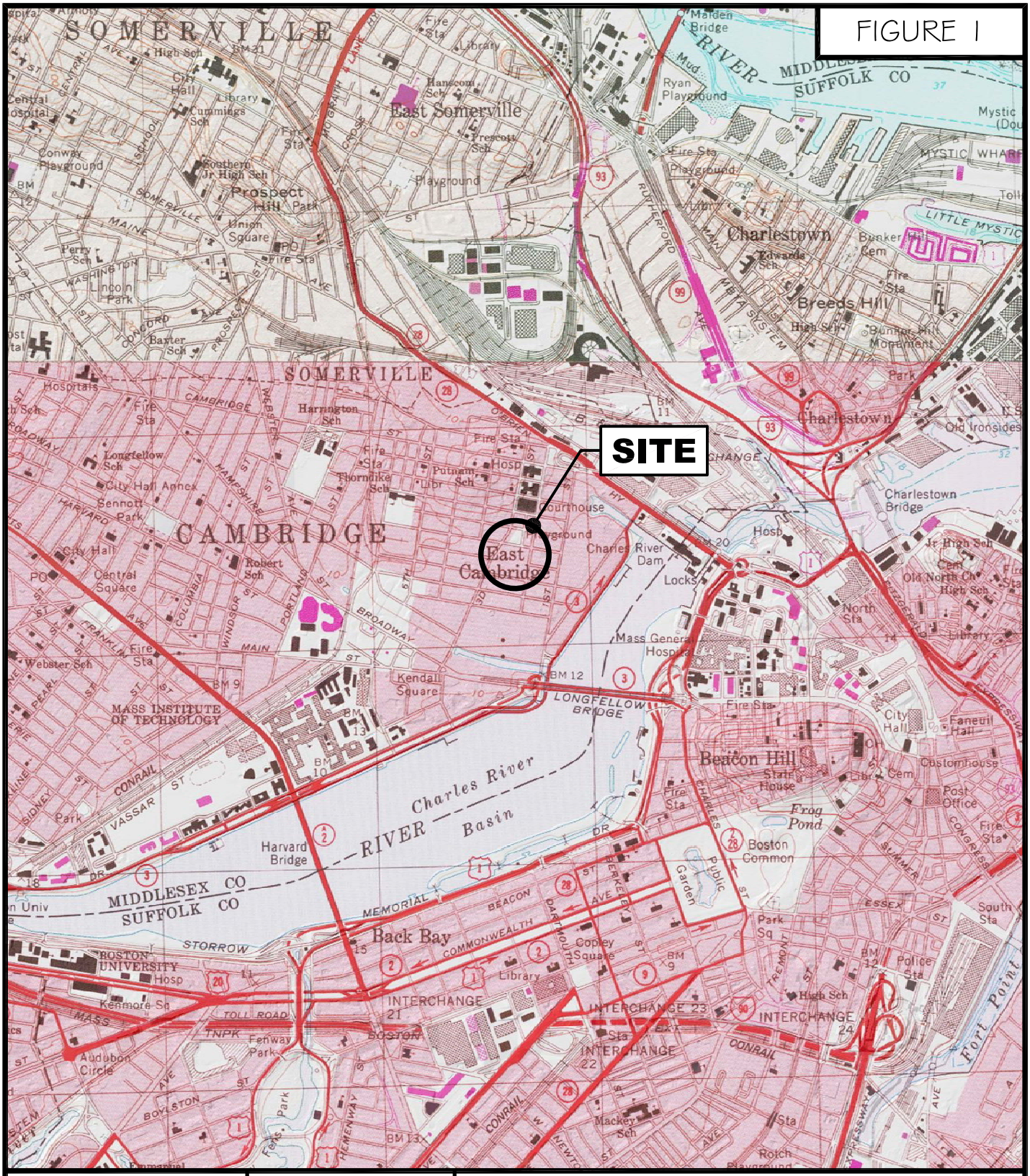
KEH/wjb

FIGURE 1



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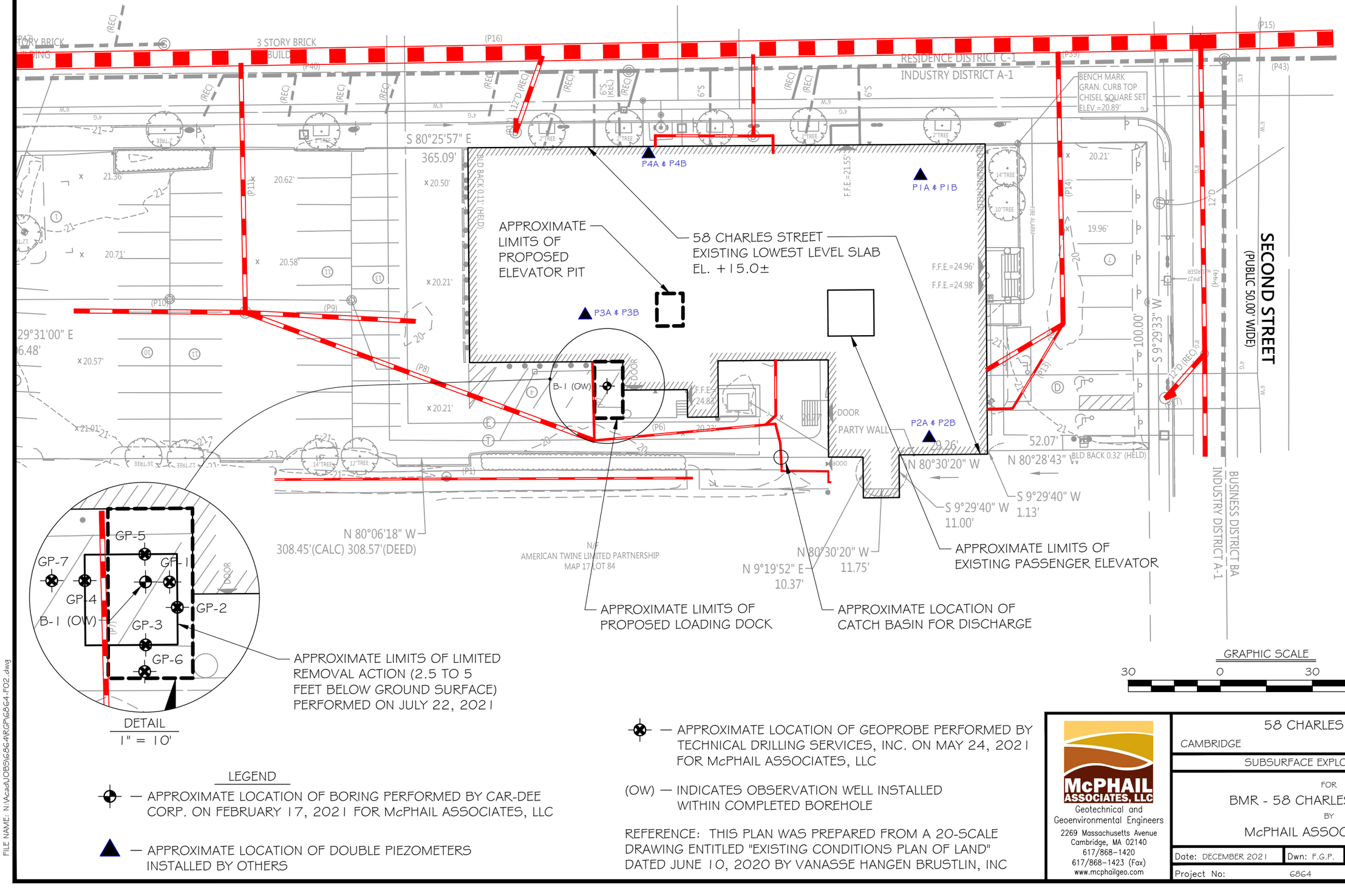
SCALE 1:25,000

PROJECT LOCATION PLAN

58 CHARLES STREET

CAMBRIDGE MASSACHUSETTS

FIGURE 2



LEGEND

— APPROXIMATE LOCATION OF BORING PERFORMED BY CAR-DEE CORP. ON FEBRUARY 17, 2021 FOR McPHAIL ASSOCIATES, LLC

— APPROXIMATE LOCATION OF DOUBLE PIEZOMETERS INSTALLED BY OTHERS

— APPROXIMATE LOCATION OF GEOPROBE PERFORMED BY TECHNICAL DRILLING SERVICES, INC. ON MAY 24, 2021 FOR McPHAIL ASSOCIATES, LLC

(OW) — INDICATES OBSERVATION WELL INSTALLED WITHIN COMPLETED BOREHOLE

REFERENCE: THIS PLAN WAS PREPARED FROM A 20-SCALE DRAWING ENTITLED "EXISTING CONDITIONS PLAN OF LAND" DATED JUNE 10, 2020 BY VANASSE HANGEN BRUSTLIN, INC

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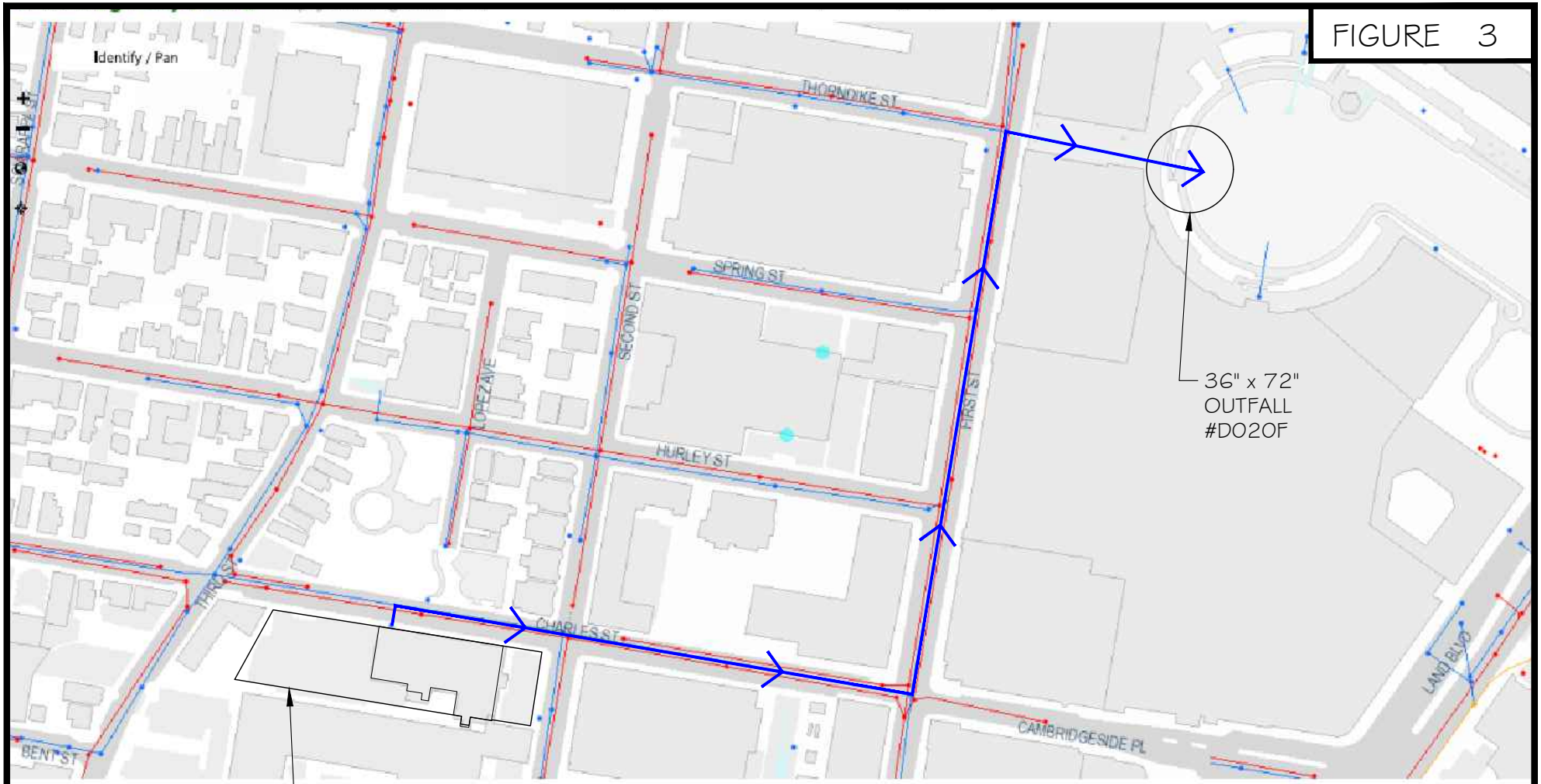
58 CHARLES STREET
CAMBRIDGE MASSACHUSETTS
SUBSURFACE EXPLORATION PLAN
FOR
BMR - 58 CHARLES STREET LLC
BY
McPHAIL ASSOCIATES, LLC

Date: DECEMBER 2021	Dwn: F.G.P.	Chkd: K.E.H.	Scale: 1" = 30'
Project No: 6864			

FILE NAME: N:\Acad\JOBS\6864\RGF\6864-F02.dwg

FILE NAME: N:\Acad\JOBS\6864\RGP\6864-F03.dwg

FIGURE 3



REFERENCE: THIS PLAN WAS PREPARED FROM A 100-SCALE DRAWING PRINTED ON DECEMBER 1, 2021 FROM BOSTON WATER AND SEWER COMMISSION SITE

GRAPHIC SCALE

200 0 200 400

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58 CHARLES STREET
CAMBRIDGE MASSACHUSETTS

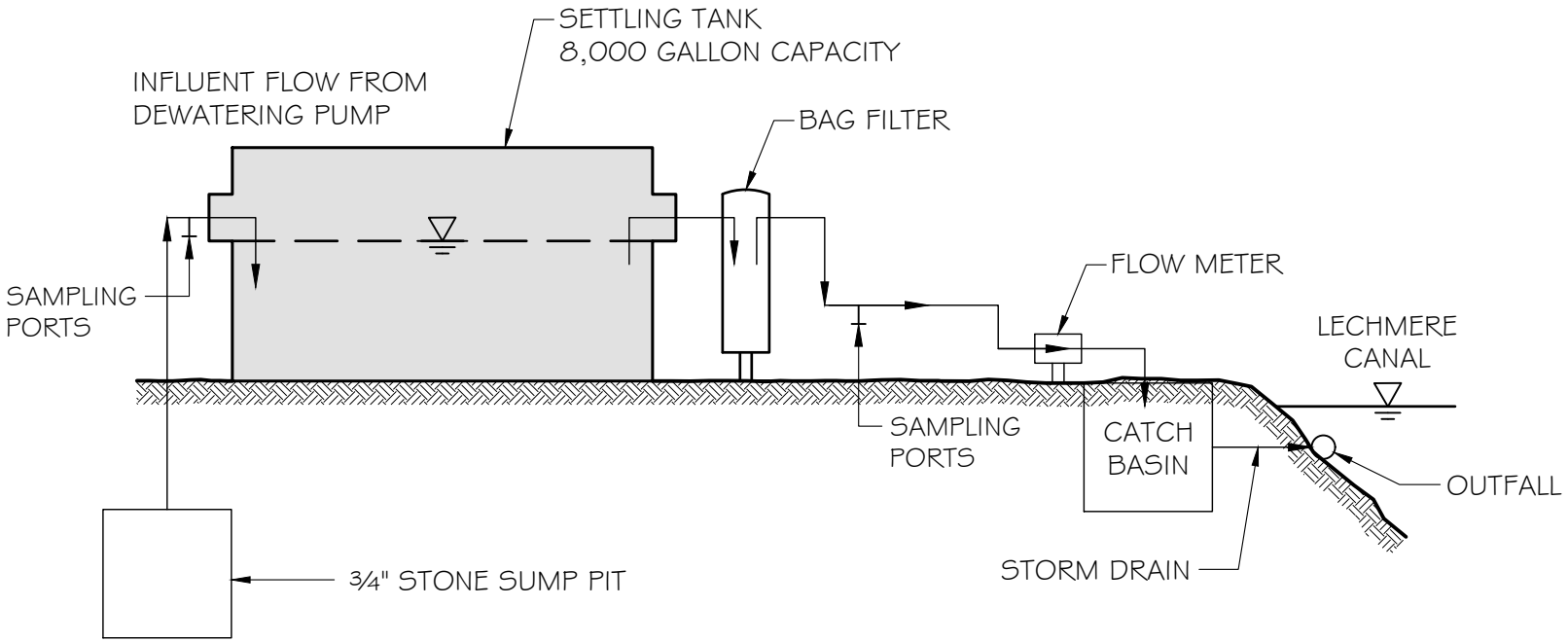
DISCHARGE LOCATION PLAN

FOR
BMR - 58 CHARLES STREET LLC
BY
McPHAIL ASSOCIATES, LLC
CONSULTING GEOTECHNICAL ENGINEERS

Date: DECEMBER 2021	Dwn: F.G.P.	Chkd: K.E.H.	Scale: 1" = 200'
Project No: 7075			

FILE NAME: N:\Acad\JOBS\6864\RGP\6864-F04.dwg

FIGURE 4



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58 CHARLES STREET

CAMBRIDGE MASSACHUSETTS

SCHEMATIC OF TREATMENT SYSTEM

FOR

BMR - 58 CHARLES STREET LLC

BY

McPHAIL ASSOCIATES, LLC

CONSULTING GEOTECHNICAL ENGINEERS

Date: DECEMBER 2021	Dwn: F.G.P.	Chkd: K.E.H.	Scale: N.T.S.
Project No: 7075			

TABLE 1
ANALYTICAL RESULTS - GROUNDWATER

58 Charles Street
Cambridge, MA
Project No. 6864

LOCATION	MassDEP RCGW-2	MassDEP GW-3	Water Quality Based Effluent	Technology Based Effluent Limitation	EPA Fresh Chronic Criteria	EPA-ALFCCC	EPA-ALFCMC	GW
SAMPLING DATE								12/1/2021
LAB SAMPLE ID								L2165980-01
SAMPLE TYPE								WATER
A. Inorganics								
Nitrogen, Ammonia (mg/L)			Reporting					2.22
Chloride (µg/L)			Reporting		230000	230000	860000	1510000
Chlorine, Total Residual (µg/L)			1100	200	11			ND(20)
Solids, Total Suspended (mg/L)			30					ND(5)
pH (H)			6.5-8.3					7.8
Hardness (mg/L)								461
Antimony, Total (µg/L)	8000	8000	640	206				ND(4)
Arsenic, Total (µg/L)	900	900	10	104	150	150	340	ND(1)
Cadmium, Total (µg/L)	4	4	0.25	10.2	0.25	0.25	2	ND(0.2)
Chromium, Trivalent (µg/L)	600	600	74	323		74	570	ND(10)
Chromium, Hexavalent (µg/L)	300	300	11	323	11	11	16	ND(10)
Chromium, Total (µg/L)	300	300			74			5.09
Copper, Total (µg/L)	100000		9	242	9			4.65
Iron, Total (µg/L)			1000	5000	1000	1000		260
Lead, Total (µg/L)	10	10	2.5	160	2.5	2.5	65	ND(1)
Mercury, Total (µg/L)	20	20	0.77	0.739	0.77	0.77	1.4	ND(0.2)
Nickel, Total (µg/L)	200	200	52	1450	52	52	470	3.03
Selenium, Total (µg/L)	100	100	5	235.8	5	5		ND(5)
Silver, Total (µg/L)	7	7	3.2	35.1			3.2	ND(0.4)
Zinc, Total (µg/L)	900	900	120	420	120	120	120	58
Cyanide, Total (µg/L)	30	30	5.2	178	5.2	5.2	22	ND(5)
B. Non-Halogenated Volatile Organic Compounds								
Total BTEX (µg/L)			100					ND(1)
Benzene (µg/L)	1000	10000	5					ND(1)
Toluene (µg/L)	40000	40000						ND(1)
Ethylbenzene (µg/L)	5000	5000						ND(1)
p/m-Xylene (µg/L)	3000	5000						ND(2)
o-xylene (µg/L)	3000	5000						ND(1)
Xylenes, Total (µg/L)	3000	5000						ND(1)
1,4-Dioxane (µg/L)	6000	50000	200					ND(5)
Acetone (µg/L)	50000	50000	7970					ND(10)
Phenolics, Total (µg/L)			300	1080				ND(15)
C. Halogenated Volatile Organic Compounds								
Carbon tetrachloride (µg/L)	2	5000	1.6	4.4				ND(1)
1,2-Dichlorobenzene (µg/L)	2000	2000	600					ND(5)
1,3-Dichlorobenzene (µg/L)	6000	50000	320					ND(5)
1,4-Dichlorobenzene (µg/L)	60	8000	5					ND(5)
Total dichlorobenzene			763					ND
1,1-Dichloroethane (µg/L)	2000	20000	70					ND(1.5)
1,2-Dichloroethane (µg/L)	5	20000	5					ND(1.5)
1,1-Dichloroethene (µg/L)	80	30000	3.2					ND(1)
Methylene chloride (µg/L)	2000	50000	4.6					ND(1)
1,1,1-Trichloroethane (µg/L)	4000	20000	200					ND(2)
1,1,2-Trichloroethane (µg/L)	900	50000	5					ND(1.5)
Trichloroethene (µg/L)	5	5000	5					ND(1)
Tetrachloroethene (µg/L)	50	30000	3.3	5				ND(1)
cis-1,2-Dichloroethene (µg/L)	20	50000	70					ND(1)
Vinyl chloride (µg/L)	2	50000	2					ND(1)
1,2-Dibromoethane (µg/L)	2	50000						ND(0.01)
1,2-Dibromo-3-chloropropane (µg/L)	1000							-
1,2,3-Trichloropropane (µg/L)	10000							-
D. Non-Halogenated Sem-Volatile Organic Compounds								
Bis(2-ethylhexyl)phthalate (µg/L)	50000	50000	3	Sum = 190				ND(2.2)
Butyl benzyl phthalate (µg/L)	10000							ND(5)
Di-n-butylphthalate (µg/L)	5000							ND(5)
Di-n-octylphthalate (µg/L)	100000							ND(5)
Diethyl phthalate (µg/L)	9000	9000						ND(5)
Dimethyl phthalate (µg/L)	50000	50000						ND(5)
Total Group I PAHs			1.01	As Individual				ND
Benzo(a)anthracene (µg/L)	1000	1000	0.0038	As Total Group I PAHs				ND(0.1)
Benzo(a)pyrene (µg/L)	500	500	0.0038					ND(0.1)
Benzo(b)fluoranthene (µg/L)	400	400	0.0038					ND(0.1)
Benzo(k)fluoranthene (µg/L)	100	100	0.0038					ND(0.1)
Chrysene (µg/L)	70	70	0.0038					ND(0.1)
Dibenzo(a,h)anthracene (µg/L)	40	40	0.0038					ND(0.1)
Indeno(1,2,3-cd)pyrene (µg/L)	100	100	0.0038					ND(0.1)
Total Group II PAHs			100					ND(0.1)
Acenaphthene (µg/L)	10000	10000		As Total Group II PAHs including Naphthalene				ND(0.1)
Acenaphthylene (µg/L)	40	40						ND(0.1)
Anthracene (µg/L)	30	30						ND(0.1)
Benzo(ghi)perylene (µg/L)	20	20						ND(0.1)
Fluoranthene (µg/L)	200	200						0.168
Fluorene (µg/L)	40	40						ND(0.1)
Phenanthrene (µg/L)	10000	10000						ND(0.1)
Naphthalene (µg/L)	700	20000	20					ND(0.1)
Pyrene (µg/L)	20	20						0.118
E. Halogenated Semi-Volatile Organic Compounds								
Total Polychlorinated Biphenyls (µg/L)	5	10	0.000064		0.014			ND(0.2)
Pentachlorophenol (µg/L)	200	200	1		15	15	19	ND(1)
F. Fuels Parameters								
TPH, SGT-HEM (mg/L)	5	5	5					ND(4)
Ethanol (mg/L)			Reporting					ND(20)
Methyl tert butyl ether (µg/L)	5000	50000	20	70				ND(10)
Tert-Butyl Alcohol (µg/L)			120					ND(100)
Tertiary-Amyl Methyl Ether (µg/L)			90					ND(20)

ND - not detected in excess of the laboratory reporting limit in ()
Bold - exceeds EPA water quality criteria - freshwater (chronic)

TABLE 2
ANALYTICAL RESULTS - RECEIVING WATER

58 Charles Street
Cambridge, MA
Project No. 6864

LOCATION	LECHMERE CANAL
SAMPLING DATE	12/1/2021
LAB SAMPLE ID	L2165980-02
SAMPLE TYPE	WATER
A. Inorganics	
Nitrogen, Ammonia (mg/L)	0.354
pH (H)	7.7
Hardness (µg/L)	80700

ND - not detected in excess of the laboratory reporting limit in ()
Bold - exceeds EPA water quality criteria - freshwater (chronic)

Table 3
Laboratory Analytical Resuts - RGP Compliance Testing

58 Charles Street
Cambridge, MA
Project No. 6864

LOCATION	MassDEP RCGW-2	Water Quality Based Effluent Limitation	Technology Based Effluent Limitation	INFLUENT - DAY 1	EFFLUENT - DAY 1	INFLUENT - DAY 3	EFFLUENT - DAY 3
SAMPLING DATE				12/6/2021	12/6/2021	12/8/2021	12/8/2021
LAB SAMPLE ID				L2166864-01	L2166864-02	L2167504-01	L2167504-02
SAMPLE TYPE				L2166864-01	WATER	WATER	WATER
General Chemistry							
Chloride (mg/l)		Report		1530	1490	1380	1380
Solids, Total Suspended (mg/l)		30		11	12	12	ND(5)
Cyanide, Total (mg/l)	0.03	5.2	178	ND(0.005)	ND(0.005)	0.006	0.005
pH (S.U.)		6.5-8.3		7.6	7.9	7.5	7.6
Nitrogen, Ammonia (mg/l)		Report		2.39	2.41	2.06	2.18
Hardness (mg/l)		100		476	487	403	414
Total Metals (µg/l)							
Antimony, Total	8000	640	206	ND(4)	ND(4)	ND(4)	ND(4)
Arsenic, Total	900	10	104	ND(1)	ND(1)	ND(1)	ND(1)
Cadmium, Total	4	0.25	10.2	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)
Chromium, Total	300		323	8.93	7.72	3.08	3.4
Chromium, Trivalent	600	74	323	ND(10)	ND(10)	ND(10)	ND(10)
Chromium, Hexavalent	300	11	323	ND(10)	ND(10)	ND(10)	ND(10)
Copper, Total	100000	9	242	3.74	7.69	ND(1)	10.6
Iron, Total		1000	5000	787	540	225	283
Lead, Total	10	2.5	160	ND(1)	ND(1)	ND(1)	3.43
Mercury, Total	20	0.77	0.739	ND(0.2)	ND(0.2)	ND(0.2)	ND(0.2)
Nickel, Total	200	52	1450	5.02	4.47	ND(2)	8.49
Selenium, Total	100	5	235.8	ND(5)	ND(5)	ND(5)	ND(5)
Silver, Total	7	3.2	35.1	ND(0.4)	ND(0.4)	ND(0.4)	ND(0.4)
Zinc, Total	900	120	420	164.7	**122.2**	51.74	75.88

ND - Not detected in excess of the reporting limit
(#) - Reporting limit
Highlighted - exceeds RGP Effluent Limitation

APPENDIX A:

LIMITATIONS

LIMITATIONS

The purpose of this report is to present the results of testing of a groundwater sample obtained from a monitoring well located at 58 Charles Street in Cambridge, Massachusetts, in support of an application for approval of construction site dewatering discharge into surface waters of the Commonwealth of Massachusetts under EPA's Massachusetts Remediation General Permit MAG910000.

The observations were made under the conditions stated in this report. The conclusions presented above were based on these observations. If variations in the nature and extent of subsurface conditions between the spaced subsurface explorations become evident in the future, it will be necessary to re-evaluate the conclusions presented herein after performing on-site observations and noting the characteristics of any variations.

The conclusions submitted in this report are based in part upon laboratory test data obtained from analysis of groundwater samples and are contingent upon their validity. The data have been reviewed, and interpretations have been made in the text. It should also be noted that fluctuations in the types and levels of contaminants and variations in their flow paths may occur due to changes in the seasonal water table, past practices used at the site, and other factors.

Laboratory analyses have been performed for specific constituents during this assessment, as described in the text.

This report and application have been prepared on behalf of and for the exclusive use of BMR-58 Charles Street, LLC and The Richmond Group. This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, other than submission to relevant governmental agencies, nor used in whole or in part by any other party without the prior written consent of McPhail Associates, LLC.

APPENDIX B:

NOTICE OF INTENT TRANSMITTAL FORM

CITY OF CAMBRIDGE DEWATERING APPLICATION

PERMIT TO DEWATER

Location: 58 Charles Street

Owner: BMR-58 Charles Street, LLC

Contractor: The Richmond Group

Temporary ☑

Permanent ☐

The property owner, BMR-58 Charles Street, LLC agrees to hold harmless and indemnify the City of Cambridge for any liability on the part of the City directly or indirectly arising out of the dewatering operation.

The issuance of this permit is based in part in the submission packet of the applicant with documentation as follows:

Remediation General Permit in Massachusetts (MAG910000).

In addition, the application has been reviewed by the City under third party agreement as documented in the following reports:

N/A

All activities conducted in conjunction with the issuance of this permit must be in accordance with the provisions of the aforementioned reports. Any deviations in conditions must be reported to and approved by the Commissioner of Public Works.

This permit is in addition to any other street permit issued by the Department in connection with any street excavation or obstruction; and all conditions as specified in the Discharge Permit for Dewatering.

For the entire period of time the groundwater is being discharged to a storm drain, the property owner shall provide copies of each Discharge Monitoring Report Form submitted to the EPA, pursuant to the owner's discharge permit.

If in the future the EPA requires the City of Cambridge to bring existing stormwater drainage into compliance with EPA quality standards, as a condition to the continuation of discharge of that stormwater (also including groundwater) into an EPA regulated system into which the BMR-58 Charles Street, LLC (property owner) drains, the owner will agree to maintain its water discharge with such EPA water quality standards.

The property owner and contractor shall at all times meet the conditions specified in the requisite legal agreement/affidavits.

All groundwater pumped from the work shall be disposed of without damage to pavements, other surfaces or property.

Where material or debris has washed or flowed into or has been placed in existing gutters, drains, pipes or structures, such material or debris shall be entirely removed and satisfactorily disposed of by the

Contractor during the progress of work as directed by the Public Works Department.

Any flooding or damage of property and possessions caused by siltation of existing gutters, pipes or structures shall be the responsibility of the Contractor.

Provisions shall be made to insure that no material, water or solid, will freeze on any pavement or in any location which will cause inconvenience or hazard to the general public.

Upon completion of the work, existing gutters, drains, pipes and structures shall be (bucket) cleaned and material disposed of satisfactorily prior to release by the Public Works Department.

Any permit issued by the City of Cambridge shall be revoked upon transfer of any ownership interest unless and until subsequent owner(s) or parties of interest agree to the foregoing terms.

This permit shall remain in effect for one year and shall be renewable thereafter at the agreement of the parties.

The following special conditions as set forth below are part of the permit.

N/A

City Manager	Property Manager: Corporate Entity President, General Partner or Trustee Trustee with Instrument of Authority
Date	Date
City Solicitor	Contractor
Date	Date
Commissioner of Public	*Tom Leduc* Contractor
Date	12/13/21 Date

CC: Engineering
Supervisor of Sewer Maintenance and Engineering
Superintendent of Streets
Commissioner of Inspectional Services

Print Form

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

A. General site information:

<table>
<tr><td rowspan="2">1. Name of site:
58 Charles St</td><td colspan="3">Site address:
Street: 58 Charles St</td></tr>
<tr><td>City: Cambridge</td><td>State: MA</td><td>Zip: 02141</td></tr>
<tr><td rowspan="4">2. Site owner
BMR-58 Charles Street, LLC

Owner is (check one): ☐ Federal ☐ State/Tribal ■ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: Ashley Myslinski, Project Manager</td></tr>
<tr><td colspan="2">Telephone: 858-524-9153</td><td>Email: Ashley.Myslinski@biomedrealty.c</td></tr>
<tr><td colspan="3">Mailing address:
Street: 4570 Executive Drive, Suite 400</td></tr>
<tr><td>City: San Diego</td><td>State: CA</td><td>Zip: 92121</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
The Richmond Group</td><td colspan="3">Contact Person: Tom Leduc</td></tr>
<tr><td colspan="2">Telephone: 508-435-9700</td><td>Email: TLeduc@therichmondgroup.com</td></tr>
<tr><td colspan="3">Mailing address:
Street: 77 Main Street</td></tr>
<tr><td>City: Hopkinton</td><td>State: MA</td><td>Zip: 01748</td></tr>
<tr><td>4. NPDES permit number assigned by EPA:
Emergency Discharge

NPDES permit is (check all that apply: ■ RGP ☐ DGP ☐ CGP
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td><td colspan="3">5. Other regulatory program(s) that apply to the site (check all that apply):
☐ MA Chapter 21e; list RTN(s):
☐ NH Groundwater Management Permit or Groundwater Release Detection Permit:
☐ CERCLA
☐ UIC Program
☐ POTW Pretreatment
☐ CWA Section 404</td></tr>
</table>

B. Receiving water information:

1. Name of receiving water(s):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
Lechmere Canal	MA72-38	Class B Surface Water

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

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

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

3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP. Pathogens and phosphorus

4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.	NA
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.	NA

6. Has the operator received confirmation from the appropriate State for the 7Q10and dilution factor indicated? (check one): ■ Yes ☐ No
If yes, indicate date confirmation received:

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

C. Source water information:

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

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

2. Source water contaminants: Total suspended solids, inorganic metals	
a. For source waters that are contaminated groundwater or contaminated surface water, indicate are any contaminants present that are not included in the RGP? (check one): ☐ Yes ■ No If yes, indicate the contaminant(s) and the maximum concentration present in accordance with the instructions in Appendix VIII.	b. For a source water that is a surface water other than the receiving water, potable water or other, indicate any contaminants present at the maximum concentration in accordance with the instructions in Appendix VIII? (check one): ☐ Yes ☐ No
3. Has the source water been previously chlorinated or otherwise contains residual chlorine? (check one): ☐ Yes ■ No	

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ☐ Existing discharge ■ New discharge ☐ New source	
Outfall(s): Lechmere Canal	Outfall location(s): (Latitude, Longitude) 42.369137, -71.076266
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ■ Indirect discharge, if so, specify: Discharge into Charles River through City of Cambridge stormwater lines ☐ A private storm sewer system ■ A municipal storm sewer system If the discharge enters the receiving water via a private or municipal storm sewer system: Has notification been provided to the owner of this system? (check one): ■ Yes ☐ No Has the operator has received permission from the owner to use such system for discharges? (check one): ■ Yes ☐ No, if so, explain, with an estimated timeframe for obtaining permission: Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ■ Yes ☐ No	
Provide the expected start and end dates of discharge(s) (month/year): Temporary treatment system 12/2021 - 12/2022 Indicate if the discharge is expected to occur over a duration of: ☐ less than 12 months ☐ 12 months or more ■ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ■ Yes ☐ No	

<table>
<tr><td>2. Activity Category: (check all that apply)</td><td colspan="2">3. Contamination Type Category: (check all that apply)</td></tr>
<tr><td rowspan="4">☐ I – Petroleum-Related Site Remediation
☐ II – Non-Petroleum-Related Site Remediation
■ III – Contaminated Site Dewatering
☐ IV – Dewatering of Pipelines and Tanks
☐ V – Aquifer Pump Testing
☐ VI – Well Development/Rehabilitation
☐ VII – Collection Structure Dewatering/Remediation
☐ VIII – Dredge-Related Dewatering</td><td colspan="2">a. If Activity Category I or II: (check all that apply)

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

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

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✔	1	121.4500	75	2.22	2.22	Report mg/L	---
Chloride	✔	✔	1	44,300.0	5000	1510000	1510000	Report µg/l	---
Total Residual Chlorine	✔		1	121,4500	0.02	<DL	<DL	0.2 mg/L	NA
Total Suspended Solids		✔	1	121,2540D	5000	<DL	<DL	30 mg/L	NA
Antimony	✔		1	200.8	4	<DL	<DL	206 µg/L	NA
Arsenic	✔		1	200.8	1	<DL	<DL	104 µg/L	NA
Cadmium	✔		1	200.8	0.2	<DL	<DL	10.2 µg/L	NA
Chromium III	✔		1	107	10	<DL	<DL	323 µg/L	NA
Chromium VI	✔		1	7196A	10	<DL	<DL	323 µg/L	NA
Copper		✔	1	200.8	1	4.65	4.65	242 µg/L	NA
Iron		✔	1	200.7	50	260	260	5,000 µg/L	NA
Lead	✔		1	200.8	1	<DL	<DL	160 µg/L	NA
Mercury	✔		1	245.1	0.2	<DL	<DL	0.739 µg/L	NA
Nickel		✔	1	200.8	2	3.03	3.03	1,450 µg/L	NA
Selenium	✔		1	200.8	5	<DL	<DL	235.8 µg/L	NA
Silver	✔		1	200.8	0.4	<DL	<DL	35.1 µg/L	NA
Zinc		✔	1	200.8	10	58	58	420 µg/L	NA
Cyanide	✔		1	121.4500	5	<DL	<DL	178 mg/L	NA
B. Non-Halogenated VOCs									
Total BTEX	✔		1	128.624.1	1	<DL	<DL	100 µg/L	---
Benzene	✔		1	128.624.1	1	<DL	<DL	5.0 µg/L	---
1,4 Dioxane	✔		1	128.624.1	5	<DL	<DL	200 µg/L	---
Acetone	✔		1	128.624.1	10	<DL	<DL	7.97 mg/L	---
Phenol			0	129.625.1				1,080 µg/L	NA

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	✔		1	128,624.1	1	<DL	<DL	4.4 µg/L	NA
1,2 Dichlorobenzene	✔		1	128,624.1	5	<DL	<DL	600 µg/L	---
1,3 Dichlorobenzene	✔		1	128,624.1	5	<DL	<DL	320 µg/L	---
1,4 Dichlorobenzene	✔		1	128,624.1	5	<DL	<DL	5.0 µg/L	---
Total dichlorobenzene	✔		1	128,624.1	5	<DL	<DL	763 µg/L in NH	---
1,1 Dichloroethane	✔		1	128,624.1	1.5	<DL	<DL	70 µg/L	---
1,2 Dichloroethane	✔		1	128,624.1	1.5	<DL	<DL	5.0 µg/L	---
1,1 Dichloroethylene	✔		1	128,624.1	1	<DL	<DL	3.2 µg/L	---
Ethylene Dibromide			0					0.05 µg/L	---
Methylene Chloride	✔		1	128,624.1	1	<DL	<DL	4.6 µg/L	---
1,1,1 Trichloroethane	✔		1	128,624.1	2	<DL	<DL	200 µg/L	---
1,1,2 Trichloroethane	✔		1	128,624.1	1.5	<DL	<DL	5.0 µg/L	---
Trichloroethylene	✔		1	128,624.1	1	<DL	<DL	5.0 µg/L	---
Tetrachloroethylene	✔		1	128,624.1	1	<DL	<DL	5.0 µg/L	NA
cis-1,2 Dichloroethylene	✔		1	128,624.1	1	<DL	<DL	70 µg/L	---
Vinyl Chloride	✔		1	128,624.1	1	<DL	<DL	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✔		1	129,625.1	5	<DL	<DL	190 µg/L	NA
Diethylhexyl phthalate	✔		1	129,625.1	5	<DL	<DL	101 µg/L	
Total Group I PAHs	✔		1	129,625.1	5	<DL	<DL	1.0 µg/L	---
Benzo(a)anthracene	✔		1	129,625.1	0.1	<DL	<DL	As Total PAHs	NA
Benzo(a)pyrene	✔		1	129,625.1	0.1	<DL	<DL		
Benzo(b)fluoranthene	✔		1	129,625.1	0.1	<DL	<DL		
Benzo(k)fluoranthene	✔		1	129,625.1	0.1	<DL	<DL		
Chrysene	✔		1	129,625.1	0.1	<DL	<DL		
Dibenzo(a,h)anthracene	✔		1	129,625.1	0.1	<DL	<DL		
Indeno(1,2,3-cd)pyrene	✔		1	129,625.1	0.1	<DL	<DL		

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	✔		1	129,625.1	0.1	0.286	<DL	100 µg/L	---
Naphthalene	✔		1	129,625.1	0.1	<DL	<DL	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✔		1	127,608.3	0.2	<DL	<DL	0.000064 µg/L	---
Pentachlorophenol	✔		1	129,625.1	1	<DL	<DL	1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons	✔		1	74.1664A	4.0	<DL	<DL	5.0 mg/L	---
Ethanol			0	1671A	20	<DL	<DL	Report mg/L	---
Methyl-tert-Butyl Ether	✔		1	128,624.1	100	<DL	<DL	70 µg/L	
tert-Butyl Alcohol	✔		1	128,624.1	100	<DL	<DL	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✔		1	128,624.1	20	<DL	<DL	90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									
pH - Influent		✔	1	121,4500		7.8	7.8		
hardness - Influent		✔	1	3005A		461	461		

E. Treatment system information

1. Indicate the type(s) of treatment that will be applied to effluent prior to discharge: (check all that apply)

☐ Adsorption/Absorption ☐ Advanced Oxidation Processes ☐ Air Stripping ☐ Granulated Activated Carbon ("GAC")/Liquid Phase Carbon Adsorption
☐ Ion Exchange ☐ Precipitation/Coagulation/Flocculation ■ Separation/Filtration ☐ Other; if so, specify:

2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.
Settling tank, bag filters. If necessary to meet discharge limits, pH adjustment or ion media resin vessels will be added as a NOC.

Identify each major treatment component (check any that apply):
■ Fractionation tanks☐ Equalization tank ☐ Oil/water separator ☐ Mechanical filter ☐ Media filter
☐ Chemical feed tank ☐ Air stripping unit ■ Bag filter ☐ Other; if so, specify:

Indicate if either of the following will occur (check any that apply):
☐ Chlorination ☐ De-chlorination

3. Provide the **design flow capacity** in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: Fractionation tank Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	100
Provide the proposed maximum effluent flow in gpm.	50
Provide the average effluent flow in gpm.	25
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	N/A

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

F. Chemical and additive information

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

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

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

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

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

G. Endangered Species Act eligibility determination

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

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

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

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

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

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

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

H. National Historic Preservation Act eligibility determination

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

■ **Criterion A**: No historic properties are present. The discharges and discharge-related activities (e.g., BMPs) do not have the potential to cause effects on historic properties.

☐ **Criterion B**: Historic properties are present. Discharges and discharge related activities do not have the potential to cause effects on historic properties.

☐ **Criterion C**: Historic properties are present. The discharges and discharge-related activities have the potential to have an effect or will have an adverse effect on historic properties.

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

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

I. Supplemental information

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

Refer to the attached Report

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 Statement has been implemented in accordance with good engineering practices following Part 2.5 of the RGP and shall be implemented upon initiation of discharge.
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ☒ No ☐
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.	Check one: Yes ☒ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested.	Check one: Yes ☒ No ☐ NA ☐
Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.	Check one: Yes ☐ No ☐ NA ☒
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Check one: Yes ☐ No ☐ NA ☒
Signature: *Tom Leduc*	Date: 12/13/21
Print Name and Title: Tom Leduc - Project Superintendent	

APPENDIX C:

DEP PRIORITY RESOURCES MAP

USGS STREAMFLOW STATISTICS REPORT

DILUTION FACTOR AND WQBEL CALCULATIONS

ADDITIONAL NOI SUPPORT INFORMATION

MassDEP - Bureau of Waste Site Cleanup

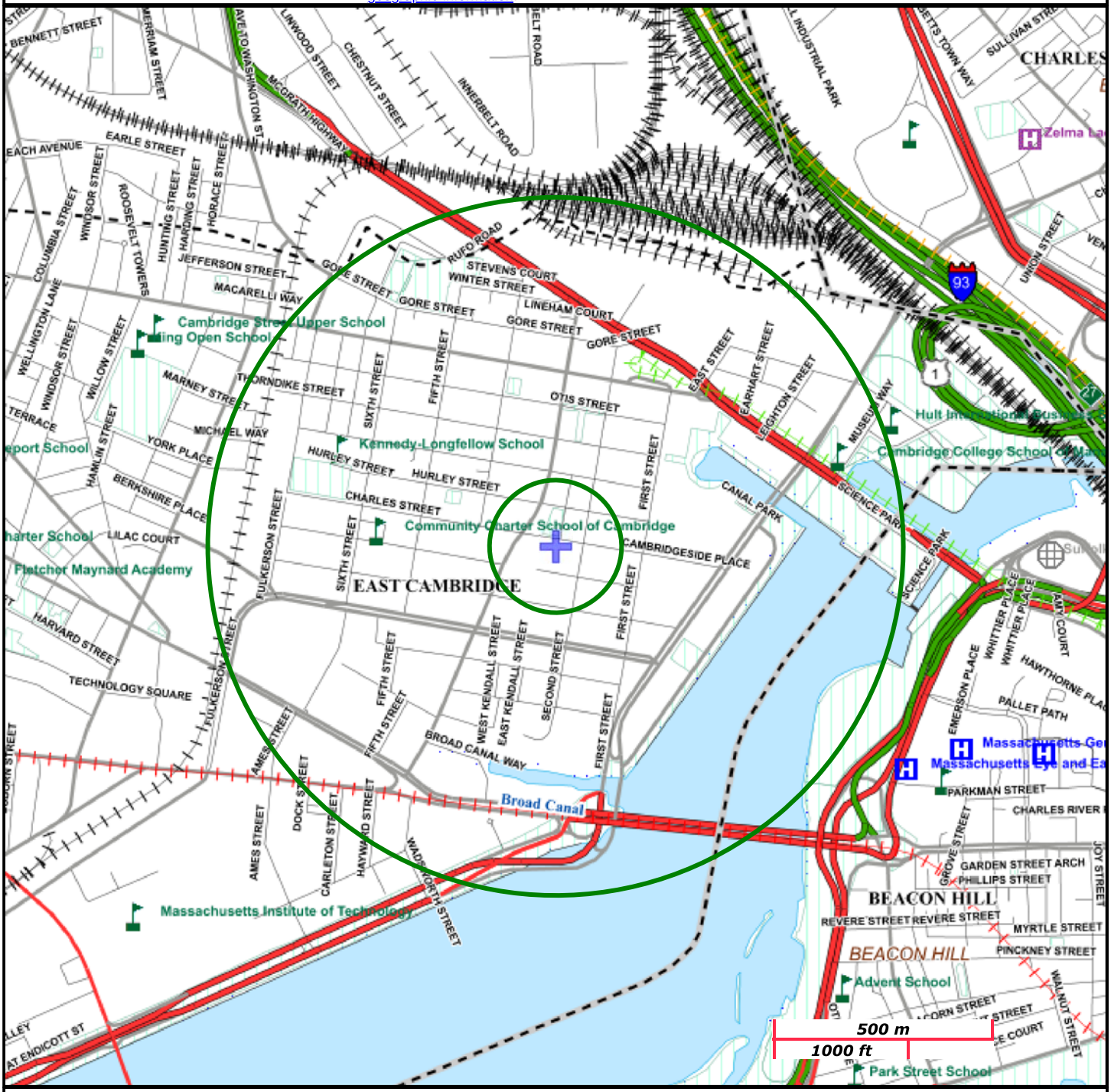
Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:
58 CHARLES STREET
58 CHARLES STREET CAMBRIDGE, MA

NAD83 UTM Meters:
4692665mN , 328717mE (Zone: 19)
December 3, 2021

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

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



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

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

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

Aquifers: Medium Yield, High Yield, EPA Sole Source

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

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

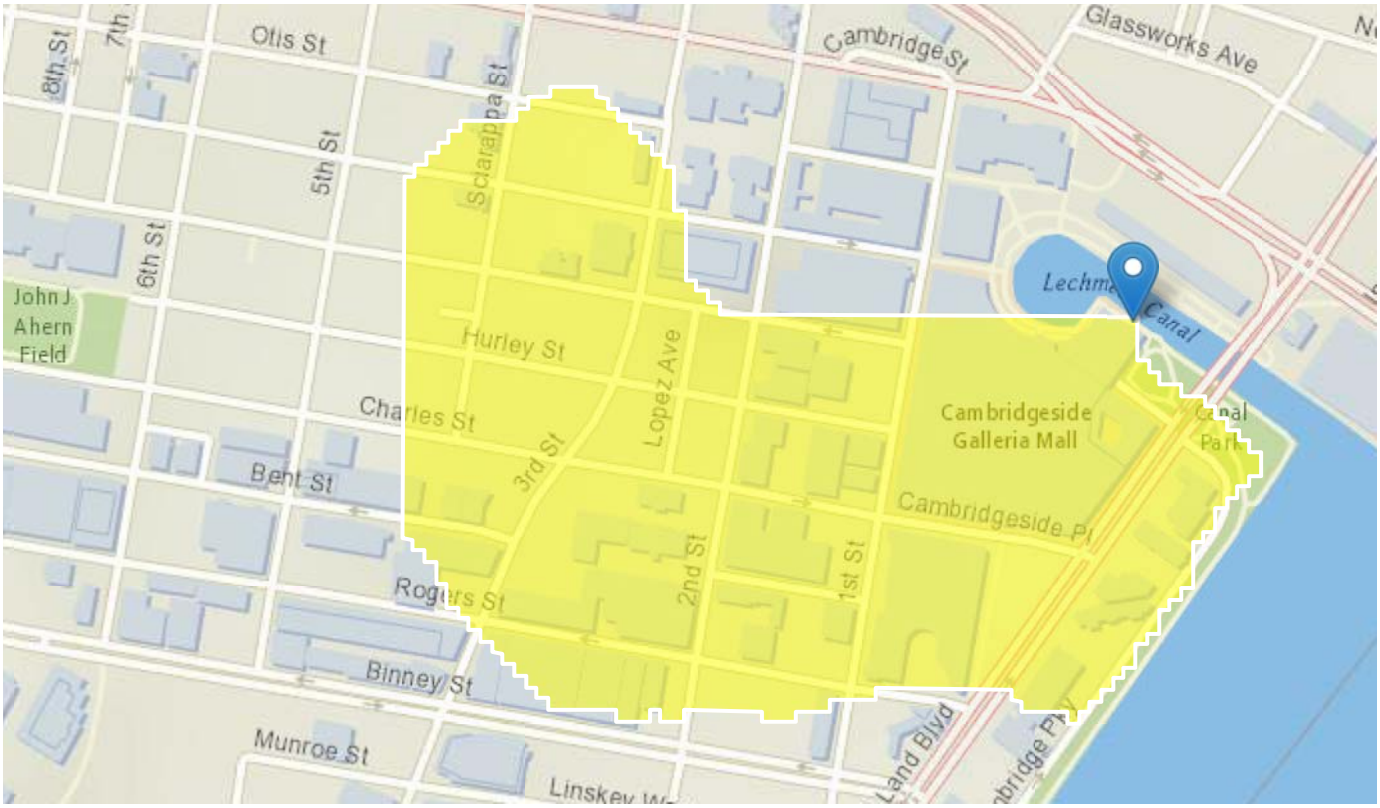
FEMA 100yr Floodplain; Protected Open Space; ACEC

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

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

StreamStats Report

Region ID: MA
Workspace ID: MA20211124184019749000
Clicked Point (Latitude, Longitude): 42.36879, -71.07500
Time: 2021-11-24 13:40:39 -0500



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	0.1	square miles
BSLDEM250	Mean basin slope computed from 1:250K DEM	0.562	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	-100000	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.1	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	0.562	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	-100000	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

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

Statistic	Value	Unit

Low-Flow Statistics Citations

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	0.1	square miles	1.61	149
DRFTPERSTR	Stratified Drift per Stream Length	-100000	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1
BSLDEM250	Mean Basin Slope from 250K DEM	0.562	percent	0.32	24.6

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

Statistic	Value	Unit

Flow-Duration Statistics Citations

expressed or implied is made regarding the display or utility of the data for other purposes, nor on all computer systems, nor shall the act of distribution constitute any such warranty.

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USGS Product Names Disclaimer: Any use of trade, firm, or product names is for descriptive purposes only and does not imply endorsement by the U.S. Government.

Application Version: 4.6.2
StreamStats Services Version: 1.2.22
NSS Services Version: 2.1.2

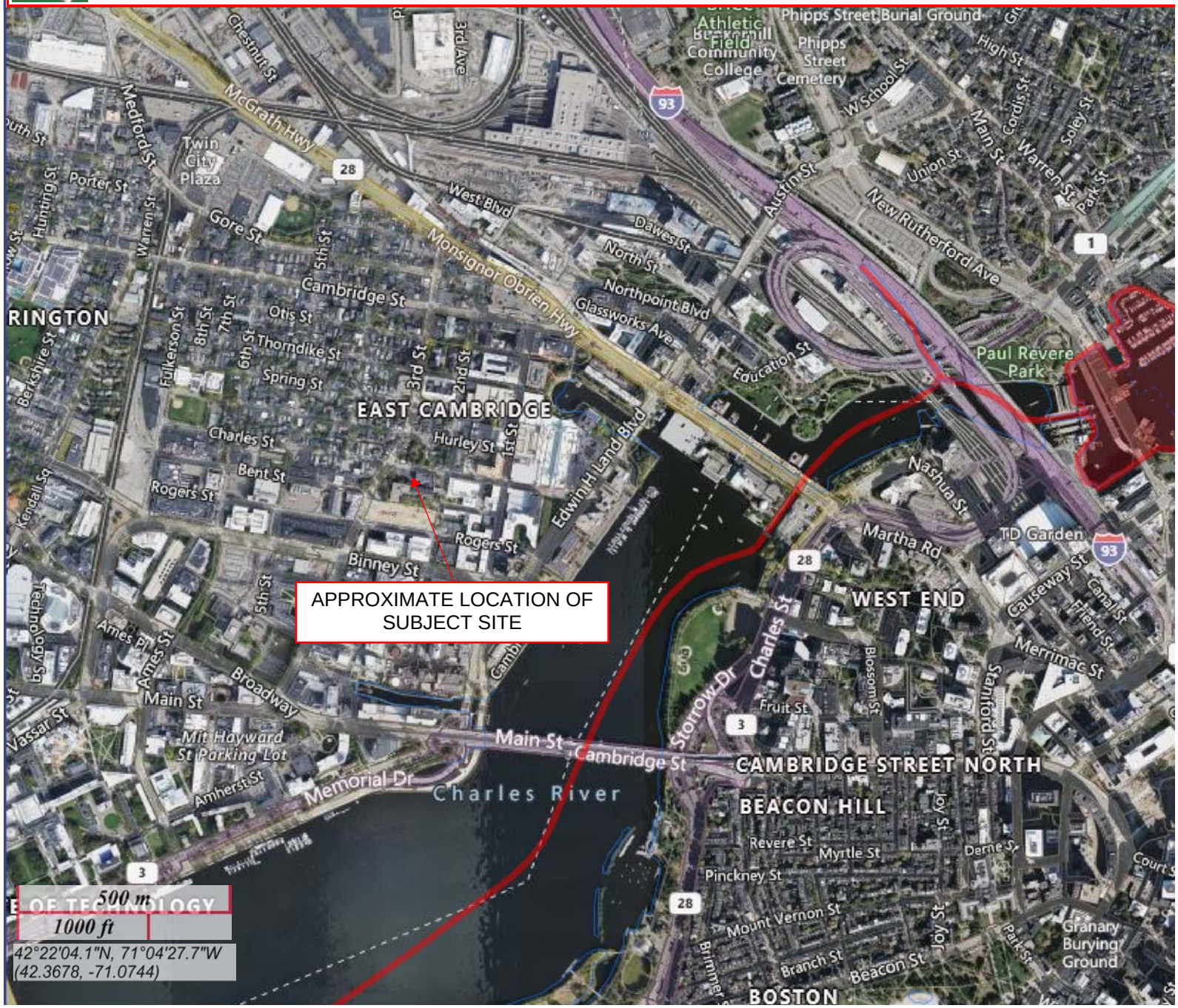
MassDEP Online Map Viewer

2014 Integrated List of Waters Map

Helpful Links:

- The Clean Water Act
- MassDEP Total Maximum Daily Loads

Mass.Gov



Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Cambridge; Place: Kendall Square; Street Name: Charles; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

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: December 08, 2021
Consultation Code: 05E1NE00-2022-SLI-0738
Event Code: 05E1NE00-2022-E-02622
Project Name: 58 Charles 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). Additionally, wind energy projects should follow the wind energy guidelines (http://www.fws.gov/windenergy/) for minimizing impacts to migratory birds and bats.

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 05E1NE00-2022-SLI-0738
Event Code: Some(05E1NE00-2022-E-02622)
Project Name: 58 Charles Street
Project Type: DEVELOPMENT
Project Description: Renovations
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.367303750000005,-71.08009015655702,14z

Counties: Middlesex County, Massachusetts

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

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

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

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

---

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

Insects

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

Critical habitats

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

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

Water Body	Segment ID	Description	Size	Units	Impairment	EPA TMDL No.
Charles River	MA72-36	From Watertown Dam (NATID: MA00456), Watertown to the Boston University Bridge, Boston/Cambridge (formerly part of segment MA72-08).	6.10	Miles	(Fish Passage Barrier*)	
					(Flow Regime Modification*)	
					(Non-Native Aquatic Plants*)	
					Chlorophyll-a	33826
					DDT in Fish Tissue	
					Dissolved Oxygen	
					Escherichia Coli (E. Coli)	32371
					Fish Bioassessments	
					Harmful Algal Blooms	33826
					Nutrient/Eutrophication Biological Indicators	33826
					Oil and Grease	
					PCBs In Fish Tissue	
					pH, High	
					Phosphorus, Total	33826
					Sediment Bioassay (Acute Toxicity Freshwater)	
					Transparency / Clarity	33826
					Unspecified Metals in Sediment	
Charles River	MA72-38	From Boston University Bridge, Boston/Cambridge to mouth at the New Charles River Dam (NATID: MA01092), Boston (formerly part of segment MA72-08).	3.10	Miles	(Flow Regime Modification*)	
					Cause Unknown (Sediment Screening Value (Exceedence))	
					Chlorophyll-a	33826
					Combined Biota/Habitat Bioassessments	
					DDT in Fish Tissue	
					Dissolved Oxygen	
					Dissolved Oxygen Supersaturation	33826
					Escherichia Coli (E. Coli)	32371
					Harmful Algal Blooms	33826
					Nutrient/Eutrophication Biological Indicators	33826
					Odor	33826
					Oil and Grease	
					PCBs In Fish Tissue	
					Phosphorus, Total	33826
					Salinity	
					Temperature	
					Transparency / Clarity	33826
Chicken Brook	MA72-34	Source, outlet Waseeka Sanctuary Pond, Holliston to mouth at confluence with the Charles River, Medway.	7.40	Miles	Escherichia Coli (E. Coli)	
Crystal Lake	MA72030	Newton.	27.00	Acres	Harmful Algal Blooms	

From: Ruan, Xiaodan (DEP)
To: Kate Hanrahan
Cc: Vakalopoulos, Catherine (DEP)
Subject: RE: 58 Charles Street - RGP Dilution Factor [Filed 13 Dec 2021 14:11]
Date: Monday, December 13, 2021 2:09:10 PM

[External]

Hi Kate,

You were correct that the Lechmere Canal does not receive enough flow, and the StreamStats cannot calculate a 7Q10; therefore, no dilution will be allowed for the discharge to the Lechmere Canal for the project at 58 Charles Street in Cambridge.

Here is water quality information in assisting you in filling out the NOI:

> Waterbody and ID: Charles River (MA72-38) within Charles River Watershed
> Classification: B
> Outstanding Resource Water?: no
> State's most recent Integrated List is located here: https://www.epa.gov/sites/production/files/2020-01/documents/2016-ma-303d-list-report.pdf, search for "MA72-38" to see the causes of impairments.
> TMDLs: there are two approved TMDL (pathogen and nutrients) for this segment.

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

Please let me know if you have any questions.
Thanks,
Xiaodan

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

From: Vakalopoulos, Catherine (DEP) <catherine.vakalopoulos@mass.gov>
Sent: Monday, December 13, 2021 1:45 PM
To: khanrahan@mcphailgeo.com
Cc: Ruan, Xiaodan (DEP) <xiaodan.ruan@mass.gov>

Subject: Fw: 58 Charles Street - RGP Dilution Factor

Hi Kate,
Sorry for the delay...I have fallen behind. Xiaodan has some time to look at this now.
Cathy

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

From: Kate Hanrahan <khanrahan@mcphailgeo.com>
Sent: Wednesday, November 24, 2021 2:02 PM
To: Vakalopoulos, Catherine (DEP) <catherine.vakalopoulos@mass.gov>; Ruan, Xiaodan (DEP) <xiaodan.ruan@mass.gov>
Cc: John Miller <jmiller@mcphailgeo.com>
Subject: 58 Charles Street - RGP Dilution Factor

Hi Cathy,

I am currently preparing a NOI to discharge under the RGP for the project located at 58 Charles Street in Cambridge. The Contractor would like to discharge treated water off-site into a storm drain that directly discharges into a catch basin with a final out fall in the Lechmere Canal (Charles River MA72-38) The 7 Day 10 year flow value from the streamstats report is not available because the Lechmere Canal does not receive enough flow. Please confirm.

Thank you,

Kate Hanrahan

McPhail Associates, LLC
2269 Massachusetts Avenue
Cambridge, MA 02140
Tel: 617-868-1420 ext. 362
Direct: 617-349-7362
Cell: 978-273-6529
www.mcphailgeo.com

APPENDIX D:

LABORATORY ANALYTICAL DATA

ANALYTICAL REPORT

Lab Number:	L2165980
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	58 CHARLES STREET
Project Number:	6864.9.06
Report Date:	12/06/21

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

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

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2165980
Report Date: 12/06/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2165980-01	GW	WATER	CAMBRIDGE, MA	12/01/21 08:30	12/01/21
L2165980-02	LECHMERE CANAL	WATER	CAMBRIDGE, MA	12/01/21 09:30	12/01/21

Project Name:	58 CHARLES STREET	**Lab Number:**	L2165980
Project Number:	6864.9.06	**Report Date:**	12/06/21

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.

Project Name: 58 CHARLES STREET **Lab Number:** L2165980
Project Number: 6864.9.06 **Report Date:** 12/06/21

Case Narrative (continued)

Report Submission

The analyses of Phenolics and Ethanol were subcontracted. A copy of the laboratory report is included as an addendum. Please note: This data is only available in PDF format and is not available on Data Merger.

Sample Receipt

The analyses performed were specified by the client.

L2165980-01: Sample containers for PCBs, Semivolatile Organics and Phenolics were received for the "GW" sample, but were not listed on the chain of custody. At the client's request, the analyses were performed.

Total Metals

The WG1578225-3 MS recovery for hardness (138%), performed on L2165980-01, does not apply because the sample concentration is greater than four times the spike amount added.

Chlorine, Total Residual

The WG1578071-4 MS recovery, performed on L2165980-01, is outside the acceptance criteria for chlorine, total residual (0%); however, the associated LCS recovery is within criteria. No further action was taken.

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

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 12/06/21

ORGANICS

VOLATILES

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2165980
Report Date: 12/06/21

SAMPLE RESULTS

Lab ID: L2165980-01
Client ID: GW
Sample Location: CAMBRIDGE, MA

Date Collected: 12/01/21 08:30
Date Received: 12/01/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 12/02/21 17:52
Analyst: GT

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: 58 CHARLES STREET **Lab Number:** L2165980

Project Number: 6864.9.06 **Report Date:** 12/06/21

SAMPLE RESULTS

Lab ID: L2165980-01 Date Collected: 12/01/21 08:30

Client ID: GW Date Received: 12/01/21

Sample Location: CAMBRIDGE, MA Field Prep: Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	96		60-140
Fluorobenzene	110		60-140
4-Bromofluorobenzene	97		60-140

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2165980
Report Date: 12/06/21

SAMPLE RESULTS

Lab ID: L2165980-01
Client ID: GW
Sample Location: CAMBRIDGE, MA

Date Collected: 12/01/21 08:30
Date Received: 12/01/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1-SIM
Analytical Date: 12/02/21 17:52
Analyst: GT

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

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

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2165980
Report Date: 12/06/21

SAMPLE RESULTS

Lab ID: L2165980-01
Client ID: GW
Sample Location: CAMBRIDGE, MA

Date Collected: 12/01/21 08:30
Date Received: 12/01/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 12/03/21 16:37
Analyst: AMM

Extraction Method: EPA 504.1
Extraction Date: 12/03/21 13:54

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

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2165980
Report Date: 12/06/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 12/02/21 10:01
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1578151-10					
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: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2165980
Report Date: 12/06/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 12/02/21 10:01
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1578151-10					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	93		60-140
Fluorobenzene	107		60-140
4-Bromofluorobenzene	96		60-140

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2165980
Report Date: 12/06/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1-SIM
Analytical Date: 12/02/21 10:01
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1578247-4					
1,4-Dioxane	ND		ug/l	5.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	111		60-140
4-Bromofluorobenzene	106		60-140

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2165980
Report Date: 12/06/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 12/03/21 15:13
Analyst: AMM

Extraction Method: EPA 504.1
Extraction Date: 12/03/21 13:54

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westborough Lab for sample(s): 01 Batch: WG1578706-1						
1,2-Dibromoethane	ND		ug/l	0.010	--	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 58 CHARLES STREET

Project Number: 6864.9.06

Lab Number: L2165980

Report Date: 12/06/21

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: WG1578151-9								
Methylene chloride	105		-		60-140	-		28
1,1-Dichloroethane	105		-		50-150	-		49
Carbon tetrachloride	115		-		70-130	-		41
1,1,2-Trichloroethane	100		-		70-130	-		45
Tetrachloroethene	100		-		70-130	-		39
1,2-Dichloroethane	105		-		70-130	-		49
1,1,1-Trichloroethane	105		-		70-130	-		36
Benzene	115		-		65-135	-		61
Toluene	110		-		70-130	-		41
Ethylbenzene	110		-		60-140	-		63
Vinyl chloride	105		-		5-195	-		66
1,1-Dichloroethene	105		-		50-150	-		32
cis-1,2-Dichloroethene	110		-		60-140	-		30
Trichloroethene	120		-		65-135	-		48
1,2-Dichlorobenzene	100		-		65-135	-		57
1,3-Dichlorobenzene	100		-		70-130	-		43
1,4-Dichlorobenzene	100		-		65-135	-		57
p/m-Xylene	105		-		60-140	-		30
o-xylene	100		-		60-140	-		30
Acetone	96		-		40-160	-		30
Methyl tert butyl ether	90		-		60-140	-		30
Tert-Butyl Alcohol	90		-		60-140	-		30
Tertiary-Amyl Methyl Ether	85		-		60-140	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2165980
Report Date: 12/06/21

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: WG1578151-9								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	97				60-140
Fluorobenzene	111				60-140
4-Bromofluorobenzene	100				60-140

Lab Control Sample Analysis
Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2165980
Report Date: 12/06/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1578247-3								
1,4-Dioxane	98		-		60-140	-		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Fluorobenzene	110				60-140
4-Bromofluorobenzene	106				60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: 58 CHARLES STREET

Project Number: 6864.9.06

Lab Number: L2165980

Report Date: 12/06/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab	Associated sample(s): 01		Batch: WG1578706-2						
1,2-Dibromoethane	108		-		80-120	-			A

Matrix Spike Analysis

Batch Quality Control

Project Name: 58 CHARLES STREET

Project Number: 6864.9.06

Lab Number: L2165980

Report Date: 12/06/21

Parameter	*Native Sample*	*MS Added*	*MS Found*	*MS %Recovery*	*Qual*	*MSD Found*	*MSD %Recovery*	*Qual*	*Recovery Limits*	*RPD*	*Qual*	*RPD Limits*	*Column*
Microextractables by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1578706-3 QC Sample: L2165276-01 Client ID: MS Sample													
1,2-Dibromoethane	ND	0.252	0.261	103		-	-		80-120	-		20	A
1,2-Dibromo-3-chloropropane	ND	0.252	0.259	103		-	-		80-120	-		20	A
1,2,3-Trichloropropane	ND	0.252	0.284	113		-	-		80-120	-		20	A

SEMIVOLATILES

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2165980
Report Date: 12/06/21

SAMPLE RESULTS

Lab ID: L2165980-01
Client ID: GW
Sample Location: CAMBRIDGE, MA

Date Collected: 12/01/21 08:30
Date Received: 12/01/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 12/03/21 09:20
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 12/02/21 10:04

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	57		42-122
2-Fluorobiphenyl	56		46-121
4-Terphenyl-d14	67		47-138

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2165980
Report Date: 12/06/21

SAMPLE RESULTS

Lab ID: L2165980-01
Client ID: GW
Sample Location: CAMBRIDGE, MA

Date Collected: 12/01/21 08:30
Date Received: 12/01/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 12/04/21 17:11
Analyst: JJW

Extraction Method: EPA 625.1
Extraction Date: 12/02/21 10:05

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.100	--	1
Fluoranthene	0.168		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	0.118		ug/l	0.100	--	1
Pentachlorophenol	ND		ug/l	1.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	50		25-87
Phenol-d6	34		16-65
Nitrobenzene-d5	78		42-122
2-Fluorobiphenyl	72		46-121
2,4,6-Tribromophenol	115		45-128
4-Terphenyl-d14	84		47-138

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2165980
Report Date: 12/06/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1
Analytical Date: 12/02/21 13:56
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 12/02/21 00:31

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1577981-1					
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	75		42-122
2-Fluorobiphenyl	66		46-121
4-Terphenyl-d14	81		47-138

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2165980
Report Date: 12/06/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1-SIM
Analytical Date: 12/04/21 16:54
Analyst: JJW

Extraction Method: EPA 625.1
Extraction Date: 12/02/21 00:31

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1577982-1					
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	59		25-87
Phenol-d6	45		16-65
Nitrobenzene-d5	85		42-122
2-Fluorobiphenyl	78		46-121
2,4,6-Tribromophenol	111		45-128
4-Terphenyl-d14	87		47-138

Lab Control Sample Analysis
Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2165980
Report Date: 12/06/21

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: WG1577981-2								
Bis(2-ethylhexyl)phthalate	107		-		29-137	-		82
Butyl benzyl phthalate	91		-		1-140	-		60
Di-n-butylphthalate	98		-		8-120	-		47
Di-n-octylphthalate	105		-		19-132	-		69
Diethyl phthalate	92		-		1-120	-		100
Dimethyl phthalate	88		-		1-120	-		183

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	95				42-122
2-Fluorobiphenyl	86				46-121
4-Terphenyl-d14	95				47-138

Lab Control Sample Analysis
Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2165980
Report Date: 12/06/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1577982-2								
Acenaphthene	87		-		60-132	-		30
Fluoranthene	96		-		43-121	-		30
Naphthalene	89		-		36-120	-		30
Benzo(a)anthracene	88		-		42-133	-		30
Benzo(a)pyrene	90		-		32-148	-		30
Benzo(b)fluoranthene	89		-		42-140	-		30
Benzo(k)fluoranthene	87		-		25-146	-		30
Chrysene	83		-		44-140	-		30
Acenaphthylene	105		-		54-126	-		30
Anthracene	90		-		43-120	-		30
Benzo(ghi)perylene	89		-		1-195	-		30
Fluorene	92		-		70-120	-		30
Phenanthrene	84		-		65-120	-		30
Dibenzo(a,h)anthracene	95		-		1-200	-		30
Indeno(1,2,3-cd)pyrene	88		-		1-151	-		30
Pyrene	95		-		70-120	-		30
Pentachlorophenol	78		-		38-152	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2165980
Report Date: 12/06/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1577982-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	62				25-87
Phenol-d6	49				16-65
Nitrobenzene-d5	95				42-122
2-Fluorobiphenyl	94				46-121
2,4,6-Tribromophenol	126				45-128
4-Terphenyl-d14	89				47-138

PCBS

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2165980
Report Date: 12/06/21

SAMPLE RESULTS

Lab ID: L2165980-01
Client ID: GW
Sample Location: CAMBRIDGE, MA

Date Collected: 12/01/21 08:30
Date Received: 12/01/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 12/03/21 09:50
Analyst: AWS

Extraction Method: EPA 608.3
Extraction Date: 12/02/21 16:40
Cleanup Method: EPA 3665A
Cleanup Date: 12/02/21
Cleanup Method: EPA 3660B
Cleanup Date: 12/03/21

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	61		37-123	B
Decachlorobiphenyl	58		38-114	B
2,4,5,6-Tetrachloro-m-xylene	60		37-123	A
Decachlorobiphenyl	61		38-114	A

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2165980
Report Date: 12/06/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 127,608.3
Analytical Date: 12/03/21 08:18
Analyst: JWL

Extraction Method: EPA 608.3
Extraction Date: 12/02/21 16:40
Cleanup Method: EPA 3665A
Cleanup Date: 12/02/21
Cleanup Method: EPA 3660B
Cleanup Date: 12/03/21

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG1578407-1						
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	67		37-123	B
Decachlorobiphenyl	68		38-114	B
2,4,5,6-Tetrachloro-m-xylene	63		37-123	A
Decachlorobiphenyl	68		38-114	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2165980
Report Date: 12/06/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG1578407-2									
Aroclor 1016	80		-		50-140	-		36	A
Aroclor 1260	81		-		8-140	-		38	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	76				37-123	B
Decachlorobiphenyl	79				38-114	B
2,4,5,6-Tetrachloro-m-xylene	73				37-123	A
Decachlorobiphenyl	79				38-114	A

METALS

Project Name: 58 CHARLES STREET
Lab Number: L2165980
Project Number: 6864.9.06
Report Date: 12/06/21

SAMPLE RESULTS

Lab ID: L2165980-01
Client ID: GW
Sample Location: CAMBRIDGE, MA
Date Collected: 12/01/21 08:30
Date Received: 12/01/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	12/02/21 14:15	12/02/21 18:51	EPA 3005A	3,200.8	PS
Arsenic, Total	ND		mg/l	0.00100	--	1	12/02/21 14:15	12/02/21 18:51	EPA 3005A	3,200.8	PS
Cadmium, Total	ND		mg/l	0.00020	--	1	12/02/21 14:15	12/02/21 18:51	EPA 3005A	3,200.8	PS
Chromium, Total	0.00509		mg/l	0.00100	--	1	12/02/21 14:15	12/02/21 18:51	EPA 3005A	3,200.8	PS
Copper, Total	0.00465		mg/l	0.00100	--	1	12/02/21 14:15	12/02/21 18:51	EPA 3005A	3,200.8	PS
Iron, Total	0.260		mg/l	0.050	--	1	12/02/21 14:15	12/06/21 09:02	EPA 3005A	19,200.7	EW
Lead, Total	ND		mg/l	0.00100	--	1	12/02/21 14:15	12/02/21 18:51	EPA 3005A	3,200.8	PS
Mercury, Total	ND		mg/l	0.00020	--	1	12/02/21 14:24	12/03/21 11:38	EPA 245.1	3,245.1	NB
Nickel, Total	0.00303		mg/l	0.00200	--	1	12/02/21 14:15	12/02/21 18:51	EPA 3005A	3,200.8	PS
Selenium, Total	ND		mg/l	0.00500	--	1	12/02/21 14:15	12/02/21 18:51	EPA 3005A	3,200.8	PS
Silver, Total	ND		mg/l	0.00040	--	1	12/02/21 14:15	12/02/21 18:51	EPA 3005A	3,200.8	PS
Zinc, Total	0.05800		mg/l	0.01000	--	1	12/02/21 14:15	12/02/21 18:51	EPA 3005A	3,200.8	PS
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	461		mg/l	0.660	NA	1	12/02/21 14:15	12/06/21 12:47	EPA 3005A	19,200.7	GD
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		12/02/21 18:51	NA	107,-	

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2165980
Report Date: 12/06/21

SAMPLE RESULTS

Lab ID: L2165980-02
Client ID: LECHMERE CANAL
Sample Location: CAMBRIDGE, MA
Sample Depth:
Matrix: Water

Date Collected: 12/01/21 09:30
Date Received: 12/01/21
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	80.7		mg/l	0.660	NA	1	12/02/21 14:15	12/06/21 12:42	EPA 3005A	19,200.7	GD

Project Name: 58 CHARLES STREET **Lab Number:** L2165980

Project Number: 6864.9.06 **Report Date:** 12/06/21

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): 01-02 Batch: WG1578225-1										
Iron, Total	ND		mg/l	0.050	--	1	12/02/21 14:15	12/06/21 08:38	19,200.7	EW

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab for sample(s): 01-02 Batch: WG1578225-1										
Hardness	ND		mg/l	0.660	NA	1	12/02/21 14:15	12/06/21 12:24	19,200.7	GD

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1578227-1										
Antimony, Total	ND		mg/l	0.00400	--	1	12/02/21 14:15	12/02/21 18:28	3,200.8	PS
Arsenic, Total	ND		mg/l	0.00100	--	1	12/02/21 14:15	12/02/21 18:28	3,200.8	PS
Cadmium, Total	ND		mg/l	0.00020	--	1	12/02/21 14:15	12/02/21 18:28	3,200.8	PS
Chromium, Total	ND		mg/l	0.00100	--	1	12/02/21 14:15	12/02/21 18:28	3,200.8	PS
Copper, Total	ND		mg/l	0.00100	--	1	12/02/21 14:15	12/02/21 18:28	3,200.8	PS
Lead, Total	ND		mg/l	0.00100	--	1	12/02/21 14:15	12/02/21 18:28	3,200.8	PS
Nickel, Total	ND		mg/l	0.00200	--	1	12/02/21 14:15	12/02/21 18:28	3,200.8	PS
Selenium, Total	ND		mg/l	0.00500	--	1	12/02/21 14:15	12/02/21 18:28	3,200.8	PS
Silver, Total	ND		mg/l	0.00040	--	1	12/02/21 14:15	12/02/21 18:28	3,200.8	PS
Zinc, Total	ND		mg/l	0.01000	--	1	12/02/21 14:15	12/02/21 18:28	3,200.8	PS

Prep Information

Digestion Method: EPA 3005A

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2165980
Report Date: 12/06/21

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: WG1578229-1										
Mercury, Total	ND		mg/l	0.00020	--	1	12/02/21 14:24	12/03/21 11:07	3,245.1	NB

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2165980
Report Date: 12/06/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1578225-2								
Iron, Total	105		-		85-115	-		
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 Batch: WG1578225-2								
Hardness	104		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1578227-2								
Antimony, Total	95		-		85-115	-		
Arsenic, Total	104		-		85-115	-		
Cadmium, Total	103		-		85-115	-		
Chromium, Total	106		-		85-115	-		
Copper, Total	104		-		85-115	-		
Lead, Total	101		-		85-115	-		
Nickel, Total	96		-		85-115	-		
Selenium, Total	103		-		85-115	-		
Silver, Total	105		-		85-115	-		
Zinc, Total	98		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1578229-2								
Mercury, Total	102		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2165980
Report Date: 12/06/21

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): 01-02 QC Batch ID: WG1578225-3 QC Sample: L2165980-01 Client ID: GW												
Iron, Total	0.260	1	1.28	102		-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1578225-3 QC Sample: L2165980-01 Client ID: GW												
Hardness	461	66.2	552	**138**	Q	-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1578227-3 QC Sample: L2165980-01 Client ID: GW												
Antimony, Total	ND	0.5	0.5858	117		-	-		70-130	-		20
Arsenic, Total	ND	0.12	0.1266	106		-	-		70-130	-		20
Cadmium, Total	ND	0.053	0.05472	103		-	-		70-130	-		20
Chromium, Total	0.00509	0.2	0.2128	104		-	-		70-130	-		20
Copper, Total	0.00465	0.25	0.2589	102		-	-		70-130	-		20
Lead, Total	ND	0.53	0.5433	102		-	-		70-130	-		20
Nickel, Total	0.00303	0.5	0.4760	94		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1256	105		-	-		70-130	-		20
Silver, Total	ND	0.05	0.05159	103		-	-		70-130	-		20
Zinc, Total	0.05800	0.5	0.5432	97		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1578229-3 QC Sample: L2165498-01 Client ID: MS Sample												
Mercury, Total	ND	0.025	0.02284	91		-	-		70-130	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2165980
Report Date: 12/06/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1578225-4 QC Sample: L2165980-01 Client ID: GW						
Iron, Total	0.260	0.269	mg/l	3		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1578225-4 QC Sample: L2165980-01 Client ID: GW						
Hardness	461	482	mg/l	4		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1578227-4 QC Sample: L2165980-01 Client ID: GW						
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	0.00509	0.00489	mg/l	4		20
Copper, Total	0.00465	0.00495	mg/l	6		20
Lead, Total	ND	ND	mg/l	NC		20
Nickel, Total	0.00303	0.00309	mg/l	2		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	0.05800	0.05992	mg/l	3		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1578229-4 QC Sample: L2165498-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2165980
Report Date: 12/06/21

SAMPLE RESULTS

Lab ID: L2165980-01
Client ID: GW
Sample Location: CAMBRIDGE, MA

Date Collected: 12/01/21 08:30
Date Received: 12/01/21
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										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	12/02/21 12:00	121,2540D	MD
Cyanide, Total	ND		mg/l	0.005	--	1	12/02/21 05:45	12/02/21 11:51	121,4500CN-CE	CS
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	12/02/21 07:39	121,4500CL-D	KA
pH (H)	7.8		SU	-	NA	1	-	12/02/21 17:27	121,4500H+-B	AS
Nitrogen, Ammonia	2.22		mg/l	0.075	--	1	12/03/21 09:30	12/03/21 22:15	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.00	--	1	12/02/21 14:00	12/02/21 17:15	140,1664B	NP
Chromium, Hexavalent	ND		mg/l	0.010	--	1	12/02/21 07:10	12/02/21 07:40	1,7196A	KP
Anions by Ion Chromatography - Westborough Lab										
Chloride	1510		mg/l	25.0	--	50	-	12/04/21 22:23	44,300.0	SH

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2165980
Report Date: 12/06/21

SAMPLE RESULTS

Lab ID: L2165980-02
Client ID: LECHMERE CANAL
Sample Location: CAMBRIDGE, MA

Date Collected: 12/01/21 09:30
Date Received: 12/01/21
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										
pH (H)	7.7		SU	-	NA	1	-	12/02/21 17:27	121,4500H+-B	AS
Nitrogen, Ammonia	0.354		mg/l	0.075	--	1	12/03/21 09:30	12/03/21 22:16	121,4500NH3-BH	AT

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2165980
Report Date: 12/06/21

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: WG1577991-1										
Cyanide, Total	ND		mg/l	0.005	--	1	12/02/21 13:05	12/02/21 16:20	121,4500CN-CE	CS
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1578067-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	12/02/21 07:10	12/02/21 07:37	1,7196A	KP
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1578071-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	12/02/21 07:39	121,4500CL-D	KA
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1578205-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	12/02/21 14:00	12/02/21 17:15	140,1664B	NP
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1578233-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	12/02/21 12:00	121,2540D	MD
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1578866-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	12/03/21 09:30	12/03/21 21:59	121,4500NH3-BH	AT
Anions by Ion Chromatography - Westborough Lab for sample(s): 01 Batch: WG1579329-1										
Chloride	ND		mg/l	0.500	--	1	-	12/04/21 13:37	44,300.0	SH

Lab Control Sample Analysis

Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2165980
Report Date: 12/06/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1577991-2								
Cyanide, Total	99		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1578067-2								
Chromium, Hexavalent	102		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1578071-2								
Chlorine, Total Residual	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1578205-2								
TPH	79		-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1578233-2								
Solids, Total Suspended	100		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1578419-1								
pH	101		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1578866-2								
Nitrogen, Ammonia	92		-		80-120	-		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 58 CHARLES STREET

Project Number: 6864.9.06

Lab Number: L2165980

Report Date: 12/06/21

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 Batch: WG1579329-2					
Chloride	98	-	90-110	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2165980
Report Date: 12/06/21

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: WG1577991-4 QC Sample: L2164029-01 Client ID: MS Sample												
Cyanide, Total	0.182	0.2	0.336	**77**	Q	-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1578067-4 QC Sample: L2165980-01 Client ID: GW												
Chromium, Hexavalent	ND	0.1	0.099	99		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1578071-4 QC Sample: L2165980-01 Client ID: GW												
Chlorine, Total Residual	ND	0.25	ND	**0**	Q	-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1578205-4 QC Sample: L2165838-01 Client ID: MS Sample												
TPH	ND	19.8	10.6	**53**	Q	-	-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1578866-4 QC Sample: L2163882-02 Client ID: MS Sample												
Nitrogen, Ammonia	0.621	4	3.88	81		-	-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1579329-3 QC Sample: L2163869-01 Client ID: MS Sample												
Chloride	125	40	166	103		-	-		90-110	-		18

Lab Duplicate Analysis
Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2165980
Report Date: 12/06/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1577991-3 QC Sample: L2165980-01 Client ID: GW						
Cyanide, Total	ND	ND	mg/l	NC		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1578067-3 QC Sample: L2165980-01 Client ID: GW						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1578071-3 QC Sample: L2165980-01 Client ID: GW						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1578205-3 QC Sample: L2164370-01 Client ID: DUP Sample						
TPH	ND	ND	mg/l	NC		34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1578233-3 QC Sample: L2165668-01 Client ID: DUP Sample						
Solids, Total Suspended	1500	1500	mg/l	0		29
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1578419-2 QC Sample: L2165520-01 Client ID: DUP Sample						
pH	8.2	8.2	SU	0		5
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1578866-3 QC Sample: L2163882-02 Client ID: DUP Sample						
Nitrogen, Ammonia	0.621	0.552	mg/l	12		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1579329-4 QC Sample: L2163869-01 Client ID: DUP Sample						
Chloride	125	126	mg/l	1		18

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2165980
Report Date: 12/06/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2165980-01A	Vial unpreserved	A	NA		2.6	Y	Absent		SUB-ETHANOL(14)
L2165980-01B	Vial unpreserved	A	NA		2.6	Y	Absent		SUB-ETHANOL(14)
L2165980-01C	Vial unpreserved	A	NA		2.6	Y	Absent		SUB-ETHANOL(14)
L2165980-01D	Vial Na2S2O3 preserved	A	NA		2.6	Y	Absent		624.1-RGP(7)
L2165980-01E	Vial Na2S2O3 preserved	A	NA		2.6	Y	Absent		624.1-RGP(7)
L2165980-01F	Vial Na2S2O3 preserved	A	NA		2.6	Y	Absent		624.1-RGP(7)
L2165980-01G	Vial Na2S2O3 preserved	A	NA		2.6	Y	Absent		624.1-SIM-RGP(7)
L2165980-01H	Vial Na2S2O3 preserved	A	NA		2.6	Y	Absent		624.1-SIM-RGP(7)
L2165980-01I	Vial Na2S2O3 preserved	A	NA		2.6	Y	Absent		624.1-SIM-RGP(7)
L2165980-01J	Vial Na2S2O3 preserved	A	NA		2.6	Y	Absent		504(14)
L2165980-01K	Vial Na2S2O3 preserved	A	NA		2.6	Y	Absent		504(14)
L2165980-01L	Plastic 250ml NaOH preserved	A	>12	>12	2.6	Y	Absent		TCN-4500(14)
L2165980-01M	Plastic 250ml HNO3 preserved	A	<2	<2	2.6	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),HARDU(180),CU-2008T(180),FE-UI(180),SE-2008T(180),HG-U(28),AG-2008T(180),AS-2008T(180),CR-2008T(180),SB-2008T(180),PB-2008T(180)
L2165980-01N	Plastic 500ml H2SO4 preserved	A	<2	<2	2.6	Y	Absent		NH3-4500(28)
L2165980-01O	Plastic 500ml unpreserved	A	7	7	2.6	Y	Absent		HEXCR-7196(1),CL-300(28),TRC-4500(1),PH-4500(.01)
L2165980-01P	Amber 1000ml H2SO4 preserved	A	7	7	2.6	Y	Absent		SUB-PHENOL()
L2165980-01Q	Plastic 950ml unpreserved	A	7	7	2.6	Y	Absent		TSS-2540(7)
L2165980-01R	Amber 1000ml HCl preserved	B	NA		3.1	Y	Absent		TPH-1664(28)
L2165980-01S	Amber 1000ml HCl preserved	B	NA		3.1	Y	Absent		TPH-1664(28)
L2165980-01T	Amber 1000ml Na2S2O3	B	7	7	3.1	Y	Absent		625.1-SIM-RGP(7)

*Values in parentheses indicate holding time in days

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2165980
Report Date: 12/06/21

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2165980-01U	Amber 1000ml Na2S2O3	B	7	7	3.1	Y	Absent		625.1-SIM-RGP(7)
L2165980-01V	Amber 1000ml Na2S2O3	B	7	7	3.1	Y	Absent		PCB-608.3(365)
L2165980-01W	Amber 1000ml Na2S2O3	B	7	7	3.1	Y	Absent		PCB-608.3(365)
L2165980-01X	Amber 1000ml Na2S2O3	B	7	7	3.1	Y	Absent		625.1-RGP(7)
L2165980-01Y	Amber 1000ml Na2S2O3	B	7	7	3.1	Y	Absent		625.1-RGP(7)
L2165980-02A	Plastic 250ml H2SO4 preserved	A	<2	<2	2.6	Y	Absent		NH3-4500(28)
L2165980-02B	Plastic 250ml HNO3 preserved	A	<2	<2	2.6	Y	Absent		HARDU(180)
L2165980-02C	Plastic 500ml unpreserved	A	7	7	2.6	Y	Absent		PH-4500(.01)

*Values in parentheses indicate holding time in days

Project Name:	58 CHARLES STREET	**Lab Number:**	L2165980
Project Number:	6864.9.06	**Report Date:**	12/06/21

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:	58 CHARLES STREET	**Lab Number:**	L2165980
Project Number:	6864.9.06	**Report Date:**	12/06/21

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

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

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

Data Qualifiers

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

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

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

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

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

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

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

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

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

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

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

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

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

Report Format: Data Usability Report

Project Name:	58 CHARLES STREET	**Lab Number:**	L2165980
Project Number:	6864.9.06	**Report Date:**	12/06/21

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.

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

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

Report Format: Data Usability Report

Project Name:	58 CHARLES STREET	**Lab Number:**	L2165980
Project Number:	6864.9.06	**Report Date:**	12/06/21

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.

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

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

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

107 Alpha Analytical - In-house calculation method.

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

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

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

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

140 Method 1664,Revision B: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-10-001, February 2010.

LIMITATION OF LIABILITIES

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

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

Certification Information

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

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

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

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

Westborough Facility:

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

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

Mansfield Facility:

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

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

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

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 12/01/21

ALPHA Job #: L2165980

Project Information

Project Name: 58 Charles Street
Project Location: Cambridge, MA
Project #: 6864.9.06
Project Manager: K. Hanrahan
ALPHA Quote #:

Client Information

Client: McPhail Associates, LLC
Address: 2269 Massachusetts Avenue
Cambridge, MA 02140
Phone: 978-273-6529
Fax: 6178681423
Email: khanrahan@mcphailgeo.com
☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☐ Standard ☒ Rush (ONLY IF PRE-APPROVED)
3 DAY TAT
Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: EPA RGP
Criteria:

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
Hardness, PH
Sect A Inorganics: Ammonia, Chloride, TRC, TSS, CrVI, CrIII, Tot-R
Sect B NonHalogenated VOCs: Total BTEX, Benzene
Sect F Fuels Parameters: TPH, Ethanol, MTBE, tert-Butyl Alc, tert-Amyl Methyl Et

note: Samples in cooler

SAMPLE HANDLING
Filtration: ☐ Done ☒ Not Needed ☐ Lab to do
Preservation: ☐ Lab to do
(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	RGP Metals (200.8)(A)	TSS (A)	Ammonia (4500)(A)	TCN (A)	HexCr (7196), Cl (A)	8260 (F)	BTEX and Benzene (8260) (B)	TPH-1664 (F)	SUB-ETHANOL (F)	PH, HARDNESS	TEMPERATURE		Sample Specific Comments	TOTAL # BOTTLES
65980-01	GW	12/1/21	8:30	GW	ZMH	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	3 day rush OK - SE	
-02	LECHMERE CANAL	12/1/21	9:30	SW	ZMH	☐	☐	☒	☐	☐	☐	☐	☐	☐	☒	☒	☐		
Container Type						-	-	-	-	-	-	-	-	-	-	-	-		
Preservative						-	-	-	-	-	-	-	-	-	-	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
ZMH	12/1/21/10:42	Benjamin Suiz ARL	12/1 16:00
Benjamin Suiz ARL	12/1 17:00	[illegible signature]	12/1/21 17:00

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 01-01(I) (rev. 30-JUL-07)

ALPHA ANALYTICAL
World Class Chemistry

Subcontract Chain of Custody

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

Alpha Job Number
L2165980

Client Information

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

Phone: 603.319.5010
Email: mgulli@alphalab.com

Project Information

Project Location: MA
Project Manager: Melissa Gulli

Turnaround & Deliverables Information

Due Date: 12/06/21 (RUSH)
Deliverables:

Regulatory Requirements/Report Limits

State/Federal Program:
Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L2165980

Report to include Method Blank, LCS/LCSD:

Additional Comments: Send all results/reports to subreports@alphalab.com 2 DAY RUSH

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	GW	12-01-21 08:30	WATER	Ethanol by EPA 1671 Revision A	

Relinquished By:	Date/Time:	Received By:	Date/Time:
C Tilden	12/2/21		

Form No: AL_subcoc

PHOENIX
Environmental Laboratories, Inc.

Monday, December 06, 2021

Attn: Melissa Gulli
Alpha Analytical Lab
8 Walkup Drive
Westborough, MA 01581

Project ID: **L2165980**
SDG ID: **GCJ88782**
Sample ID#s: **CJ88782**

This laboratory is in compliance with the NELAC requirements of procedures used except where indicated.

This report contains results for the parameters tested, under the sampling conditions described on the Chain Of Custody, as received by the laboratory. This report is incomplete unless all pages indicated in the pagination at the bottom of the page are included.

A scanned version of the COC form accompanies the analytical report and is an exact duplicate of the original.

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200. The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Sincerely yours,

Phyllis Shiller
Laboratory Director

NELAC - #NY11301
CT Lab Registration #PH-0618
MA Lab Registration #M-CT007
ME Lab Registration #CT-007
NH Lab Registration #213693-A,B
NJ Lab Registration #CT-003
NY Lab Registration #11301
PA Lab Registration #68-03530
RI Lab Registration #63
UT Lab Registration #CT00007
VT Lab Registration #VT11301

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Sample Id Cross Reference

December 06, 2021

SDG I.D.: GCJ88782

Project ID: L2165980

Client Id	Lab Id	Matrix
GW	CJ88782	WATER

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

Analysis Report

December 06, 2021

FOR: Attn: Melissa Gulli
Alpha Analytical Lab
8 Walkup Drive
Westborough, MA 01581

Sample Information		Custody Information		Date	Time
Matrix:	WATER	Collected by:		12/01/21	8:30
Location Code:	ALPHA	Received by:	LB	12/02/21	12:55
Rush Request:	24 Hour	Analyzed by:	see "By" below		
P.O.#:					

Laboratory Data

SDG ID: GCJ88782
Phoenix ID: CJ88782

Project ID: L2165980
Client ID: GW

Parameter	Result	RL/ PQL	Units	Dilution	Date/Time	By	Reference
Phenolics	< 0.015	0.015	mg/L	1	12/03/21	MSF	E420.4

RL/PQL=Reporting/Practical Quantitation Level ND=Not Detected BRL=Below Reporting Level

Comments:

If you are the client above and have any questions concerning this testing, please do not hesitate to contact Phoenix Client Services at ext.200.
The contents of this report cannot be discussed with anyone other than the client listed above without their written consent.

Phyllis Shiller, Laboratory Director
December 06, 2021
Reviewed and Released by: Rashmi Makol, Project Manager

Ver 1

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

QA/QC Report

December 06, 2021

QA/QC Data

SDG I.D.: GCJ88782

Parameter	Blank	Blk RL	Sample Result	Dup Result	Dup RPD	LCS %	LCSD %	LCS RPD	MS %	MSD %	MS RPD	% Rec Limits	% RPD Limits
QA/QC Batch 602947 (mg/L), QC Sample No: CJ88810 (CJ88782)													
Phenolics	BRL	0.015	<0.015	<0.015	NC	98.9			92.0			90 - 110	20

If there are any questions regarding this data, please call Phoenix Client Services at extension 200.

RPD - Relative Percent Difference
LCS - Laboratory Control Sample
LCSD - Laboratory Control Sample Duplicate
MS - Matrix Spike
MS Dup - Matrix Spike Duplicate
NC - No Criteria
Intf - Interference

Phyllis Shiller, Laboratory Director
December 06, 2021

Monday, December 06, 2021

Criteria: None

State: MA

Sample Criteria Exceedances Report

GCJ88782 - ALPHA

SampNo	Acode	Phoenix Analyte	Criteria	Result	RL	Criteria	RL Criteria	Analysis Units

*** No Data to Display ***

Phoenix Laboratories does not assume responsibility for the data contained in this exceedance report. It is provided as an additional tool to identify requested criteria exceedences. All efforts are made to ensure the accuracy of the data (obtained from appropriate agencies). A lack of exceedence information does not necessarily suggest conformance to the criteria. It is ultimately the site professional's responsibility to determine appropriate compliance.

Environmental Laboratories, Inc.
587 East Middle Turnpike, P.O.Box 370, Manchester, CT 06045
Tel. (860) 645-1102 Fax (860) 645-0823

ACCREDITED IN ACCORDANCE WITH nelac NY # 11301

Analysis Comments

December 06, 2021 SDG I.D.: GCJ88782

The following analysis comments are made regarding exceptions to criteria not already noted in the Analysis Report or QA/QC Report: None.

5.1° WL
IU.

ALPHA ANALYTICAL World Class Chemistry

Subcontract Chain of Custody

Phoenix Environmental Laboratories
587 East Middle Turnpike
Manchester, CT 06040

Alpha Job Number
L2165980

Client Information	Project Information	Regulatory Requirements/Report Limits
Client: Alpha Analytical Labs Address: Eight Walkup Drive Westborough, MA 01581-1019 Phone: 603.319.5010 Email: mgulli@alphalab.com	Project Location: MA Project Manager: Melissa Gulli **Turnaround & Deliverables Information** Due Date: 12/06/21 (RUSH) Deliverables:	State/Federal Program: Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L2165980

Report to include Method Blank, LCS/LCSD:

Additional Comments: Send all results/reports to subreports@alphalab.com NPDES RGP limits required- Use EPA method 420

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
88782	GW	12-01-21 08:30	WATER	Phenol	
	Rad-1 ammo				

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature] AAL		[signature]	12/2/21 9:05
[signature]	12/2/21 12:38	[signature]	12/2/21 12:55

Form No: AL_subcoc

December 06, 2021

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

Melissa Gulli
Alpha Analytical
145 Flanders Road
Westborough, MA 01581
TEL: (603) 319-5010
FAX:

RE: L2165980 **WorkOrder:** 21120212

Dear Melissa Gulli:

TEKLAB, INC received 1 sample on 12/3/2021 9:15:00 AM for the analysis presented in the following report.

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

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

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

Sincerely,

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

Report Contents

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 21120212
Client Project: L2165980
Report Date: 06-Dec-21

This reporting package includes the following:

Definitions

http://www.teklabinc.com/

Client: Alpha Analytical **Work Order:** 21120212

Client Project: L2165980 **Report Date:** 06-Dec-21

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

Definitions

http://www.teklabinc.com/

Client: Alpha Analytical **Work Order:** 21120212

Client Project: L2165980 **Report Date:** 06-Dec-21

Qualifiers

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

Case Narrative

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 21120212
Client Project: L2165980
Report Date: 06-Dec-21

Cooler Receipt Temp: 2.0 °C

Locations

Collinsville

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

Springfield

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

Kansas City

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

Collinsville Air

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

Chicago

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

Accreditations

http://www.teklabinc.com/

Client: Alpha Analytical **Work Order:** 21120212

Client Project: L2165980 **Report Date:** 06-Dec-21

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

Laboratory Results

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 21120212
Client Project: L2165980
Report Date: 06-Dec-21
Lab ID: 21120212-001
Client Sample ID: GW
Matrix: AQUEOUS
Collection Date: 12/01/2021 8:30

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 600 1671A, PHARMACEUTICAL MANUFACTURING INDUSTRY NON-PURGEABLE VOLATILE ORGANICS								
Ethanol	*	20		**ND**	mg/L	1	12/03/2021 12:52	R303394

Quality Control Results

http://www.teklabinc.com/

Client: Alpha Analytical **Work Order:** 21120212

Client Project: L2165980 **Report Date:** 06-Dec-21

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

Batch R303394 **SampType:** MBLK Units mg/L

SampID: MBLK-120321

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		**ND**						12/03/2021

Batch R303394 **SampType:** LCS Units mg/L

SampID: LCS-120321

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		**270**	250.0	0	108.8	70	132	12/03/2021

Batch R303394 **SampType:** MS Units mg/L

SampID: 21120102-001AMS

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	*	20		**270**	250.0	0	109.6	70	132	12/03/2021

Batch R303394 **SampType:** MSD Units mg/L RPD Limit **30**

SampID: 21120102-001AMSD

Analyses	Cert	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Ethanol	*	20		**270**	250.0	0	108.4	273.9	1.05	12/03/2021

Receiving Check List

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 21120212
Client Project: L2165980
Report Date: 06-Dec-21

Carrier: UPS
Received By: MLD

Completed by: Marvin L. Darling
On: 03-Dec-21

Reviewed by: Elizabeth A. Hurley
On: 03-Dec-21

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

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C **2.0**
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		

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

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

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

21120212

ALPHA ANALYTICAL
World Class Chemistry

Subcontract Chain of Custody

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

Alpha Job Number
L2165980

Client Information	Project Information	Regulatory Requirements/Report Limits
Client: Alpha Analytical Labs Address: Eight Walkup Drive Westborough, MA 01581-1019	Project Location: MA Project Manager: Melissa Gulli	State/Federal Program: Regulatory Criteria:
Phone: 603.319.5010 Email: mgulli@alphalab.com	**Turnaround & Deliverables Information** Due Date: 12/06/21 (RUSH) Deliverables:	

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L2165980

Report to include Method Blank, LCS/LCSD:

Additional Comments: Send all results/reports to subreports@alphalab.com 2 DAY RUSH 2.0 LTG3 ICE ØHS MEK 12/3/21

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
21120212-001	GW	12-01-21 08:30	WATER	Ethanol by EPA 1671 Revision A	

ONE DAY TAT

Relinquished By:	Date/Time:	Received By:	Date/Time:
C. Tebeau	12/2/21	Marvin L. Darling (...)	12/3/21 0915

Form No: AL_subcoc

MEK 12/3/21

ANALYTICAL REPORT

Lab Number:	L2166864
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	58 CHARLES STREET
Project Number:	6864.9.06
Report Date:	12/08/21

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

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

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2166864
Report Date: 12/08/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2166864-01	INFLUENT	WATER	CAMBRIDGE, MA	12/06/21 12:00	12/06/21
L2166864-02	EFFLUENT	WATER	CAMBRIDGE, MA	12/06/21 12:10	12/06/21

Project Name:	58 CHARLES STREET	**Lab Number:**	L2166864
Project Number:	6864.9.06	**Report Date:**	12/08/21

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.

Project Name:	58 CHARLES STREET	**Lab Number:**	L2166864
Project Number:	6864.9.06	**Report Date:**	12/08/21

Case Narrative (continued)

Chlorine, Total Residual

The WG1579881-4 MS recovery, performed on L2166864-02, is outside the acceptance criteria for chlorine, total residual (0%); however, the associated LCS recovery is within criteria. No further action was taken.

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

Authorized Signature: Kelly Stenstrom

Title: Technical Director/Representative Date: 12/08/21

METALS

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2166864
Report Date: 12/08/21

SAMPLE RESULTS

Lab ID: L2166864-01
Client ID: INFLUENT
Sample Location: CAMBRIDGE, MA
Date Collected: 12/06/21 12:00
Date Received: 12/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	12/07/21 13:55	12/07/21 21:15	EPA 3005A	3,200.8	PS
Arsenic, Total	ND		mg/l	0.00100	--	1	12/07/21 13:55	12/07/21 21:15	EPA 3005A	3,200.8	PS
Cadmium, Total	ND		mg/l	0.00020	--	1	12/07/21 13:55	12/07/21 21:15	EPA 3005A	3,200.8	PS
Chromium, Total	0.00893		mg/l	0.00100	--	1	12/07/21 13:55	12/07/21 21:15	EPA 3005A	3,200.8	PS
Copper, Total	0.00374		mg/l	0.00100	--	1	12/07/21 13:55	12/07/21 21:15	EPA 3005A	3,200.8	PS
Iron, Total	0.787		mg/l	0.050	--	1	12/07/21 13:55	12/08/21 12:56	EPA 3005A	19,200.7	EW
Lead, Total	ND		mg/l	0.00100	--	1	12/07/21 13:55	12/07/21 21:15	EPA 3005A	3,200.8	PS
Mercury, Total	ND		mg/l	0.00020	--	1	12/07/21 14:57	12/08/21 07:56	EPA 245.1	3,245.1	AC
Nickel, Total	0.00502		mg/l	0.00200	--	1	12/07/21 13:55	12/07/21 21:15	EPA 3005A	3,200.8	PS
Selenium, Total	ND		mg/l	0.00500	--	1	12/07/21 13:55	12/07/21 21:15	EPA 3005A	3,200.8	PS
Silver, Total	ND		mg/l	0.00040	--	1	12/07/21 13:55	12/07/21 21:15	EPA 3005A	3,200.8	PS
Zinc, Total	0.1647		mg/l	0.01000	--	1	12/07/21 13:55	12/07/21 21:15	EPA 3005A	3,200.8	PS
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	476		mg/l	0.660	NA	1	12/07/21 13:55	12/08/21 12:56	EPA 3005A	19,200.7	EW
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		12/07/21 21:15	NA	107,-	

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2166864
Report Date: 12/08/21

SAMPLE RESULTS

Lab ID: L2166864-02
Client ID: EFFLUENT
Sample Location: CAMBRIDGE, MA
Date Collected: 12/06/21 12:10
Date Received: 12/06/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	12/07/21 13:55	12/07/21 22:08	EPA 3005A	3,200.8	PS
Arsenic, Total	ND		mg/l	0.00100	--	1	12/07/21 13:55	12/07/21 22:08	EPA 3005A	3,200.8	PS
Cadmium, Total	ND		mg/l	0.00020	--	1	12/07/21 13:55	12/07/21 22:08	EPA 3005A	3,200.8	PS
Chromium, Total	0.00772		mg/l	0.00100	--	1	12/07/21 13:55	12/07/21 22:08	EPA 3005A	3,200.8	PS
Copper, Total	0.00769		mg/l	0.00100	--	1	12/07/21 13:55	12/07/21 22:08	EPA 3005A	3,200.8	PS
Iron, Total	0.540		mg/l	0.050	--	1	12/07/21 13:55	12/08/21 12:47	EPA 3005A	19,200.7	EW
Lead, Total	ND		mg/l	0.00100	--	1	12/07/21 13:55	12/07/21 22:08	EPA 3005A	3,200.8	PS
Mercury, Total	ND		mg/l	0.00020	--	1	12/07/21 14:57	12/08/21 07:40	EPA 245.1	3,245.1	AC
Nickel, Total	0.00447		mg/l	0.00200	--	1	12/07/21 13:55	12/07/21 22:08	EPA 3005A	3,200.8	PS
Selenium, Total	ND		mg/l	0.00500	--	1	12/07/21 13:55	12/07/21 22:08	EPA 3005A	3,200.8	PS
Silver, Total	ND		mg/l	0.00040	--	1	12/07/21 13:55	12/07/21 22:08	EPA 3005A	3,200.8	PS
Zinc, Total	0.1222		mg/l	0.01000	--	1	12/07/21 13:55	12/07/21 22:08	EPA 3005A	3,200.8	PS
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	487		mg/l	0.660	NA	1	12/07/21 13:55	12/08/21 12:47	EPA 3005A	19,200.7	EW
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		12/07/21 22:08	NA	107,-	

Project Name: 58 CHARLES STREET **Lab Number:** L2166864

Project Number: 6864.9.06 **Report Date:** 12/08/21

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): 01-02 Batch: WG1580119-1										
Iron, Total	ND		mg/l	0.050	--	1	12/07/21 13:55	12/08/21 12:38	19,200.7	EW

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab for sample(s): 01-02 Batch: WG1580119-1										
Hardness	ND		mg/l	0.660	NA	1	12/07/21 13:55	12/08/21 12:38	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): 01-02 Batch: WG1580120-1										
Antimony, Total	ND		mg/l	0.00400	--	1	12/07/21 13:55	12/07/21 20:53	3,200.8	PS
Arsenic, Total	ND		mg/l	0.00100	--	1	12/07/21 13:55	12/07/21 20:53	3,200.8	PS
Cadmium, Total	ND		mg/l	0.00020	--	1	12/07/21 13:55	12/07/21 20:53	3,200.8	PS
Chromium, Total	ND		mg/l	0.00100	--	1	12/07/21 13:55	12/07/21 20:53	3,200.8	PS
Copper, Total	ND		mg/l	0.00100	--	1	12/07/21 13:55	12/07/21 20:53	3,200.8	PS
Lead, Total	ND		mg/l	0.00100	--	1	12/07/21 13:55	12/07/21 20:53	3,200.8	PS
Nickel, Total	ND		mg/l	0.00200	--	1	12/07/21 13:55	12/07/21 20:53	3,200.8	PS
Selenium, Total	ND		mg/l	0.00500	--	1	12/07/21 13:55	12/07/21 20:53	3,200.8	PS
Silver, Total	ND		mg/l	0.00040	--	1	12/07/21 13:55	12/07/21 20:53	3,200.8	PS
Zinc, Total	ND		mg/l	0.01000	--	1	12/07/21 13:55	12/07/21 20:53	3,200.8	PS

Prep Information

Digestion Method: EPA 3005A

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2166864
Report Date: 12/08/21

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): 01-02 Batch: WG1580121-1										
Mercury, Total	ND		mg/l	0.00020	--	1	12/07/21 14:57	12/08/21 07:33	3,245.1	AC

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2166864
Report Date: 12/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1580119-2								
Iron, Total	103		-		85-115	-		
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 Batch: WG1580119-2								
Hardness	107		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1580120-2								
Antimony, Total	92		-		85-115	-		
Arsenic, Total	105		-		85-115	-		
Cadmium, Total	104		-		85-115	-		
Chromium, Total	109		-		85-115	-		
Copper, Total	106		-		85-115	-		
Lead, Total	109		-		85-115	-		
Nickel, Total	103		-		85-115	-		
Selenium, Total	100		-		85-115	-		
Silver, Total	106		-		85-115	-		
Zinc, Total	105		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1580121-2								
Mercury, Total	93		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2166864
Report Date: 12/08/21

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): 01-02 QC Batch ID: WG1580119-3 QC Sample: L2166864-01 Client ID: INFLUENT												
Iron, Total	0.787	1	1.80	101		-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1580119-3 QC Sample: L2166864-01 Client ID: INFLUENT												
Hardness	476	66.2	547	107		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1580120-3 QC Sample: L2166864-01 Client ID: INFLUENT												
Antimony, Total	ND	0.5	0.5888	118		-	-		70-130	-		20
Arsenic, Total	ND	0.12	0.1240	103		-	-		70-130	-		20
Cadmium, Total	ND	0.053	0.05408	102		-	-		70-130	-		20
Chromium, Total	0.00893	0.2	0.2105	101		-	-		70-130	-		20
Copper, Total	0.00374	0.25	0.2545	100		-	-		70-130	-		20
Lead, Total	ND	0.53	0.5539	104		-	-		70-130	-		20
Nickel, Total	0.00502	0.5	0.4844	96		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1157	96		-	-		70-130	-		20
Silver, Total	ND	0.05	0.05038	101		-	-		70-130	-		20
Zinc, Total	0.1647	0.5	0.6564	98		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1580121-3 QC Sample: L2166864-02 Client ID: EFFLUENT												
Mercury, Total	ND	0.005	0.00439	88		-	-		70-130	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2166864
Report Date: 12/08/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1580119-4 QC Sample: L2166864-01 Client ID: INFLUENT						
Iron, Total	0.787	0.761	mg/l	3		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1580119-4 QC Sample: L2166864-01 Client ID: INFLUENT						
Hardness	476	471	mg/l	1		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1580120-4 QC Sample: L2166864-01 Client ID: INFLUENT						
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	0.00893	0.00830	mg/l	7		20
Copper, Total	0.00374	0.00330	mg/l	13		20
Lead, Total	ND	ND	mg/l	NC		20
Nickel, Total	0.00502	0.00441	mg/l	13		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	0.1647	0.1533	mg/l	7		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1580121-4 QC Sample: L2166864-02 Client ID: EFFLUENT						
Mercury, Total	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2166864
Report Date: 12/08/21

SAMPLE RESULTS

Lab ID: L2166864-01
Client ID: INFLUENT
Sample Location: CAMBRIDGE, MA

Date Collected: 12/06/21 12:00
Date Received: 12/06/21
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										
Solids, Total Suspended	11.		mg/l	5.0	NA	1	-	12/07/21 14:30	121,2540D	JT
Cyanide, Total	ND		mg/l	0.005	--	1	12/07/21 06:30	12/07/21 10:57	121,4500CN-CE	CS
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	12/07/21 00:25	121,4500CL-D	KA
pH (H)	7.6		SU	-	NA	1	-	12/07/21 10:16	121,4500H+-B	KP
Nitrogen, Ammonia	2.39		mg/l	0.075	--	1	12/07/21 04:01	12/07/21 19:52	121,4500NH3-BH	AT
Chromium, Hexavalent	ND		mg/l	0.010	--	1	12/07/21 06:25	12/07/21 06:48	1,7196A	KP
Anions by Ion Chromatography - Westborough Lab										
Chloride	1530		mg/l	125	--	250	-	12/08/21 06:10	44,300.0	AT

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2166864
Report Date: 12/08/21

SAMPLE RESULTS

Lab ID: L2166864-02
Client ID: EFFLUENT
Sample Location: CAMBRIDGE, MA

Date Collected: 12/06/21 12:10
Date Received: 12/06/21
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										
Solids, Total Suspended	12.		mg/l	5.0	NA	1	-	12/07/21 14:30	121,2540D	JT
Cyanide, Total	ND		mg/l	0.005	--	1	12/07/21 06:30	12/07/21 10:58	121,4500CN-CE	CS
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	12/07/21 00:25	121,4500CL-D	KA
pH (H)	7.9		SU	-	NA	1	-	12/07/21 10:16	121,4500H+-B	KP
Nitrogen, Ammonia	2.41		mg/l	0.075	--	1	12/07/21 04:01	12/07/21 19:53	121,4500NH3-BH	AT
Chromium, Hexavalent	ND		mg/l	0.010	--	1	12/07/21 06:25	12/07/21 06:48	1,7196A	KP
Anions by Ion Chromatography - Westborough Lab										
Chloride	1490		mg/l	125	--	250	-	12/08/21 06:21	44,300.0	AT

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2166864
Report Date: 12/08/21

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): 01-02 Batch: WG1579881-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	12/07/21 00:25	121,4500CL-D	KA
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1579887-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	12/07/21 04:01	12/07/21 19:48	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1579897-1										
Cyanide, Total	ND		mg/l	0.005	--	1	12/07/21 06:30	12/07/21 10:36	121,4500CN-CE	CS
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1579976-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	12/07/21 06:25	12/07/21 06:45	1,7196A	KP
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1580148-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	12/07/21 14:30	121,2540D	JT
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-02 Batch: WG1580401-1										
Chloride	ND		mg/l	0.500	--	1	-	12/07/21 17:15	44,300.0	AT

Lab Control Sample Analysis

Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2166864
Report Date: 12/08/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1579881-2								
Chlorine, Total Residual	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1579887-2								
Nitrogen, Ammonia	102		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1579897-2								
Cyanide, Total	101		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1579976-2								
Chromium, Hexavalent	104		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1580104-1								
pH	100		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1580148-2								
Solids, Total Suspended	99		-		80-120	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 Batch: WG1580401-2								
Chloride	101		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2166864
Report Date: 12/08/21

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): 01-02 QC Batch ID: WG1579881-4 QC Sample: L2166864-02 Client ID: EFFLUENT												
Chlorine, Total Residual	ND	0.25	ND	**0**	Q	-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1579887-4 QC Sample: L2164518-01 Client ID: MS Sample												
Nitrogen, Ammonia	ND	4	3.74	94		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1579897-4 QC Sample: L2166358-01 Client ID: MS Sample												
Cyanide, Total	ND	0.2	0.181	90		-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1579976-4 QC Sample: L2166864-02 Client ID: EFFLUENT												
Chromium, Hexavalent	ND	0.1	0.100	100		-	-		85-115	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1580401-3 QC Sample: L2165857-02 Client ID: MS Sample												
Chloride	327	100	438	**111**	Q	-	-		90-110	-		18

Lab Duplicate Analysis

Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2166864
Report Date: 12/08/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1579881-3 QC Sample: L2166864-01 Client ID: INFLUENT						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1579887-3 QC Sample: L2164518-01 Client ID: DUP Sample						
Nitrogen, Ammonia	ND	0.110	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1579897-3 QC Sample: L2166627-03 Client ID: DUP Sample						
Cyanide, Total	ND	ND	mg/l	NC		30
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1579976-3 QC Sample: L2166864-01 Client ID: INFLUENT						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1580104-2 QC Sample: L2166817-01 Client ID: DUP Sample						
pH	7.8	7.7	SU	1		5
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1580148-3 QC Sample: L2166087-01 Client ID: DUP Sample						
Solids, Total Suspended	46	51	mg/l	10		29
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1580401-4 QC Sample: L2165857-02 Client ID: DUP Sample						
Chloride	327	326	mg/l	0		18

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2166864
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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(*)
L2166864-01A	Plastic 250ml HNO3 preserved	A	<2	<2	5.3	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),HARDU(180),FE-UI(180),AS-2008T(180),SE-2008T(180),HG-U(28),AG-2008T(180),CR-2008T(180),SB-2008T(180),PB-2008T(180)
L2166864-01B	Plastic 250ml NaOH preserved	A	>12	>12	5.3	Y	Absent		TCN-4500(14)
L2166864-01C	Plastic 250ml H2SO4 preserved	A	<2	<2	5.3	Y	Absent		NH3-4500(28)
L2166864-01D	Plastic 250ml H2SO4 preserved	A	<2	<2	5.3	Y	Absent		NH3-4500(28)
L2166864-01E	Plastic 950ml unpreserved	A	7	7	5.3	Y	Absent		CL-300(28),HEXCR-7196(1),TRC-4500(1),PH-4500(.01)
L2166864-01F	Plastic 950ml unpreserved	A	7	7	5.3	Y	Absent		TSS-2540(7)
L2166864-02A	Plastic 250ml HNO3 preserved	A	<2	<2	5.3	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),FE-UI(180),CU-2008T(180),HARDU(180),AG-2008T(180),HG-U(28),SE-2008T(180),AS-2008T(180),PB-2008T(180),CR-2008T(180),SB-2008T(180)
L2166864-02B	Plastic 250ml NaOH preserved	A	>12	>12	5.3	Y	Absent		TCN-4500(14)
L2166864-02C	Plastic 250ml H2SO4 preserved	A	<2	<2	5.3	Y	Absent		NH3-4500(28)
L2166864-02D	Plastic 250ml H2SO4 preserved	A	<2	<2	5.3	Y	Absent		NH3-4500(28)
L2166864-02E	Plastic 950ml unpreserved	A	7	7	5.3	Y	Absent		HEXCR-7196(1),CL-300(28),TRC-4500(1),PH-4500(.01)
L2166864-02F	Plastic 950ml unpreserved	A	7	7	5.3	Y	Absent		TSS-2540(7)

*Values in parentheses indicate holding time in days

Project Name:	58 CHARLES STREET	**Lab Number:**	L2166864
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GLOSSARY

Acronyms

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

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

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

EPA - Environmental Protection Agency.

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

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

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

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

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

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

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

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

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

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

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

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

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

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

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

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

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

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

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

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

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Footnotes

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

Terms

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

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

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

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

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

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

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

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

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

Data Qualifiers

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

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

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

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

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

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

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

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

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

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

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

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

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

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Data Qualifiers

the identification is based on a mass spectral library search.

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

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

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

Report Format: Data Usability Report

Project Name:	58 CHARLES STREET	**Lab Number:**	L2166864
Project Number:	6864.9.06	**Report Date:**	12/08/21

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.

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

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

107 Alpha Analytical - In-house calculation method.

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

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

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

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

Westborough Facility:

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

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

Mansfield Facility:

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

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

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

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 12/6/21

ALPHA Job #: L2166867

Project Information

Project Name: 58 Charles Street

Project Location: Cambridge, MA

Project #: 6864.9.06

Project Manager: K. Hanrahan

ALPHA Quote #:

Client Information

Client: McPhail Associates, LLC

Address: 2269 Massachusetts Avenue

Cambridge, MA 02140

Phone: 978-273-6529

Fax: 6178681423

Email: khanrahan@mcphailgeo.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☐ Standard ☒ Rush (ONLY IF PRE-APPROVED)

48 hr

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
EPA RGP	

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:

Circle the following if required;

SALINITY HARDNESS PH

Sect. A inorganics: Ammonia, Chloride, TRC,TSS,CrVI,CrIII, Tot-CN, RGP Metals

SAMPLE HANDLING
Filtration
☐ Done
☒ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	RGP Metals (200.8)(A)	TSS (A)	Ammonia (4500)(A)	TCN (A)	HexCr (7196), Cl (A)	624.1(B, C, F) 624.1-simSIM (B)	Tphenol-420 (B)	504-EDB (C)	625.1/625.1SIM- (D, E)	PCB-608- (E)	TPH-1664-(F)	SUB-ETHANOL (F)	Sample Specific Comments	TOTAL # BOTTLES
66867-01	INFLUENT	12/6/21	12:00	W	KEH	☒	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐		
-02	EFFLUENT	12/6/21	12:10	W	KEH	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
Container Type						-	-	-	-	-	-	-	-	-	-	-	-		
Preservative						-	-	-	-	-	-	-	-	-	-	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	12/6/21 13:00	W. Dandl AAL	12/6/21 14:10
W. Dandl AAL	12/6/21 17:04	[signature]	12/6/21

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

FORM NO: 01-01(I) (rev. 30-JUL-07)

ANALYTICAL REPORT

Lab Number:	L2167504
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	58 CHARLES STREET
Project Number:	6864.9.06
Report Date:	12/10/21

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

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

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2167504
Report Date: 12/10/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2167504-01	INFLUENT	WATER	CAMBRIDGE, MA	12/08/21 09:15	12/08/21
L2167504-02	EFFLUENT	WATER	CAMBRIDGE, MA	12/08/21 09:30	12/08/21

Project Name:	58 CHARLES STREET	**Lab Number:**	L2167504
Project Number:	6864.9.06	**Report Date:**	12/10/21

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.

Project Name:	58 CHARLES STREET	**Lab Number:**	L2167504
Project Number:	6864.9.06	**Report Date:**	12/10/21

Case Narrative (continued)

Total Metals

The WG1581032-3 MS recovery for silver (40%), performed on L2167504-01, recovered outside the 70-130% acceptance criteria. The result for this analyte is considered suspect due to either the heterogeneous nature of the sample or matrix interference.

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

Authorized Signature: Sebastian Corbin

Title: Technical Director/Representative Date: 12/10/21

METALS

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2167504
Report Date: 12/10/21

SAMPLE RESULTS

Lab ID: L2167504-01
Client ID: INFLUENT
Sample Location: CAMBRIDGE, MA
Date Collected: 12/08/21 09:15
Date Received: 12/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	12/09/21 08:33	12/09/21 14:59	EPA 3005A	3,200.8	PS
Arsenic, Total	ND		mg/l	0.00100	--	1	12/09/21 08:33	12/09/21 14:59	EPA 3005A	3,200.8	PS
Cadmium, Total	ND		mg/l	0.00020	--	1	12/09/21 08:33	12/09/21 14:59	EPA 3005A	3,200.8	PS
Chromium, Total	0.00308		mg/l	0.00100	--	1	12/09/21 08:33	12/09/21 14:59	EPA 3005A	3,200.8	PS
Copper, Total	ND		mg/l	0.00100	--	1	12/09/21 08:33	12/09/21 14:59	EPA 3005A	3,200.8	PS
Iron, Total	0.225		mg/l	0.050	--	1	12/09/21 08:33	12/10/21 10:51	EPA 3005A	19,200.7	SV
Lead, Total	ND		mg/l	0.00100	--	1	12/09/21 08:33	12/09/21 14:59	EPA 3005A	3,200.8	PS
Mercury, Total	ND		mg/l	0.00020	--	1	12/09/21 08:47	12/09/21 12:20	EPA 245.1	3,245.1	AC
Nickel, Total	ND		mg/l	0.00200	--	1	12/09/21 08:33	12/09/21 14:59	EPA 3005A	3,200.8	PS
Selenium, Total	ND		mg/l	0.00500	--	1	12/09/21 08:33	12/09/21 14:59	EPA 3005A	3,200.8	PS
Silver, Total	ND		mg/l	0.00040	--	1	12/09/21 08:33	12/09/21 14:59	EPA 3005A	3,200.8	PS
Zinc, Total	0.05174		mg/l	0.01000	--	1	12/09/21 08:33	12/09/21 14:59	EPA 3005A	3,200.8	PS
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	403		mg/l	0.660	NA	1	12/09/21 08:33	12/10/21 10:51	EPA 3005A	19,200.7	SV
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		12/09/21 14:59	NA	107,-	

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2167504
Report Date: 12/10/21

SAMPLE RESULTS

Lab ID: L2167504-02
Client ID: EFFLUENT
Sample Location: CAMBRIDGE, MA
Date Collected: 12/08/21 09:30
Date Received: 12/08/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	12/09/21 08:33	12/09/21 15:04	EPA 3005A	3,200.8	PS
Arsenic, Total	ND		mg/l	0.00100	--	1	12/09/21 08:33	12/09/21 15:04	EPA 3005A	3,200.8	PS
Cadmium, Total	ND		mg/l	0.00020	--	1	12/09/21 08:33	12/09/21 15:04	EPA 3005A	3,200.8	PS
Chromium, Total	0.00340		mg/l	0.00100	--	1	12/09/21 08:33	12/09/21 15:04	EPA 3005A	3,200.8	PS
Copper, Total	0.01060		mg/l	0.00100	--	1	12/09/21 08:33	12/09/21 15:04	EPA 3005A	3,200.8	PS
Iron, Total	0.283		mg/l	0.050	--	1	12/09/21 08:33	12/10/21 10:46	EPA 3005A	19,200.7	SV
Lead, Total	0.00343		mg/l	0.00100	--	1	12/09/21 08:33	12/09/21 15:04	EPA 3005A	3,200.8	PS
Mercury, Total	ND		mg/l	0.00020	--	1	12/09/21 08:47	12/09/21 11:57	EPA 245.1	3,245.1	AC
Nickel, Total	0.00849		mg/l	0.00200	--	1	12/09/21 08:33	12/09/21 15:04	EPA 3005A	3,200.8	PS
Selenium, Total	ND		mg/l	0.00500	--	1	12/09/21 08:33	12/09/21 15:04	EPA 3005A	3,200.8	PS
Silver, Total	ND		mg/l	0.00040	--	1	12/09/21 08:33	12/09/21 15:04	EPA 3005A	3,200.8	PS
Zinc, Total	0.07588		mg/l	0.01000	--	1	12/09/21 08:33	12/09/21 15:04	EPA 3005A	3,200.8	PS
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	414		mg/l	0.660	NA	1	12/09/21 08:33	12/10/21 10:46	EPA 3005A	19,200.7	SV
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		12/09/21 15:04	NA	107,-	

Project Name: 58 CHARLES STREET **Lab Number:** L2167504

Project Number: 6864.9.06 **Report Date:** 12/10/21

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): 01-02 Batch: WG1581000-1										
Mercury, Total	ND		mg/l	0.00020	--	1	12/09/21 08:47	12/09/21 11:50	3,245.1	AC

Prep Information

Digestion Method: EPA 245.1

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1581032-1										
Antimony, Total	ND		mg/l	0.00400	--	1	12/09/21 08:33	12/09/21 14:19	3,200.8	PS
Arsenic, Total	ND		mg/l	0.00100	--	1	12/09/21 08:33	12/09/21 14:19	3,200.8	PS
Cadmium, Total	ND		mg/l	0.00020	--	1	12/09/21 08:33	12/09/21 14:19	3,200.8	PS
Chromium, Total	ND		mg/l	0.00100	--	1	12/09/21 08:33	12/09/21 14:19	3,200.8	PS
Copper, Total	ND		mg/l	0.00100	--	1	12/09/21 08:33	12/09/21 14:19	3,200.8	PS
Lead, Total	ND		mg/l	0.00100	--	1	12/09/21 08:33	12/09/21 14:19	3,200.8	PS
Nickel, Total	ND		mg/l	0.00200	--	1	12/09/21 08:33	12/09/21 14:19	3,200.8	PS
Selenium, Total	ND		mg/l	0.00500	--	1	12/09/21 08:33	12/09/21 14:19	3,200.8	PS
Silver, Total	ND		mg/l	0.00040	--	1	12/09/21 08:33	12/09/21 14:19	3,200.8	PS
Zinc, Total	ND		mg/l	0.01000	--	1	12/09/21 08:33	12/09/21 14:19	3,200.8	PS

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): 01-02 Batch: WG1581034-1										
Iron, Total	ND		mg/l	0.050	--	1	12/09/21 08:33	12/10/21 10:37	19,200.7	SV

Prep Information

Digestion Method: EPA 3005A

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2167504
Report Date: 12/10/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab for sample(s): 01-02 Batch: WG1581034-1										
Hardness	ND		mg/l	0.660	NA	1	12/09/21 08:33	12/10/21 10:37	19,200.7	SV

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 58 CHARLES STREET

Project Number: 6864.9.06

Lab Number: L2167504

Report Date: 12/10/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1581000-2								
Mercury, Total	89		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1581032-2								
Antimony, Total	87		-		85-115	-		
Arsenic, Total	96		-		85-115	-		
Cadmium, Total	96		-		85-115	-		
Chromium, Total	100		-		85-115	-		
Copper, Total	96		-		85-115	-		
Lead, Total	92		-		85-115	-		
Nickel, Total	96		-		85-115	-		
Selenium, Total	96		-		85-115	-		
Silver, Total	99		-		85-115	-		
Zinc, Total	96		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1581034-2								
Iron, Total	99		-		85-115	-		
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 Batch: WG1581034-2								
Hardness	101		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2167504
Report Date: 12/10/21

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): 01-02 QC Batch ID: WG1581000-3 QC Sample: L2167504-02 Client ID: EFFLUENT												
Mercury, Total	ND	0.005	0.00437	87		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1581032-3 QC Sample: L2167504-01 Client ID: INFLUENT												
Antimony, Total	ND	0.5	0.4730	95		-	-		70-130	-		20
Arsenic, Total	ND	0.12	0.1155	96		-	-		70-130	-		20
Cadmium, Total	ND	0.053	0.05142	97		-	-		70-130	-		20
Chromium, Total	0.00308	0.2	0.1950	96		-	-		70-130	-		20
Copper, Total	ND	0.25	0.2357	94		-	-		70-130	-		20
Lead, Total	ND	0.53	0.5213	98		-	-		70-130	-		20
Nickel, Total	ND	0.5	0.4570	91		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1104	92		-	-		70-130	-		20
Silver, Total	ND	0.05	0.01991	**40**	Q	-	-		70-130	-		20
Zinc, Total	0.05174	0.5	0.5153	93		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1581034-3 QC Sample: L2167504-01 Client ID: INFLUENT												
Iron, Total	0.225	1	1.22	100		-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1581034-3 QC Sample: L2167504-01 Client ID: INFLUENT												
Hardness	403	66.2	464	92		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2167504
Report Date: 12/10/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1581000-4 QC Sample: L2167504-02 Client ID: EFFLUENT						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1581032-4 QC Sample: L2167504-01 Client ID: INFLUENT						
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	0.00308	0.00309	mg/l	0		20
Copper, Total	ND	0.00213	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	0.05174	0.05232	mg/l	1		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1581034-4 QC Sample: L2167504-01 Client ID: INFLUENT						
Iron, Total	0.225	0.223	mg/l	1		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1581034-4 QC Sample: L2167504-01 Client ID: INFLUENT						
Hardness	403	406	mg/l	1		20

INORGANICS
&
MISCELLANEOUS

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2167504
Report Date: 12/10/21

SAMPLE RESULTS

Lab ID: L2167504-01
Client ID: INFLUENT
Sample Location: CAMBRIDGE, MA

Date Collected: 12/08/21 09:15
Date Received: 12/08/21
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										
Solids, Total Suspended	12.		mg/l	5.0	NA	1	-	12/09/21 12:00	121,2540D	MG
Cyanide, Total	0.006		mg/l	0.005	--	1	12/09/21 05:20	12/09/21 14:27	121,4500CN-CE	CS
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	12/09/21 08:58	121,4500CL-D	KA
pH (H)	7.5		SU	-	NA	1	-	12/08/21 22:11	121,4500H+-B	AS
Nitrogen, Ammonia	2.06		mg/l	0.075	--	1	12/09/21 02:14	12/09/21 20:44	121,4500NH3-BH	AT
Chromium, Hexavalent	ND		mg/l	0.010	--	1	12/09/21 08:50	12/09/21 09:06	1,7196A	KP
Anions by Ion Chromatography - Westborough Lab										
Chloride	1380		mg/l	50.0	--	100	-	12/09/21 21:31	44,300.0	AT

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2167504
Report Date: 12/10/21

SAMPLE RESULTS

Lab ID: L2167504-02
Client ID: EFFLUENT
Sample Location: CAMBRIDGE, MA

Date Collected: 12/08/21 09:30
Date Received: 12/08/21
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										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	12/09/21 12:00	121,2540D	MG
Cyanide, Total	0.005		mg/l	0.005	--	1	12/09/21 05:20	12/09/21 14:29	121,4500CN-CE	CS
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	12/09/21 08:58	121,4500CL-D	KA
pH (H)	7.6		SU	-	NA	1	-	12/08/21 22:11	121,4500H+-B	AS
Nitrogen, Ammonia	2.18		mg/l	0.075	--	1	12/09/21 02:14	12/09/21 20:45	121,4500NH3-BH	AT
Chromium, Hexavalent	ND		mg/l	0.010	--	1	12/09/21 08:50	12/09/21 09:07	1,7196A	KP
Anions by Ion Chromatography - Westborough Lab										
Chloride	1380		mg/l	50.0	--	100	-	12/09/21 21:42	44,300.0	AT

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06
Lab Number: L2167504
Report Date: 12/10/21

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): 01-02 Batch: WG1580890-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	12/09/21 02:14	12/09/21 20:31	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1580934-1										
Cyanide, Total	ND		mg/l	0.005	--	1	12/09/21 05:20	12/09/21 14:05	121,4500CN-CE	CS
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1580983-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	12/09/21 12:00	121,2540D	MG
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1581065-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	12/09/21 08:50	12/09/21 09:05	1,7196A	KP
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1581070-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	12/09/21 08:58	121,4500CL-D	KA
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-02 Batch: WG1581380-1										
Chloride	ND		mg/l	0.500	--	1	-	12/09/21 10:23	44,300.0	JT

Lab Control Sample Analysis

Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2167504
Report Date: 12/10/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1580885-1								
pH	100		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1580890-2								
Nitrogen, Ammonia	102		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1580934-2								
Cyanide, Total	90		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1580983-2								
Solids, Total Suspended	95		-		80-120	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1581065-2								
Chromium, Hexavalent	104		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1581070-2								
Chlorine, Total Residual	96		-		90-110	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 Batch: WG1581380-2								
Chloride	96		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2167504
Report Date: 12/10/21

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): 01-02 QC Batch ID: WG1580890-4 QC Sample: L2166867-03 Client ID: MS Sample												
Nitrogen, Ammonia	0.736	4	4.73	100		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1580934-4 QC Sample: L2165443-01 Client ID: MS Sample												
Cyanide, Total	ND	0.2	0.204	102		-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1581065-4 QC Sample: L2167504-02 Client ID: EFFLUENT												
Chromium, Hexavalent	ND	0.1	0.105	105		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1581070-4 QC Sample: L2167343-02 Client ID: MS Sample												
Chlorine, Total Residual	ND	0.25	0.28	112		-	-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1581380-3 QC Sample: L2164731-07 Client ID: MS Sample												
Chloride	106	40	144	95		-	-		90-110	-		18

Lab Duplicate Analysis
Batch Quality Control

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2167504
Report Date: 12/10/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1580885-2 QC Sample: L2166930-01 Client ID: DUP Sample						
pH	8.4	8.3	SU	1		5
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1580890-3 QC Sample: L2166867-03 Client ID: DUP Sample						
Nitrogen, Ammonia	0.736	0.749	mg/l	2		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1580934-3 QC Sample: L2167366-01 Client ID: DUP Sample						
Cyanide, Total	0.016	0.016	mg/l	1		30
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1580983-3 QC Sample: L2166657-01 Client ID: DUP Sample						
Solids, Total Suspended	800	1100	mg/l	**32**	Q	29
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1581065-3 QC Sample: L2167504-01 Client ID: INFLUENT						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1581070-3 QC Sample: L2167343-01 Client ID: DUP Sample						
Chlorine, Total Residual	0.86	0.83	mg/l	4		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1581380-4 QC Sample: L2164731-07 Client ID: DUP Sample						
Chloride	106	106	mg/l	0		18

Project Name: 58 CHARLES STREET
Project Number: 6864.9.06

Lab Number: L2167504
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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(*)
L2167504-01A	Plastic 250ml HNO3 preserved	A	<2	<2	4.2	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),HARDU(180),FE-UI(180),SE-2008T(180),AS-2008T(180),HG-U(28),AG-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L2167504-01B	Plastic 250ml NaOH preserved	A	>12	>12	4.2	Y	Absent		TCN-4500(14)
L2167504-01C	Plastic 500ml H2SO4 preserved	A	<2	<2	4.2	Y	Absent		NH3-4500(28)
L2167504-01D	Plastic 950ml unpreserved	A	7	7	4.2	Y	Absent		HEXCR-7196(1),CL-300(28),TRC-4500(1),PH-4500(.01)
L2167504-01E	Plastic 950ml unpreserved	A	7	7	4.2	Y	Absent		TSS-2540(7)
L2167504-02A	Plastic 250ml HNO3 preserved	A	<2	<2	4.2	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),FE-UI(180),CU-2008T(180),HARDU(180),HG-U(28),AG-2008T(180),SE-2008T(180),AS-2008T(180),SB-2008T(180),CR-2008T(180),PB-2008T(180)
L2167504-02B	Plastic 250ml NaOH preserved	A	>12	>12	4.2	Y	Absent		TCN-4500(14)
L2167504-02C	Plastic 500ml H2SO4 preserved	A	<2	<2	4.2	Y	Absent		NH3-4500(28)
L2167504-02D	Plastic 950ml unpreserved	A	7	7	4.2	Y	Absent		CL-300(28),HEXCR-7196(1),TRC-4500(1),PH-4500(.01)
L2167504-02E	Plastic 950ml unpreserved	A	7	7	4.2	Y	Absent		TSS-2540(7)

*Values in parentheses indicate holding time in days

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GLOSSARY

Acronyms

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

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

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

EPA - Environmental Protection Agency.

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

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

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

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

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

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

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

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

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

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

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

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

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

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

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

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

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

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

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

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

Report Format: Data Usability Report

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Footnotes

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

Terms

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

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

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

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

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

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

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

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

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

Data Qualifiers

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

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

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

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

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

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

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

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

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

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

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

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

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

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Data Qualifiers

the identification is based on a mass spectral library search.

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

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

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

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Project Name:	58 CHARLES STREET	**Lab Number:**	L2167504
Project Number:	6864.9.06	**Report Date:**	12/10/21

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.

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

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

107 Alpha Analytical - In-house calculation method.

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

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

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

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

Westborough Facility:

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

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

Mansfield Facility:

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

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

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

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193
Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab: 12/08/21

ALPHA Job #: L2167504

Client Information

Client: McPhail Associates, LLC
Address: 2269 Massachusetts Avenue
Cambridge, MA 02140
Phone: 978-273-6529
Fax: 6178681423
Email: khanrahan@mcphailgeo.com
☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: 58 Charles Street
Project Location: Cambridge, MA
Project #: 6864.9.06
Project Manager: K. Hanrahan
ALPHA Quote #:

Turn-Around Time

☐ Standard ☒ Rush (ONLY IF PRE-APPROVED)
48 hr
Due Date: Time:

Report Information Data Deliverables

☐ FAX ☒ EMAIL
☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info
PO #:

Regulatory Requirements/Report Limits

State/Fed Program: EPA RGP
Criteria:

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?
☐ Yes ☒ No Are CT RCP (Reasonable Confidence Protocols) Required?

Other Project Specific Requirements/Comments/Detection Limits:
Circle the following if required;
SALINITY HARDNESS PH
Sect. A inorganics: Ammonia, Chloride, TRC,TSS,CrVI,CrIII, Tot-CN, RGP Metals

SAMPLE HANDLING
Filtration
☐ Done
☒ Not Needed
☐ Lab to do
Preservation
☐ Lab to do
(Please specify below)

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	RGP Metals (200.8)(A)	TSS (A)	Ammonia (4500)(A)	TCN (A)	HexCr (7196), Cl (A)	624.1(B, C, F) 624.1-simSIM (B)	Tphenol-420 (B)	504-EDB (C)	625.1/625.1SIM- (D, E)	PCB-608- (E)	TPH-1664-(F)	SUB-ETHANOL (F)	Sample Specific Comments	TOTAL # BOTTLES
67504-01	INFLUENT	12/8/21	9:15	W	ZMH	☒	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐		5
02	EFFLUENT	12/8/21	9:30	W	ZMH	☒	☒	☒	☒	☒	☐	☐	☐	☐	☐	☐	☐		5
Container Type						-	-	-	-	-	-	-	-	-	-	-	-		
Preservative						-	-	-	-	-	-	-	-	-	-	-	-		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

FORM NO: 01-01(I) (rev. 30-JUL-07)

Relinquished By:	Date/Time	Received By:	Date/Time
Z. Holman	12/8/21 1000	W. [illegible] AAL	12/8/21 [illegible]
W. [illegible] AAL	12/8/21 17:04	[illegible]	12/8/21 17:04

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. All samples submitted are subject to Alpha's Payment Terms.

APPENDIX E:

BEST MANAGEMENT PRACTICE PLAN

A Notice of Intent for a Remediation General Permit (RGP) under the National Pollutant Discharge Elimination System (NPDES) has been submitted to the US Environmental Protection Agency (EPA) in anticipation of temporary construction dewatering that will occur during renovation activities at the property located at 58 Charles Street in Cambridge, Massachusetts. This Best Management Practices Plan (BMPP) has been prepared as an Appendix to the RGP application and will be posted at the site during the time period that temporary construction dewatering is occurring at the site.

Water Treatment and Management

During construction of the proposed foundation, dewatering effluent is anticipated to be pumped from extraction wells and localized sumps directly into a settling tank. The effluent will then flow through treatment systems and discharge through hoses or piping connected into the storm water drains located beneath subject site. Based upon a review of the City of Cambridge stormwater drainage plan, the above referenced stormwater drain ultimately discharges into the Lechmere Canal. Dewatering effluent treatment will consist of an 8,000-gallon settling tank with bag filters to remove suspended soil particulates, prior to off-site discharge.

Discharge Monitoring and Compliance

Regular sampling and testing will be conducted at the influent to the system and the treated effluent as required by the RGP. This includes laboratory testing required within days 1 and 3 of initial discharge and then weekly or monthly testing to be conducted through the end of the scheduled discharge.

Monitoring will include checking the condition of the treatment system, assessing the need for treatment system adjustments based on monitoring data, observing and recording daily flow rates and discharge quantities, and verifying the flow path of the discharged effluent.

The total monthly flow will be monitored by checking and documenting the flow through the flow meter to be installed on the system. Flow will be maintained below the "system design flow" by regularly monitoring flow and adjusting the amount of construction dewatering as needed. Monthly monitoring reports will be compiled and maintained at the site.

System Maintenance

A number of methods will be used to minimize the potential for violations during the term of this permit discharge. Scheduled regular maintenance of the treatment system will be conducted to verify proper operation. Regular maintenance will include checking the condition of the treatment system equipment such as the settling tanks, bag filters, hoses,

pumps, and flow meters. Equipment will be monitored daily for potential issues or unscheduled maintenance requirements.

Employees who have direct or indirect responsibility for ensuring compliance with the RGP will be trained by the Contractor.

Miscellaneous Items

It is anticipated that the erosion control measures and the nature of the site will minimize potential runoff to or from the site. The project specifications also include requirements for erosion control. Site security for the treatment system will be addressed within the overall site security plan.

No adverse effects on designated uses of surrounding surface water bodies is anticipated. The nearest surface water body is the Charles River which is located approximately 1,300 feet to the east of the subject site. Dewatering effluent will be pumped into a settling tank. Water within the settling tank will pumped through bag filters prior to discharge into the storm drains.

Management of Treatment System Materials

Dewatering effluent will be pumped directly to the treatment system from the excavation with use of hoses and localized sumps to minimize handling. The Contractor will establish staging areas for equipment or materials storage that may be possible sources of pollution away from any dewatering activities, to the extent practicable.

Sediment from the tank used in the treatment system will be characterized and removed from the site to an appropriate receiving facility, in accordance with applicable laws and regulations. Bag filters will be disposed of as necessary.