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

139 MAIN STREET

CAMBRIDGE, MASSACHUSETTS

DECEMBER 12, 2017

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:
MIT 139 Main Street Leasehold LLC
&
John Moriarty and Associates

PROJECT NO. 6231

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

December 12, 2017

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: 139 Main Street - Cambridge, MA;
Notice of Intent for Temporary Construction Dewatering Discharge;
Massachusetts Remediation General Permit MAG910000

Ladies and Gentlemen:

In accordance with the provisions of the Remediation General Permit (RGP) MAG910000 that has been prepared for the Commonwealth of Massachusetts, the following is a summary of the site and groundwater quality information in support of a Notice of Intent for the temporary discharge of groundwater from the above-referenced property into the Charles River via the City of Cambridge storm drain system. The temporary construction dewatering discharge will occur as part of the proposed redevelopment of the above referenced property. Refer to **Figure 1,** Project Location Plan for the general site locus.

These services were performed and this permit application was prepared in accordance with the verbal authorization of MIT 139 Main Street Leasehold LLC. These services are subject to the limitations contained in **Appendix A**.

The required Notice of Intent (NOI) Form contained in the RGP permit is included in **Appendix B**. Additional supporting information including a Massachusetts DEP Resource Map, USGS Streamflow Statistics Report, Dilution Factor and WQBEL Calculations, Massachusetts Cultural Resource Information System (MACRIS) Report, and U.S. Fish and Wildlife Information for Planning Consultation (IPaC) Report are contained in **Appendix C**. This project is considered Activity Category II-C as defined in the RGP. Category II-B is defined as Non-Petroleum Related Site Remediation with Halogenated Volatile Organic Compounds. Based on historical and current groundwater analysis completed at the site and the constituents of concern (COCs) that were detected, subcategory C (Halogenated Volatile Organic Compounds) apply. Thus, Technology Based Effluent Limitations (TBELs) for Type C contamination apply. Water Quality Based Effluent Limitations (WQBELs) were calculated in accordance with Appendix V of the RGP for the parameters detected.

GEOTECHNICAL AND GEOENVIRONMENTAL ENGINEERS
2269 Massachusetts Avenue
Cambridge, Massachusetts 02140
(617) 868-1420

Applicant/Operator

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

John Moriarty & Associates
3 Church Street
Winchester, MA 01890

Attention: Mr. Bill Twomey

Existing Conditions

Fronting onto Main Street to the south, the project site is bounded by Broad Canal Way to the east and a parking lot to the west. The subject site occupies an area of approximately 9,437 square feet, the southern portion of which is covered by the footprint of a multi-story office building. Exterior portions of the project site consist of vegetated planters and concrete walkways.

The project site is located at 139 Main Street in Cambridge. The building at the project site was constructed in the 1870's as a 4-story brick and timber-framed structure with red brick, field stone and/or granite block foundation walls and pile caps which are supported on untreated wood piles. A crawl space underlies most of the original building footprint with the exception of the eastern side of the building where a 1-story driveway is located. The first floor of the original building is located at about Elevation +22 and the ground surface within the crawl space is located between about Elevation +16 and +18. In the late 1980's, a 5-story addition was constructed at the rear of the building with a fifth story penthouse over the original building. The existing exterior ground surface surrounding the project site is located at approximately Elevation +20. A site plan showing approximate limits of the site is included in the enclosed **Figure 2**.

Proposed Scope of Site Development

The proposed development is understood to consist of the repair and stabilization of existing foundations. This will include the excavation of soil below foundations and the underpinning of existing foundation walls. According to recent subsurface condition explorations, the groundwater level observed across the site sloped gradually downward from northwest to southeast from levels ranging from about Elevation +14.4 to Elevation +13.2.

Due to the relatively shallow depth of groundwater, it is anticipated that localized dewatering will be necessary to facilitate the proposed underpinning excavations.

Site Environmental Setting and Surrounding Historical Places

Based on an on-line edition of the Massachusetts Geographic Information Systems MassDEP MCP Numerical Ranking System Map, the project 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 project site.

Furthermore, per documentation provided by the U.S. Fish and Wildlife Information for Planning and Consultation (IPaC), there are no threatened, endangered, or candidate species on the species list that would be affected by the proposed site discharge. The IPaC report also indicated no critical habitats within the project site and, thus, FWS Criterion A in section G of the RGP applies.

The Resource Map indicates that there are no water bodies or wetland areas at the project site. No areas designated as solid waste sites (landfills) are noted as being located within 1,000 feet of the site. The closest body of water is the Broad Canal located approximately 150 feet to the north of the project site. However, the proposed discharge location and thus the receiving water body is noted as the Charles River which is classified as the Lower Watershed, and which flows south to north into the Boston Harbor. A copy of the Massachusetts DEP Phase I Site Assessment Map is included in **Appendix C**.

As further discussed below, treated construction dewatering effluent will be discharged into the City of Cambridge dedicated storm drain system that flows into the Charles River. The dewatering of groundwater at the site will be temporary and intermittent. Groundwater discharged as part of the proposed project will be controlled and monitored. Treatment systems will consist of temporary structures. Therefore, based on the anticipated duration of construction dewatering and the location of its discharge into the Charles River, construction dewatering activities are not anticipated to affect historical listings. Hence, the site meets Permit Eligibility Criterion A in accordance with Appendix III of the RGP.

Site & Release History

In summary, historical records indicate that the project site has been used for various commercial purposes since its development in the late 1800's. Historical Sanborn Maps indicate that these former commercial operations included wood sawing, a steam laundry, wood storage, plating and lacquering, paint storage, and can storage. More recently, the project site was occupied as office space for the American Red Cross.

McPhail performed a limited subsurface assessment at the project site in 2017 which included the performance of soil borings, the installation of groundwater monitoring wells, and the sampling/analysis of soil and groundwater samples.

In brief, the results of laboratory analysis of soil samples did not identify the presence of a reportable condition pursuant to the provisions of the Massachusetts Contingency Plan (MCP). However, results of laboratory analysis of groundwater samples identified the presence of cis-1,2-dichloroethylene (DCE) in a monitoring well located in the northwestern portion of the subject site at a concentration of 580 micrograms per liter (ug/L), which is above the applicable MCP RCGW-2 Reportable Concentration of 20 micrograms per liter (ug/L). Further, the tetrachloroethylene (PCE) breakdown product, vinyl chloride, was identified in groundwater samples collected from two monitoring wells at concentrations of 1,400 ug/L and 8.8 ug/L, both of which exceed the applicable MCP RCGW-2 Reportable Concentration of 2 ug/L.

Accordingly, on June 20, 2017, the DEP was notified by the previous owner of the subject site of a 120-reporting condition pursuant to the provisions of the MCP, to which Release Tracking Number (RTN) 3-34268 was assigned. As a result, dewatering will be performed in accordance with the EPA's RGP and under a Release Abatement Measure (RAM) Plan associated with the aforementioned RTN. This RAM Plan will be submitted to the DEP at a later date, prior to the commencement of dewatering activities.

Construction Site Dewatering

As indicated above, it is anticipated small excavations during site construction will extend below the surface of groundwater. As a result, the dewatering of groundwater within these excavations will be required. Based upon the relatively small area of the excavations, the discharge flow rate will likely range from approximately 5 to 25 gallons per minute (gpm). These estimates do not include surface run-off which will be removed from the excavation during periods of precipitation.

A review of available subgrade sanitary and storm sewer system plans accessed from the Cambridge Department of Power and Water (DPW) GIS database identified the presence of a dedicated stormwater drain system located beneath Main Street. The discharge flow, indicated by DPW plans, flows east beneath Main Street, south beneath Memorial Drive and then discharges into the Charles River at outfall D4OF0000 adjacent to Memorial Drive as shown on the enclosed **Figure 3**.

Summary of Groundwater Analysis

On October 3, 2017, McPhail Associates, LLC obtained samples of groundwater from monitoring well MA-1 (OW) located at the northwest portion of the project site. Analytical results of the testing of groundwater samples obtained in 2017 are summarized in **Table 1** and the laboratory data are enclosed in **Appendix D**. In addition, a surface water sample was obtained on October 3, 2017 from Magazine Beach in Cambridge, MA (42° 21'13.55" N, 71° 06' 45.84" W), which is located upstream of the proposed discharge into the Charles River receiving water. The approximate location of sample collection is indicated on the enclosed **Figure 3**, and analytical test results are included in the enclosed **Appendix E**.

The above referenced groundwater samples were submitted to a certified laboratory for analysis for the presence of compounds required under the EPA's RGP, including total suspended solids (TSS), pH, hardness, RGP Inorganic Compounds, volatile organic compounds (VOCs) including total cis-1,2-dichloroethene and vinyl chloride, as well as total recoverable metals found in the receiving water body. The results of the laboratory analysis completed of the sample taken from the receiving water body are summarized in **Table 2** and laboratory data is included in **Appendix D**. The receiving water sample was analyzed for the presence of total recoverable metals, pH, and hardness. Receiving water data and laboratory data are included in **Appendix E**.

In summary, groundwater testing performed at the project site has detected concentrations of cis-1,2-dichloroethene and vinyl chloride. Furthermore, laboratory results indicate that concentrations of Section A Inorganics did not exceed the EPA's National Recommended Acute Freshwater Water Quality Criteria. It is to be noted that the concentrations of vinyl chloride and cis-1,2-dichloroethene observed at the project site were not compared to EPA's National Recommended Acute Freshwater Water Quality Criteria because a limitation for those compounds has not been established. However, as mentioned above, the detected concentrations of cis-1,2-dichloroethene and vinyl chloride exceeded the applicable MCP RCGW-2 reporting thresholds.

Water Quality-Based Effluent Limits (WQBELs) were calculated for each of the detected compounds. Per the calculations, Type A and C compounds do not exceed the applicable Technology Based Effluent Limits (TBELs) and WQELS were not attributed to detectable compounds. Documentation of NOI support calculations is included in **Appendix C**.

In accordance with the RGP, and given that the project site is an MCP site, the proposed dewatering associated with this permit application is considered Contaminated/Formerly Contaminated Site Dewatering (Category II). Based on historical and current groundwater analysis completed at the site and the constituents of concern (COCs) detected, subcategory C (Halogenated Volatile Organic Compounds) apply. Based on the activity category, and in accordance with the RGP, contamination Type B as defined in Table 4 of the RGP applies. Thus, Technology Based Effluent Limitations (TBELs) for all above contamination categories apply.

Groundwater Treatment

Based upon the anticipated rates of construction dewatering in conjunction with the results of the above referenced groundwater analyses, it is our opinion that one 5,000-gallon capacity settling tank, bag filters, and a granular activated carbon (GAC) filter in series will be necessary to settle out and remove particulate matter as well as to remove chlorinated solvents in effluent to meet the limits established by the US EPA prior to the discharge of the effluent. A schematic of the treatment system is shown on **Figure 4**.

A Best Management Practices Plan (BMPP) has been prepared as **Appendix F** to the RGP and will be posted at the site during the time period that temporary construction dewatering is occurring at the site.

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 which will be encountered during construction at the 139 Main Street property located in Cambridge, Massachusetts. The groundwater testing results reported in this application have been provided to the site owner.

Based on the results of the above referenced groundwater analyses, treatment of construction dewatering will be necessary to meet the effluent limits established by the US EPA prior to off-site discharge. The proposed construction dewatering effluent treatment system will consist of one 5,000-gallon capacity settling tank, bag filters and granular activated carbon (GAC) filters in series. However, 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,

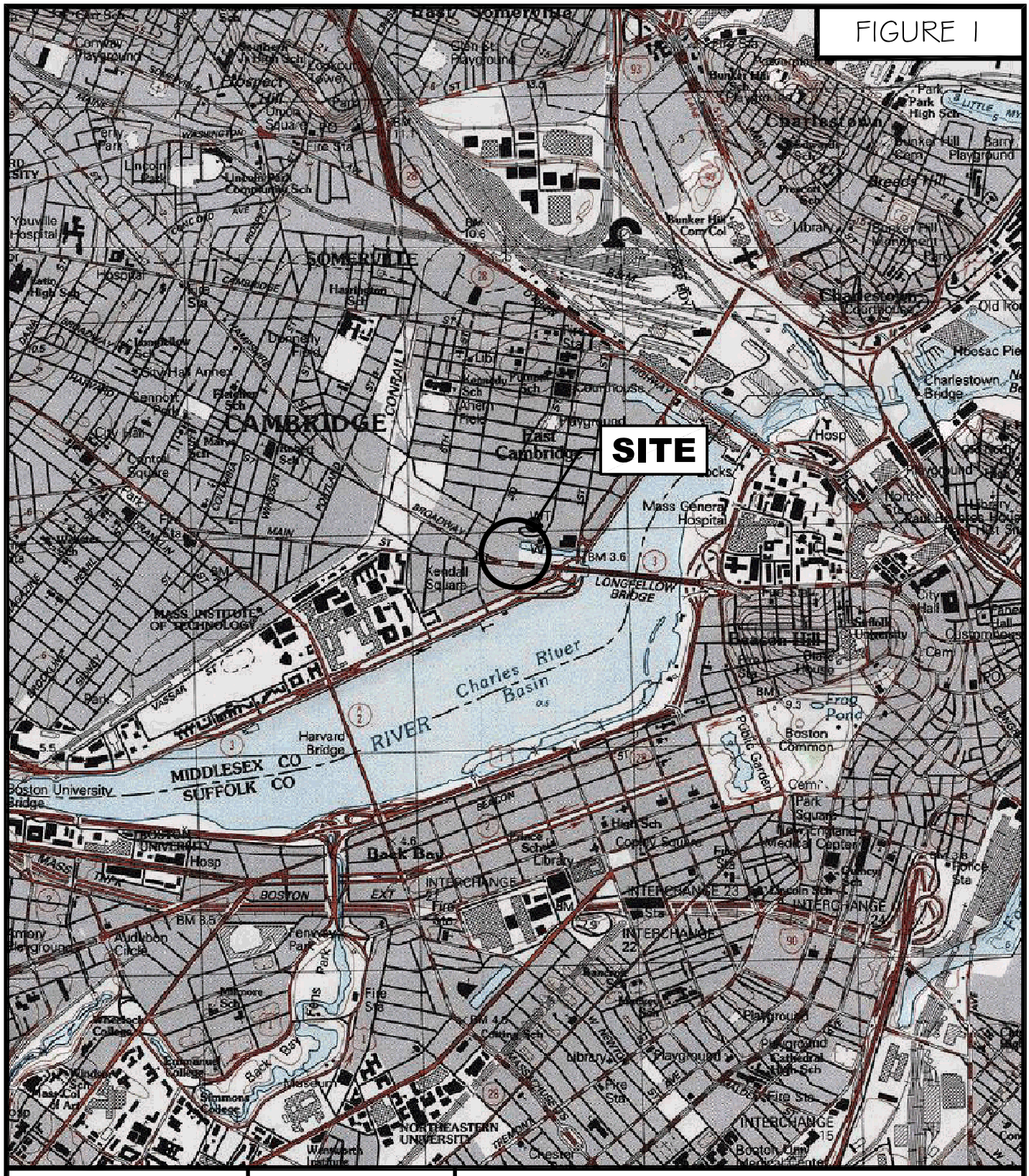
McPHAIL ASSOCIATES, LLC

Kirk W. Seaman

William J, Burns L.S.P.

N:\Working Documents\Reports\6231 RGP 092817.docx

FIGURE 1



McPHAIL ASSOCIATES, LLC
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N

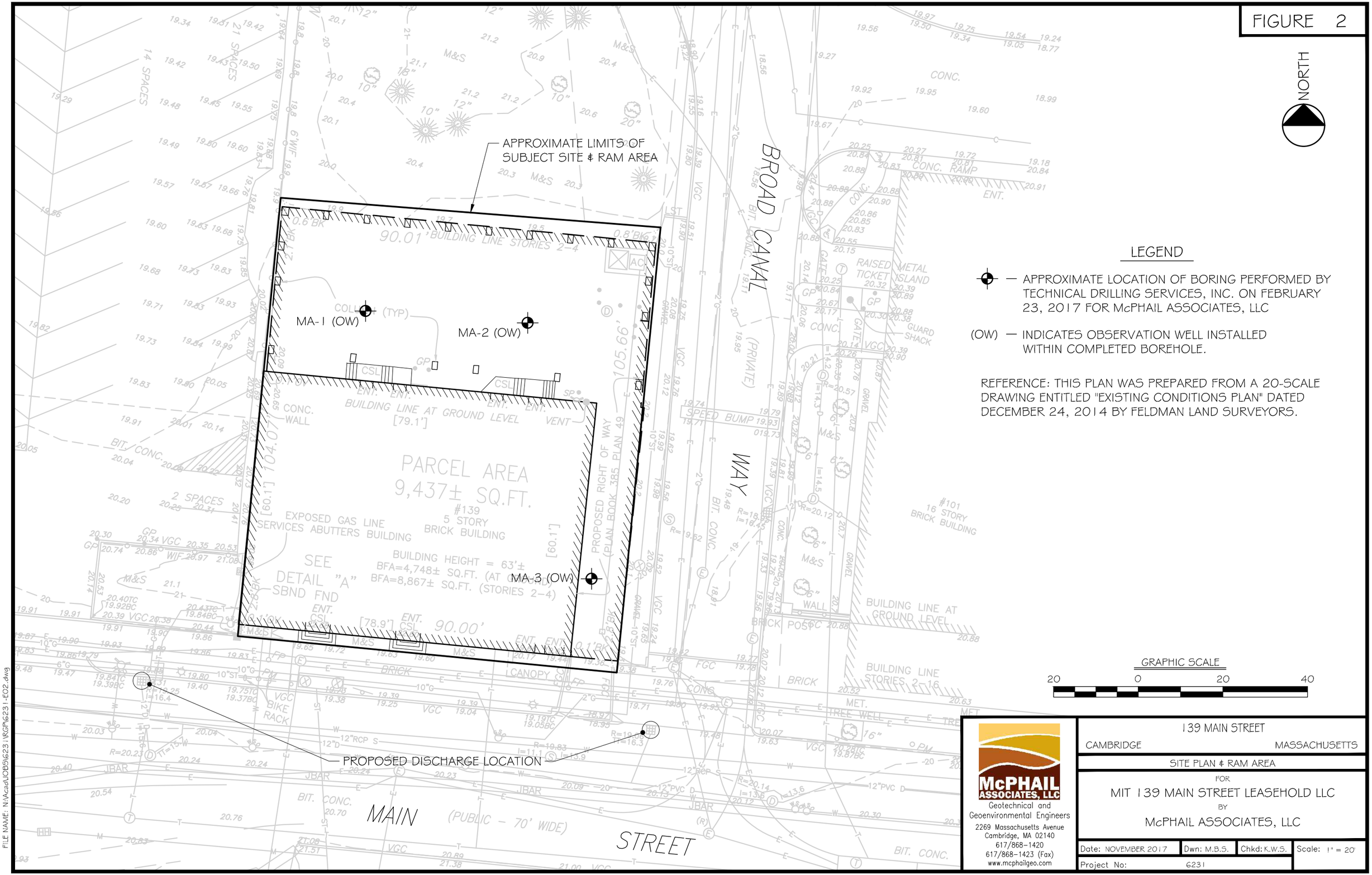
SCALE 1:25,000

PROJECT LOCATION PLAN

139 MAIN STREET

CAMBRIDGE MASSACHUSETTS

FIGURE 2



LEGEND

⊕ — APPROXIMATE LOCATION OF BORING PERFORMED BY TECHNICAL DRILLING SERVICES, INC. ON FEBRUARY 23, 2017 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" DATED DECEMBER 24, 2014 BY FELDMAN LAND SURVEYORS.

GRAPHIC SCALE

20 0 20 40

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139 MAIN STREET

CAMBRIDGE MASSACHUSETTS

SITE PLAN & RAM AREA

FOR

MIT 139 MAIN STREET LEASEHOLD LLC

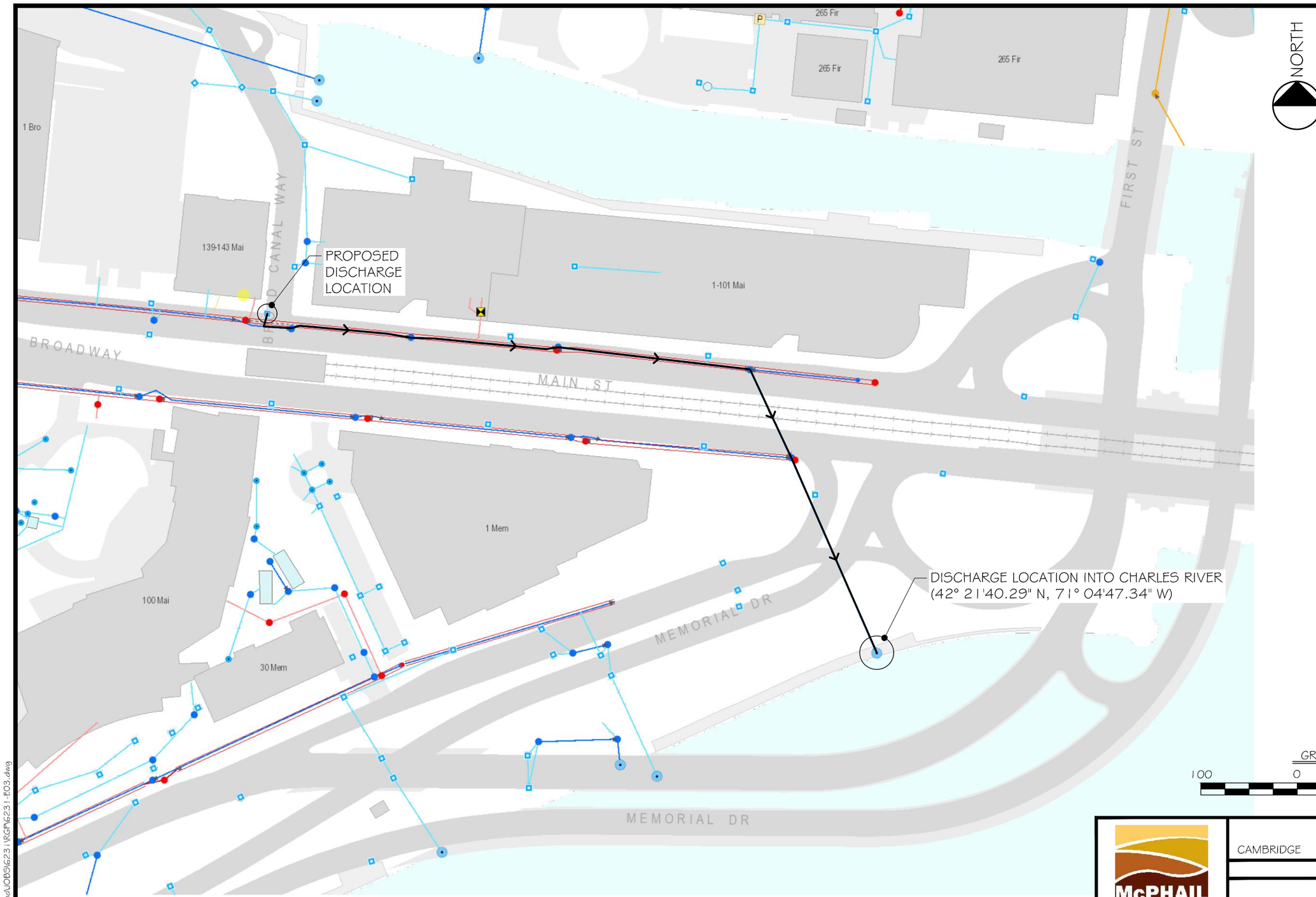
BY

McPHAIL ASSOCIATES, LLC

Date: NOVEMBER 2017	Dwn: M.B.S.	Chkd: K.W.S.	Scale: 1" = 20'
Project No: 6231			

FILE NAME: N:\Acad\JOBS\6231\RGR\6231-E02.dwg

FIGURE 3



GRAPHIC SCALE

100 0 100 200

REFERENCE: THIS PLAN WAS PREPARED FROM A 96-SCALE DRAWING ENTITLED, "CITY OF CAMBRIDGE" DATED SEPTEMBER 27, 2017 PROVIDED BY THE CITY OF CAMBRIDGE, MASSACHUSETTS

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139 MAIN STREET
CAMBRIDGE MASSACHUSETTS

DISCHARGE FLOW PLAN

FOR

MIT 139 MAIN STREET LEASEHOLD LLC

BY

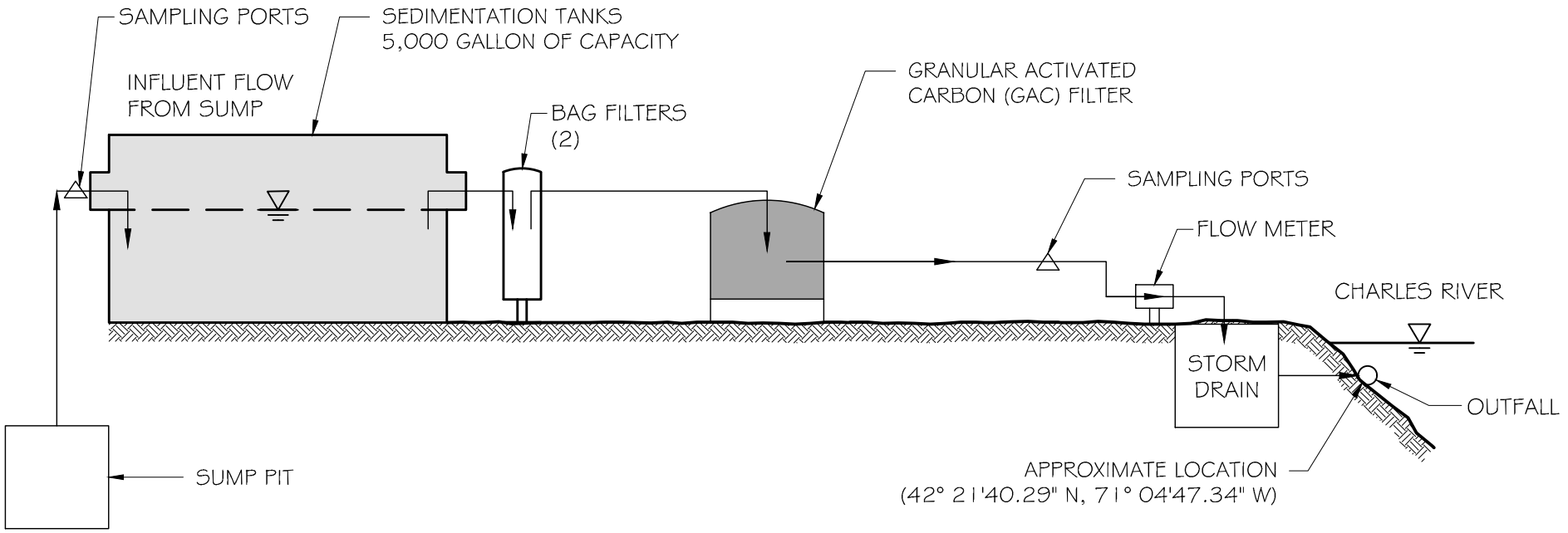
McPHAIL ASSOCIATES, LLC

Date: OCTOBER 2017	Dwn: M.B.S.	Chkd: K.W.S.	Scale: 1" = 100'
Project No: 6231			

FILE NAME: N:\Acad\OBS\6231\RGP\6231-E03.dwg

FILE NAME: N:\Acad\JOBS\6231\RGP\6231-E04.dwg

FIGURE 4



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139 MAIN STREET
CAMBRIDGE MASSACHUSETTS

SCHEMATIC OF TREATMENT SYSTEM

FOR
MIT 139 MAIN STREET LEASEHOLD LLC
BY
McPHAIL ASSOCIATES, LLC
CONSULTING GEOTECHNICAL ENGINEERS

Date: SEPTEMBER 2017	Dwn: M.B.S.	Chkd: K.W.S.	Scale: N.T.S.
Project No: 6231			

TABLE 1

LABORATORY TEST RESULTS - GROUNDWATER
139 Main Street; Cambridge, Massachusetts
McPhail Job No. 6231

	LOCATION			MA-1 (OW)	MA-1 (OW)
	SAMPLING DATE			10/3/2017	10/10/2017
	LAB SAMPLE ID			L1735516-01	L1736507-01
		EPA-ALSCMC	Units	Results	Results
General Chemistry					
	Solids, Total Suspended		ug/l	43000	
	pH (H)		SU	7.5	
	Chromium, Hexavalent	1100	ug/l	-	
	Chromium, Trivalent		ug/l	-	
Anions by Ion Chromatography					
	Chloride	860000	ug/l		243000
General Chemistry					
	Cyanide, Total	22	ug/l		ND(5)
	Chlorine, Total Residual		ug/l		1900
	Nitrogen, Ammonia		ug/l		478
Total Hardness by SM 2340B					
	Hardness		ug/l	822000	
Total Metals					
	Antimony, Total		ug/l	ND(4)	
	Arsenic, Total	69	ug/l	ND(1)	
	Cadmium, Total	40	ug/l	ND(0.2)	
	Chromium, Total		ug/l	2.05	
	Copper, Total	4.8	ug/l	ND(1)	
	Iron, Total		ug/l	767	
	Lead, Total	210	ug/l	1.21	
	Mercury, Total	1.8	ug/l	ND(0.2)	
	Nickel, Total	74	ug/l	ND(2)	
	Selenium, Total	290	ug/l	ND(5)	
	Silver, Total	1.9	ug/l	ND(0.4)	
	Zinc, Total	90	ug/l	ND(10)	
Microextractables by GC					
	1,2-Dibromoethane		ug/l	ND(0.01)	
Volatile Organics by GC/MS					
	Vinyl chloride		ug/l	2600	
	cis-1,2-Dichloroethene		ug/l	1600	

TABLE 2

LABORATORY TEST RESULTS - SURFACE WATER
139 Main Street; Cambridge, Massachusetts
McPhail Job No. 6231

LOCATION				CHARLES RIVER SURFACE WATER
SAMPLING DATE				10/3/2017
LAB SAMPLE ID				L1735516-02
		EPA-ALSCMC	Units	Results
General Chemistry				
	Solids, Total Suspended		ug/l	-
	pH (H)		SU	7.2
	Chromium, Hexavalent	1100	ug/l	ND(50)
	Chromium, Trivalent		ug/l	ND(50)
Total Hardness by SM 2340B				
	Hardness		ug/l	126000
Total Metals				
	Antimony, Total		ug/l	ND(4)
	Arsenic, Total	69	ug/l	ND(1)
	Cadmium, Total	40	ug/l	ND(0.2)
	Chromium, Total		ug/l	ND(1)
	Copper, Total	4.8	ug/l	2.89
	Iron, Total		ug/l	192
	Lead, Total	210	ug/l	1.47
	Mercury, Total	1.8	ug/l	ND(0.2)
	Nickel, Total	74	ug/l	ND(2)
	Selenium, Total	290	ug/l	ND(5)
	Silver, Total	1.9	ug/l	ND(0.4)
	Zinc, Total	90	ug/l	ND(10)

APPENDIX A:

LIMITATIONS

LIMITATIONS

The purpose of this report is to present the results of testing of groundwater samples obtained from a monitoring well located at the 139 Main Street property located 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 MIT 139 Main Street Leasehold LLC and John Moriarty and Associates. 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
CAMBRIDGE DEWATERING DISCHARGE PERMIT

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:
139 Main Street</td><td colspan="3">Site address: 139 Main Street
Street:</td></tr>
<tr><td>City: CAMBRIDGE</td><td>State: MA</td><td>Zip: 02142</td></tr>
<tr><td rowspan="4">2. Site owner
MIT 139 Main Street Leasehold LLC

Owner is (check one): ☐ Federal ☐ State/Tribal ■ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: Allen Breed</td></tr>
<tr><td colspan="2">Telephone: (617) 253-4900</td><td>Email: ahbreed@mitimco.mit.edu</td></tr>
<tr><td colspan="3">Mailing address: 238 Main Street, Suite 200
Street:</td></tr>
<tr><td>City: CAMBRIDGE</td><td>State: MA</td><td>Zip: 02142</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
John Moriarty & Associates</td><td colspan="3">Contact Person: Bill Twomey</td></tr>
<tr><td colspan="2">Telephone: 781 729 3900</td><td>Email: wtwomey@jm-a.com</td></tr>
<tr><td colspan="3">Mailing address:
Street: 3 Church Street #2</td></tr>
<tr><td>City: Winchester</td><td>State: MA</td><td>Zip: 01890</td></tr>
<tr><td>4. NPDES permit number assigned by EPA:

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):
RTN 3- 34268
☐ 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):
CHARLES RIVER	LOWER WATERSHED	CLASS B

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

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

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

3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP. 303(d)listed waterbody. Pollutants: unknown toxicity, organics, metals, nutrients, organic enrichment/low dissolved oxygen, pathogens, oil and grease, tase, odor and color, noxious acquatic plants, turbidity. Final TMDL nutrients June 2007.

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.	29.2 CFS
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.	525.24

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: September 29, 2017

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:	
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 N/A
3. Has the source water been previously chlorinated or otherwise contains residual chlorine? (check one): ☐ Yes ■ No	

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ☐ Existing discharge ■ New discharge ☐ New source	
Outfall(s): City of Cambridge - D04OF0000	Outfall location(s): (Latitude, Longitude) Latitude: 42° 21'40.29" Longitude: 71° 04'47.34"
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ■ Indirect discharge, if so, specify: ☐ 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: Upon approval of NPDES RGP 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): 11/2017 - 10/2018 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="5">☐ I – Petroleum-Related Site Remediation
■ II – Non-Petroleum-Related Site Remediation
☐ III – Contaminated Site Dewatering
☐ IV – Dewatering of Pipelines and Tanks
☐ V – Aquifer Pump Testing
☐ VI – Well Development/Rehabilitation
☐ VII – Collection Structure Dewatering/Remediation
☐ VIII – Dredge-Related Dewatering</td><td colspan="2">a. If Activity Category I or II: (check all that apply)

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

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

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia	✔		1	121,4500	75	478	478	Report mg/L	---
Chloride	✔		1	44,300	12500	24300	24300	Report µg/l	---
Total Residual Chlorine	✔		1	121,4500	200	1900	1900	0.2 mg/L	
Total Suspended Solids		✔	1	121,2540(	5,000	43000	43000	30 mg/L	
Antimony	✔		1	3200.8	4	<DL	<DL	206 µg/L	
Arsenic	✔		1	3200.8	0.5	<DL	<DL	104 µg/L	
Cadmium	✔		1	3200.8	0.2	<DL	<DL	10.2 µg/L	
Chromium III	✔		1	3200.8	10	<DL	<DL	323 µg/L	
Chromium VI	✔		1	3200.8	10	<DL	<DL	323 µg/L	
Copper	✔		1	3200.8	1	2.89	2.89	242 µg/L	
Iron	✔		1	19,200.70	50	192	192	5,000 µg/L	
Lead	✔		1	3200.8	0.5	<DL	<DL	160 µg/L	
Mercury	✔		1	3,245.10	0.2	<DL	<DL	0.739 µg/L	
Nickel	✔		1	3200.8	2	<DL	<DL	1,450 µg/L	
Selenium	✔		1	3200.8	5	<DL	<DL	235.8 µg/L	
Silver	✔		1	3200.8	0.4	<DL	<DL	35.1 µg/L	
Zinc	✔		1	3200.8	10	<DL	<DL	420 µg/L	
Cyanide			1	30,4500C	5	<DL	<DL	178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX	✔		0					100 µg/L	---
Benzene	✔		0					5.0 µg/L	---
1,4 Dioxane	✔		0					200 µg/L	---
Acetone	✔		0					7.97 mg/L	---
Phenol	✔		0					1,080 µg/L	

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✔		1	8260C	0.5	<DL	<DL	4.4 µg/L	
1,2 Dichlorobenzene	✔		1	8260C,	2	<DL	<DL	600 µg/L	---
1,3 Dichlorobenzene	✔		1	8260C,	2	<DL	<DL	320 µg/L	---
1,4 Dichlorobenzene	✔		1	8260C,	2	<DL	<DL	5.0 µg/L	---
Total dichlorobenzene	✔		1	8260C	2	<DL	<DL	763 µg/L in NH	---
1,1 Dichloroethane	✔		1	8260C	0.75	<DL	<DL	70 µg/L	---
1,2 Dichloroethane	✔		1	8260C	0.5	<DL	<DL	5.0 µg/L	---
1,1 Dichloroethylene	✔		1	8260C	0.5	<DL	<DL	3.2 µg/L	---
Ethylene Dibromide	✔		1	8260C	0.01	<DL	<DL	0.05 µg/L	---
Methylene Chloride	✔		1	8260C	3	<DL	<DL	4.6 µg/L	---
1,1,1 Trichloroethane	✔		1	8260C	0.5	<DL	<DL	200 µg/L	---
1,1,2 Trichloroethane	✔		1	8260C	0.75	<DL	<DL	5.0 µg/L	---
Trichloroethylene	✔		1	8260C	0.5	<DL	<DL	5.0 µg/L	---
Tetrachloroethylene	✔		1	8260C	0.5	<DL	<DL	5.0 µg/L	
cis-1,2 Dichloroethylene		✔	1	8260C	0.5	1600	1600	70 µg/L	---
Vinyl Chloride		✔	1	8260C	1			2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✔		0					190 µg/L	
Diethylhexyl phthalate	✔		0					101 µg/L	
Total Group I PAHs	✔		0					1.0 µg/L	---
Benzo(a)anthracene	✔		0					As Total PAHs	
Benzo(a)pyrene	✔		0						
Benzo(b)fluoranthene	✔		0						
Benzo(k)fluoranthene	✔		0						
Chrysene	✔		0						
Dibenzo(a,h)anthracene	✔		0						
Indeno(1,2,3-cd)pyrene	✔		0						

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	✔		0					100 µg/L	---
Naphthalene	✔		0					20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✔		0					0.000064 µg/L	---
Pentachlorophenol	✔		0					1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons	✔		0					5.0 mg/L	---
Ethanol	✔		0					Report mg/L	---
Methyl-tert-Butyl Ether	✔		0					70 µg/L	2636 UG/L
tert-Butyl Alcohol	✔		0					120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✔		0					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 - Inffluent		✔	1	121,2540D	-	7.5			
Hardness - Inffluent		✔	1	19,200.7	660	822000			
pH - Receiving Water		✔	1	121,2540D	-	7.2			
Hardness- Receiving Water		✔	1	19,200.7	660	126000			

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.
Refer to attached report.

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: Granular Activated Carbon (GAC) Filter

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: Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	25
Provide the proposed maximum effluent flow in gpm.	25
Provide the average effluent flow in gpm.	5
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

Proposed activities have no potential to affect historic properties. The dewatering of groundwater at the site will be temporary and intermittent. Groundwater discharged as part of the proposed project will be controlled and monitored. Treatment system(s) will consist of temporary structures.

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

I. Supplemental information

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

Refer to attached Report and supporting documentation.

Has the operator attached data, including any laboratory case narrative and chain of custody used to support the application? (check one): ■ Yes ☐ No

Has the operator attached the certification requirement for the Best Management Practices Plan (BMPP)? (check one): ■ Yes ☐ No

J. Certification requirement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

BMPP certification statement: A BMPP meeting the requirements of this general permit will be developed and implemented prior to the initiation of discharge.	
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ☐ No ☐ N/A
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: Bill Twomey	Date: Nov. 14, 2017
Print Name and Title: Bill Twomey - Project Manager	

PERMIT TO DEWATER

Location: 139 Main Street

Owner: MIT 139 Main Street Leasehold LLC

Contractor: John Moriarty & Associates

Temporary ☑

Permanent ☐

The property owner, MIT 139 Main Street Leasehold 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:

EPA NPDES RGP Application

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

Not Applicable

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 MIT 139 Main Street Leasehold LL (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.

MIT 139 Main Street Leasehold LLC
By: MIT Cambridge Real Estate LLC, its manager

DocuSigned by:
By: Seth D
3FFCCD74E1A24EA...
Seth D. Alexander, President

City Manager

12/8/2017
Date

Date

City Solicitor

Contractor

Date

Bill Twomey for John Moriarty + Assoc
Date

11-14-2017
Commissioner of Public

Contractor

Date

Date

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

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

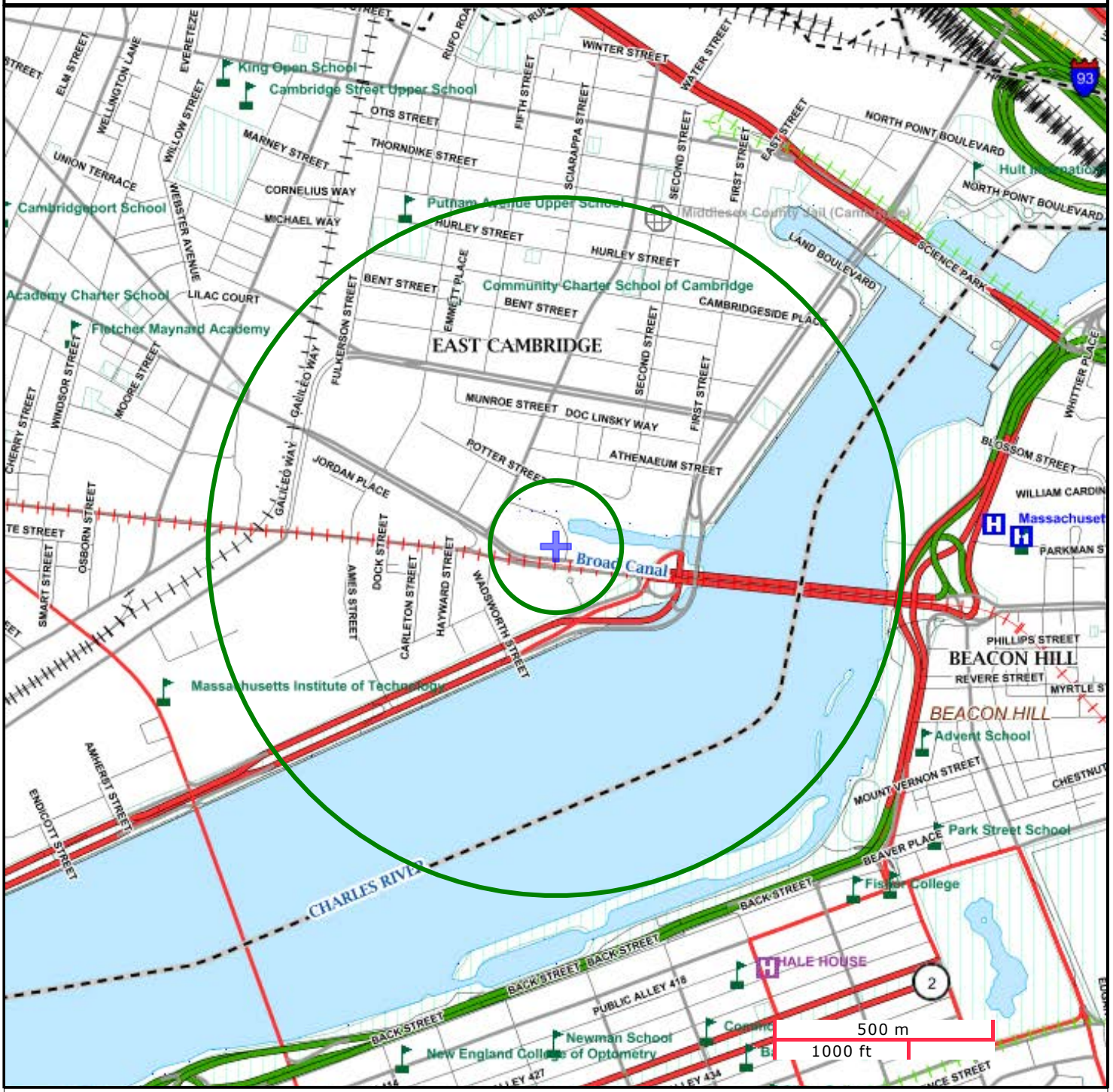
Site Information:

139 MAIN STREET CAMBRIDGE, MA

NAD83 UTM Meters:
4692116mN , 328519mE (Zone: 19)
October 2, 2017

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: http://www.mass.gov/mgis/.

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

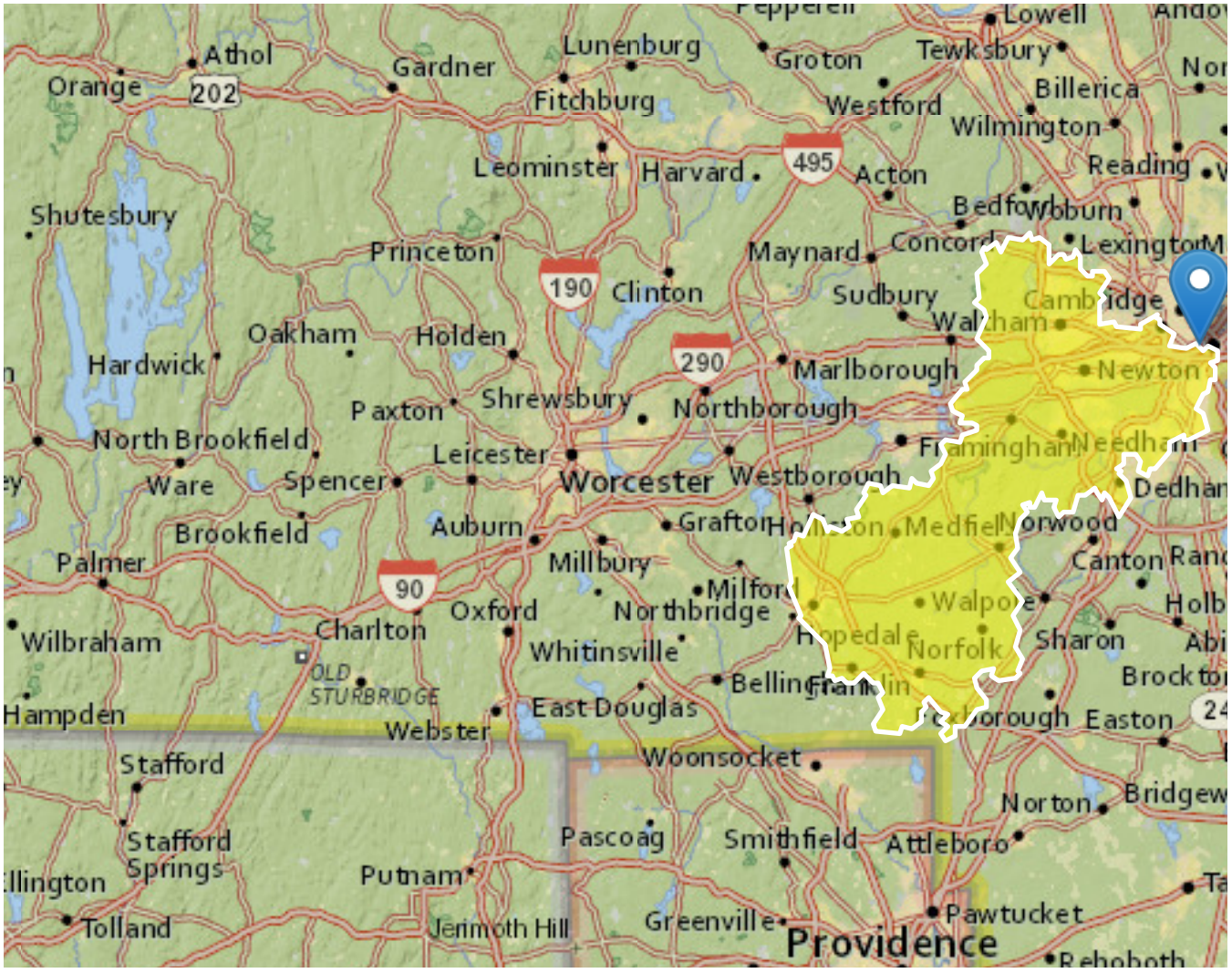
FEMA 100yr Floodplain; Protected Open Space; ACEC

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: MA20170928133547662000
Clicked Point (Latitude, Longitude): 42.35931, -71.07802
Time: 2017-09-28 09:36:04 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	308	square miles
BSLDEM250	Mean basin slope computed from 1:250K DEM	2.336	percent

Parameter Code	Parameter Description	Value	Unit
DRFTPERSTR	Area of stratified drift per unit of stream length	0.25	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	308	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	2.336	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.25	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

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

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

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

Statistic	Value	Unit
7 Day 2 Year Low Flow	57.4	ft^3/s
7 Day 10 Year Low Flow	29.2	ft^3/s

Low-Flow Statistics Citations

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

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: September 27, 2017
Consultation Code: 05E1NE00-2017-SLI-2862
Event Code: 05E1NE00-2017-E-06157
Project Name: 139 Main Street - Cambridge, MA

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

To Whom It May Concern:

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

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

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

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 05E1NE00-2017-SLI-2862

Event Code: 05E1NE00-2017-E-06157

Project Name: 139 Main Street - Cambridge, MA

Project Type: DEVELOPMENT

Project Description: <1 acre

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.36236707836201N71.08237725523396W

Counties: Middlesex, MA

Endangered Species Act Species

There is a total of 0 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. 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.

Critical habitats

There are no critical habitats within your project area under this office's jurisdiction.

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Cambridge; Street No: 139; Street Name: Main St; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

From: Vakalopoulos, Catherine (DEP) <Catherine.Vakalopoulos@MassMail.State.MA.US>
Sent: Friday, September 29, 2017 12:06 PM
To: Kirk W. Seaman
Subject: Re: Dilution Factor Confirmation - 139 Main Street Cambridge, MA

Hi Kirk,
Thanks. I have checked the 7Q10 and dilution factor calculation below. The dilution factor of 525.24 for the discharge to the Charles River, just southwest of the Longfellow Bridge is correct. The Charles River is not an ORW so you are all set from MassDEP as you prepare the EPA NOI for RGP coverage.
Cathy

Cathy Vakalopoulos, Massachusetts Department of Environmental Protection
1 Winter St., Boston, MA 02108, 617-348-4026

From: Kirk W. Seaman <KSeaman@mcphailgeo.com>
Sent: Friday, September 29, 2017 11:43 AM
To: Vakalopoulos, Catherine (DEP)
Subject: RE: Dilution Factor Confirmation - 139 Main Street Cambridge, MA

Hi Cathy,

My apologies.

I have attached a picture with the approximate location. Per the Cambridge DPW GIS database, the discharge location is south west of the Longfellow Bridge, between Memorial Dr and the riverbank.

Let me know if you have any questions.

Kirk W. Seaman

McPHAIL ASSOCIATES, LLC

2269 Massachusetts Avenue
Cambridge, MA 02140

Tel: 617-349-7352
Cell: 626-590-8418

www.mcphailgeo.com

From: Vakalopoulos, Catherine (DEP) [mailto:Catherine.Vakalopoulos@MassMail.State.MA.US]
Sent: Friday, September 29, 2017 11:36 AM

To: Kirk W. Seaman <KSeaman@mcphailgeo.com>
Subject: Re: Dilution Factor Confirmation - 139 Main Street Cambridge, MA

Hi Kirk,
Where is the discharge to the Charles? All I need is the nearest street or landmark.
Thanks,
Cathy

Cathy Vakalopoulos, Massachusetts Department of Environmental Protection
1 Winter St., Boston, MA 02108, 617-348-4026

From: Kirk W. Seaman <KSeaman@mcphailgeo.com>
Sent: Friday, September 29, 2017 11:30 AM
To: Vakalopoulos, Catherine (DEP)
Subject: Dilution Factor Confirmation - 139 Main Street Cambridge, MA

Hi Cathy,

I wanted to confirm the calculations for a dilution factor with regard to a proposed dewatering permit in Cambridge discharging to the Charles River.

The generated Streamstats report shows that the 7Q10 is 29.2 cfs (18.8725 MGD).

With the design flow of 25 GPM (0.036 MGD), the dilution factor is:

Dilution Factor = (0.036+18.8725) / 0.036 = 525.24

If you have any questions, please let me know.

Kirk W. Seaman

McPHAIL ASSOCIATES, LLC

2269 Massachusetts Avenue
Cambridge, MA 02140

Tel: 617-349-7352
Cell: 626-590-8418

www.mcphailgeo.com

APPENDIX D:

LABORATORY ANALYTICAL DATA – GROUNDWATER

ANALYTICAL REPORT

Lab Number:	L1735516
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	139 MAIN STREET
Project Number:	6231.9.00
Report Date:	10/09/17

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

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

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1735516-01	MW-1	WATER	CAMBRIDGE, MA	10/03/17 09:00	10/03/17
L1735516-02	CHARLES RIVER SURFACE WATER	WATER	CAMBRIDGE, MA	10/03/17 09:30	10/03/17

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

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

Please contact Client Services at 800-624-9220 with any questions.

Project Name: 139 MAIN STREET **Lab Number:** L1735516
Project Number: 6231.9.00 **Report Date:** 10/09/17

Case Narrative (continued)

Sample Receipt

The analyses performed were specified by the client.

Microextractables

WG1049767: An LCS/LCSD was performed in lieu of a Matrix Spike due to insufficient sample volume available for analysis.

Total Metals

The WG1049340-5 MS recovery for selenium (0%), performed on L1735516-01, 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.

The WG1049345-3 MS recovery for hardness (0%), performed on L1735516-01, does not apply because the sample concentration is greater than four times the spike amount added.

Solids, Total Suspended

WG1048775: A Laboratory Duplicate could not be performed due to insufficient sample volume available for analysis.

Hexavalent Chromium

L1735516-02: The sample has an elevated detection limit due to the dilution required by the sample matrix.

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

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 10/09/17

ORGANICS

VOLATILES

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

SAMPLE RESULTS

Lab ID: L1735516-01
Client ID: MW-1
Sample Location: CAMBRIDGE, MA

Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 10/06/17 11:39
Analyst: NS

Date Collected: 10/03/17 09:00
Date Received: 10/03/17
Field Prep: Not Specified
Extraction Method: EPA 504.1
Extraction Date: 10/06/17 09:37

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

Project Name: 139 MAIN STREET
Lab Number: L1735516
Project Number: 6231.9.00
Report Date: 10/09/17

SAMPLE RESULTS

Lab ID: L1735516-01 D
Client ID: MW-1
Sample Location: CAMBRIDGE, MA

Date Collected: 10/03/17 09:00
Date Received: 10/03/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/06/17 11:15
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	60	--	20
1,1-Dichloroethane	ND		ug/l	15	--	20
Carbon tetrachloride	ND		ug/l	10	--	20
1,1,2-Trichloroethane	ND		ug/l	15	--	20
Tetrachloroethene	ND		ug/l	10	--	20
1,2-Dichloroethane	ND		ug/l	10	--	20
1,1,1-Trichloroethane	ND		ug/l	10	--	20
Vinyl chloride	2600		ug/l	20	--	20
1,1-Dichloroethene	ND		ug/l	10	--	20
Trichloroethene	ND		ug/l	10	--	20
1,2-Dichlorobenzene	ND		ug/l	50	--	20
1,3-Dichlorobenzene	ND		ug/l	50	--	20
1,4-Dichlorobenzene	ND		ug/l	50	--	20
cis-1,2-Dichloroethene	1600		ug/l	10	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	95		70-130

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/06/17 10:20
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1049713-5					
Methylene chloride	ND		ug/l	3.0	--
1,1-Dichloroethane	ND		ug/l	0.75	--
Carbon tetrachloride	ND		ug/l	0.50	--
1,1,2-Trichloroethane	ND		ug/l	0.75	--
Tetrachloroethene	ND		ug/l	0.50	--
1,2-Dichloroethane	ND		ug/l	0.50	--
1,1,1-Trichloroethane	ND		ug/l	0.50	--
Vinyl chloride	ND		ug/l	1.0	--
1,1-Dichloroethene	ND		ug/l	0.50	--
Trichloroethene	ND		ug/l	0.50	--
1,2-Dichlorobenzene	ND		ug/l	2.5	--
1,3-Dichlorobenzene	ND		ug/l	2.5	--
1,4-Dichlorobenzene	ND		ug/l	2.5	--
cis-1,2-Dichloroethene	ND		ug/l	0.50	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	97		70-130

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 10/06/17 10:52
Analyst: NS

Extraction Method: EPA 504.1
Extraction Date: 10/06/17 09:37

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westborough Lab for sample(s): 01 Batch: WG1049767-1						
1,2-Dibromoethane	ND		ug/l	0.010	--	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

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: WG1049713-3 WG1049713-4								
Methylene chloride	99		94		70-130	5		20
1,1-Dichloroethane	100		96		70-130	4		20
Carbon tetrachloride	100		99		63-132	1		20
1,1,2-Trichloroethane	100		100		70-130	0		20
Tetrachloroethene	100		100		70-130	0		20
1,2-Dichloroethane	94		92		70-130	2		20
1,1,1-Trichloroethane	96		92		67-130	4		20
Vinyl chloride	110		110		55-140	0		20
1,1-Dichloroethene	97		94		61-145	3		25
Trichloroethene	100		94		70-130	6		25
1,2-Dichlorobenzene	110		100		70-130	10		20
1,3-Dichlorobenzene	110		100		70-130	10		20
1,4-Dichlorobenzene	110		100		70-130	10		20
cis-1,2-Dichloroethene	96		94		70-130	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	101		99		70-130
Toluene-d8	107		107		70-130
4-Bromofluorobenzene	98		97		70-130
Dibromofluoromethane	100		99		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 139 MAIN STREET

Project Number: 6231.9.00

Lab Number: L1735516

Report Date: 10/09/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab	Associated sample(s): 01		Batch: WG1049767-2 WG1049767-3						
1,2-Dibromoethane	106		117		80-120	10			A

METALS

Project Name: 139 MAIN STREET
Project Number: 6231.9.00
Lab Number: L1735516
Report Date: 10/09/17

SAMPLE RESULTS

Lab ID: L1735516-01
Client ID: MW-1
Sample Location: CAMBRIDGE, MA
Matrix: Water
Date Collected: 10/03/17 09:00
Date Received: 10/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	10/05/17 16:45	10/06/17 14:08	EPA 3005A	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	10/05/17 16:45	10/06/17 14:08	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	10/05/17 16:45	10/06/17 14:08	EPA 3005A	3,200.8	AM
Chromium, Total	0.00205		mg/l	0.00100	--	1	10/05/17 16:45	10/06/17 14:08	EPA 3005A	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	10/05/17 16:45	10/06/17 14:08	EPA 3005A	3,200.8	AM
Iron, Total	0.767		mg/l	0.050	--	1	10/05/17 16:45	10/07/17 16:00	EPA 3005A	19,200.7	AM
Lead, Total	0.00121		mg/l	0.00050	--	1	10/05/17 16:45	10/06/17 14:08	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	10/05/17 12:54	10/05/17 15:47	EPA 245.1	3,245.1	MG
Nickel, Total	ND		mg/l	0.00200	--	1	10/05/17 16:45	10/06/17 14:08	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	10/05/17 16:45	10/06/17 14:08	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	10/05/17 16:45	10/06/17 14:08	EPA 3005A	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	10/05/17 16:45	10/06/17 14:08	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	822		mg/l	0.660	NA	1	10/05/17 16:45	10/07/17 16:00	EPA 3005A	19,200.7	AM

Project Name: 139 MAIN STREET
Project Number: 6231.9.00
Lab Number: L1735516
Report Date: 10/09/17

SAMPLE RESULTS

Lab ID: L1735516-02
Client ID: CHARLES RIVER SURFACE WATER
Sample Location: CAMBRIDGE, MA
Matrix: Water
Date Collected: 10/03/17 09:30
Date Received: 10/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	10/05/17 16:45	10/06/17 13:24	EPA 3005A	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	10/05/17 16:45	10/06/17 13:24	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	10/05/17 16:45	10/06/17 13:24	EPA 3005A	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	10/05/17 16:45	10/06/17 13:24	EPA 3005A	3,200.8	AM
Copper, Total	0.00289		mg/l	0.00100	--	1	10/05/17 16:45	10/06/17 13:24	EPA 3005A	3,200.8	AM
Iron, Total	0.192		mg/l	0.050	--	1	10/05/17 16:45	10/07/17 16:14	EPA 3005A	19,200.7	AM
Lead, Total	0.00147		mg/l	0.00050	--	1	10/05/17 16:45	10/06/17 13:24	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	10/05/17 12:54	10/05/17 15:49	EPA 245.1	3,245.1	MG
Nickel, Total	ND		mg/l	0.00200	--	1	10/05/17 16:45	10/06/17 13:24	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	10/05/17 16:45	10/06/17 13:24	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	10/05/17 16:45	10/06/17 13:24	EPA 3005A	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	10/05/17 16:45	10/06/17 13:24	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	126		mg/l	0.660	NA	1	10/05/17 16:45	10/07/17 16:14	EPA 3005A	19,200.7	AM
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.050	--	1		10/06/17 13:24	NA	107,-	

Project Name: 139 MAIN STREET
Project Number: 6231.9.00
Lab Number: L1735516
Report Date: 10/09/17

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: WG1049268-1										
Mercury, Total	ND		mg/l	0.0002	--	1	10/05/17 12:54	10/05/17 15:27	3,245.1	MG

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: WG1049340-1										
Antimony, Total	ND		mg/l	0.00400	--	1	10/05/17 16:45	10/06/17 11:46	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	10/05/17 16:45	10/06/17 11:46	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	10/05/17 16:45	10/06/17 11:46	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	10/05/17 16:45	10/06/17 11:46	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	10/05/17 16:45	10/06/17 11:46	3,200.8	AM
Lead, Total	ND		mg/l	0.00050	--	1	10/05/17 16:45	10/06/17 11:46	3,200.8	AM
Nickel, Total	ND		mg/l	0.00200	--	1	10/05/17 16:45	10/06/17 11:46	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	10/05/17 16:45	10/06/17 11:46	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	10/05/17 16:45	10/06/17 11:46	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	10/05/17 16:45	10/06/17 11:46	3,200.8	AM

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1049345-1										
Iron, Total	ND		mg/l	0.050	--	1	10/05/17 16:45	10/07/17 15:46	19,200.7	AM

Prep Information

Digestion Method: EPA 3005A

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

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: WG1049345-1										
Hardness	ND		mg/l	0.660	NA	1	10/05/17 16:45	10/07/17 15:46	19,200.7	AM

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 139 MAIN STREET

Project Number: 6231.9.00

Lab Number: L1735516

Report Date: 10/09/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1049268-2								
Mercury, Total	91		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1049340-2								
Antimony, Total	99		-		85-115	-		
Arsenic, Total	104		-		85-115	-		
Cadmium, Total	108		-		85-115	-		
Chromium, Total	104		-		85-115	-		
Copper, Total	102		-		85-115	-		
Lead, Total	101		-		85-115	-		
Nickel, Total	102		-		85-115	-		
Selenium, Total	110		-		85-115	-		
Silver, Total	102		-		85-115	-		
Zinc, Total	101		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1049345-2								
Iron, Total	100		-		85-115	-		
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 Batch: WG1049345-2								
Hardness	97		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

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: WG1049268-3 QC Sample: L1735667-01 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.0048	96		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1049340-3 QC Sample: L1734970-01 Client ID: MS Sample												
Antimony, Total	ND	0.5	0.5272	105		-	-		70-130	-		20
Arsenic, Total	0.0055	0.12	0.1274	102		-	-		70-130	-		20
Cadmium, Total	0.00057	0.051	0.05480	106		-	-		70-130	-		20
Chromium, Total	0.0028	0.2	0.2060	102		-	-		70-130	-		20
Copper, Total	0.03404	0.25	0.2892	102		-	-		70-130	-		20
Lead, Total	0.0098	0.51	0.5124	98		-	-		70-130	-		20
Nickel, Total	0.0051	0.5	0.5138	102		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1293	108		-	-		70-130	-		20
Silver, Total	0.0004	0.05	0.05122	102		-	-		70-130	-		20
Zinc, Total	0.07137	0.5	0.5757	101		-	-		70-130	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1049340-5 QC Sample: L1735516-01 Client ID: MW-1										
Antimony, Total	ND	0.5	0.5365	107		-	-	70-130	-	20
Arsenic, Total	ND	0.12	0.1270	106		-	-	70-130	-	20
Cadmium, Total	ND	0.051	0.05380	105		-	-	70-130	-	20
Chromium, Total	0.00205	0.2	0.2151	106		-	-	70-130	-	20
Copper, Total	ND	0.25	0.2649	106		-	-	70-130	-	20
Lead, Total	0.00121	0.51	0.5366	105		-	-	70-130	-	20
Nickel, Total	ND	0.5	0.5149	103		-	-	70-130	-	20
Selenium, Total	ND	0.12	ND	**0**	Q	-	-	70-130	-	20
Silver, Total	ND	0.05	0.05109	102		-	-	70-130	-	20
Zinc, Total	ND	0.5	0.5105	102		-	-	70-130	-	20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1049345-3 QC Sample: L1735516-01 Client ID: MW-1										
Iron, Total	0.767	1	1.75	98		-	-	75-125	-	20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1049345-3 QC Sample: L1735516-01 Client ID: MW-1										
Hardness	822	66.2	822	**0**	Q	-	-	75-125	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1049268-4 QC Sample: L1735667-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1049340-4 QC Sample: L1734970-01 Client ID: DUP Sample						
Cadmium, Total	0.00057	0.00057	mg/l	0		20
Copper, Total	0.03404	0.03292	mg/l	3		20
Zinc, Total	0.07137	0.06895	mg/l	3		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1049340-6 QC Sample: L1735516-01 Client ID: MW-1						
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	0.00205	0.00206	mg/l	1		20
Copper, Total	ND	ND	mg/l	NC		20
Lead, Total	0.00121	0.00118	mg/l	3		20
Nickel, Total	ND	ND	mg/l	NC		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1049345-4 QC Sample: L1735516-01 Client ID: MW-1						
Iron, Total	0.767	0.769	mg/l	0		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1049345-4 QC Sample: L1735516-01 Client ID: MW-1					
Hardness	822	806	mg/l	2	20

INORGANICS
&
MISCELLANEOUS

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

SAMPLE RESULTS

Lab ID: L1735516-01
Client ID: MW-1
Sample Location: CAMBRIDGE, MA
Matrix: Water

Date Collected: 10/03/17 09:00
Date Received: 10/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	43.		mg/l	1.0	NA	1	-	10/04/17 12:45	121,2540D	JT
pH (H)	7.5		SU	-	NA	1	-	10/04/17 04:08	121,4500H+-B	UN

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

SAMPLE RESULTS

Lab ID: L1735516-02
Client ID: CHARLES RIVER SURFACE WATER
Sample Location: CAMBRIDGE, MA
Matrix: Water

Date Collected: 10/03/17 09:30
Date Received: 10/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
pH (H)	7.2		SU	-	NA	1	-	10/04/17 04:08	121,4500H+-B	UN
Chromium, Hexavalent	ND		mg/l	0.050	--	5	10/04/17 03:35	10/04/17 03:42	1,7196A	UN

Project Name: 139 MAIN STREET
Project Number: 6231.9.00
Lab Number: L1735516
Report Date: 10/09/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 02 Batch: WG1048589-1										
Chromium, Hexavalent	ND		mg/l	0.050	--	5	10/04/17 03:35	10/04/17 03:35	1,7196A	UN
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1048775-1										
Solids, Total Suspended	ND		mg/l	1.0	NA	1	-	10/04/17 12:45	121,2540D	JT

Lab Control Sample Analysis

Batch Quality Control

Project Name: 139 MAIN STREET

Project Number: 6231.9.00

Lab Number: L1735516

Report Date: 10/09/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02 Batch: WG1048589-2								
Chromium, Hexavalent	92		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1048652-1								
pH	100		-		99-101	-		5

Matrix Spike Analysis
Batch Quality Control

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1048589-4 QC Sample: L1735516-02 Client ID: CHARLES RIVER SURFACE WATER												
Chromium, Hexavalent	ND	0.5	0.491	98		-	-		85-115	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1048589-3 QC Sample: L1735516-02 Client ID: CHARLES RIVER SURFACE WATER						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1048652-2 QC Sample: L1735406-01 Client ID: DUP Sample						
pH	10.6	10.6	SU	0		5

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

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(*)
L1735516-01A	Vial HCl preserved	A	NA		2.1	Y	Absent		8260(14)
L1735516-01B	Vial HCl preserved	A	NA		2.1	Y	Absent		8260(14)
L1735516-01C	Vial HCl preserved	A	NA		2.1	Y	Absent		504(14)
L1735516-01D	Plastic 500ml unpreserved	A	7	7	2.1	Y	Absent		TSS-2540-LOW(7),PH-4500(.01)
L1735516-01E	Plastic 500ml HNO3 preserved	A	<2	<2	2.1	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),HARDU(180),AG-2008T(180),AS-2008T(180),HG-U(28),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L1735516-02A	Plastic 500ml unpreserved	A	7	7	2.1	Y	Absent		HEXCR-7196(1),PH-4500(.01)
L1735516-02B	Plastic 500ml HNO3 preserved	A	<2	<2	2.1	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),HARDU(180),AG-2008T(180),AS-2008T(180),HG-U(28),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)

*Values in parentheses indicate holding time in days

Project Name:	139 MAIN STREET	**Lab Number:**	L1735516
Project Number:	6231.9.00	**Report Date:**	10/09/17

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

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

Terms

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.

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.

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 Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related

Report Format: Data Usability Report

Project Name:	139 MAIN STREET	**Lab Number:**	L1735516
Project Number:	6231.9.00	**Report Date:**	10/09/17

Data Qualifiers

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.

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

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

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

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

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

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

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

Report Format: Data Usability Report

Project Name:	139 MAIN STREET	**Lab Number:**	L1735516
Project Number:	6231.9.00	**Report Date:**	10/09/17

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

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.

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: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: NPW and SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
EPA 9012B: NPW: Total Cyanide
EPA 9050A: NPW: Specific Conductance
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
SM 2540D: TSS
EPA 3005A NPW
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: 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**
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, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, 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 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E.**

Mansfield Facility:

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

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, Pb, Mn, Ni, Se, Ag, 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
8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

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

Date Rec'd in Lab: 10/3/17

ALPHA Job #: L1735516

Client Information

Client: MetroPhil Associates

Address: 2269 Mass Ave
Cambridge MA 02140

Phone: 617 868 1420

Email: HJB@mcphailgeo.com
KSeaman@mcphailgeo.com

Additional Project Information:

Project Information

Project Name: 139 Main Street

Project Location: Cambridge MA

Project #: 6231.9.00

Project Manager: HJB / KWS

ALPHA Quote #:

Turn-Around Time

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

Date Due:

Report Information - Data Deliverables

☒ ADEx ☐ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☐ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☐ PAH	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☐ PCB ☐ PEST	TPH: ☐ Quant Only ☐ Fingerprint	RCP TOTAL METALS	8260 Sim	PH / HARDNESS	RCP Recoverable Metals (see Email)			Sample Comments	TOTAL # BOTTLES
35516-01	MW-1	10/3	9:00	GW	KWS									X	X	X					5
-02	Charles River Surface Water	10/3	9:30	SW	KWS											X	X				2
Container Type												P	P	V	P	P					7
Preservative												B	C	B	A	C					

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

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
Kirk Seaman	10/3 11:00	Seaman AAL	10/3/17 1600
Seaman AAL	10/3/17 1740		10/3/17 1740

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

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

ANALYTICAL REPORT

Lab Number:	L1736507
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	139 MAIN STREET
Project Number:	6231.9.00
Report Date:	10/13/17

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

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

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1736507
Report Date: 10/13/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1736507-01	MW-1	WATER	CAMBRIDGE	10/10/17 12:00	10/10/17

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1736507
Report Date: 10/13/17

Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

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

Please contact Client Services at 800-624-9220 with any questions.

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: 10/13/17

INORGANICS
&
MISCELLANEOUS

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1736507
Report Date: 10/13/17

SAMPLE RESULTS

Lab ID: L1736507-01
Client ID: MW-1
Sample Location: CAMBRIDGE
Matrix: Water

Date Collected: 10/10/17 12:00
Date Received: 10/10/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	ND		mg/l	0.005	--	1	10/11/17 13:05	10/11/17 16:34	121,4500CN-CE	LH
Chlorine, Total Residual	1.9		mg/l	0.20	--	10	-	10/10/17 21:18	121,4500CL-D	AS
Nitrogen, Ammonia	0.478		mg/l	0.075	--	1	10/11/17 23:30	10/12/17 22:51	121,4500NH3-BH	AT
Anions by Ion Chromatography - Westborough Lab										
Chloride	243.		mg/l	12.5	--	25	-	10/11/17 21:21	44,300.0	AU

Project Name: 139 MAIN STREET
Project Number: 6231.9.00
Lab Number: L1736507
Report Date: 10/13/17

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: WG1050931-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	10/10/17 21:18	121,4500CL-D	AS
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1051174-1										
Cyanide, Total	ND		mg/l	0.005	--	1	10/11/17 13:05	10/11/17 16:09	121,4500CN-CE	LH
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1051417-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	10/11/17 23:30	10/12/17 22:33	121,4500NH3-BH	AT
Anions by Ion Chromatography - Westborough Lab for sample(s): 01 Batch: WG1051825-1										
Chloride	ND		mg/l	0.500	--	1	-	10/11/17 18:09	44,300.0	AU

Lab Control Sample Analysis

Batch Quality Control

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1736507
Report Date: 10/13/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1050931-2								
Chlorine, Total Residual	93		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1051174-2								
Cyanide, Total	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1051417-2								
Nitrogen, Ammonia	94		-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 Batch: WG1051825-2								
Chloride	106		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1736507
Report Date: 10/13/17

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: WG1050931-4 QC Sample: L1736507-01 Client ID: MW-1												
Chlorine, Total Residual	1.9	2.48	4.5	103		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1051174-4 QC Sample: L1736444-01 Client ID: MS Sample												
Cyanide, Total	ND	0.2	0.201	100		-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1051417-4 QC Sample: L1736417-01 Client ID: MS Sample												
Nitrogen, Ammonia	ND	4	3.65	91		-	-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1051825-3 QC Sample: L1736535-01 Client ID: MS Sample												
Chloride	1.74	4	5.93	105		-	-		90-110	-		18

Lab Duplicate Analysis
Batch Quality Control

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1736507
Report Date: 10/13/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1050931-3 QC Sample: L1736507-01 Client ID: MW-1						
Chlorine, Total Residual	1.9	1.9	mg/l	0		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1051174-3 QC Sample: L1736507-01 Client ID: MW-1						
Cyanide, Total	ND	ND	mg/l	NC		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1051417-3 QC Sample: L1736417-01 Client ID: DUP Sample						
Nitrogen, Ammonia	ND	ND	mg/l	NC		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1051825-4 QC Sample: L1736535-01 Client ID: DUP Sample						
Chloride	1.74	1.73	mg/l	1		18

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1736507
Report Date: 10/13/17

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(*)
L1736507-01A	Plastic 250ml NaOH preserved	A	>12	>12	4.5	Y	Absent		TCN-4500(14)
L1736507-01B	Plastic 250ml H2SO4 preserved	A	<2	<2	4.5	Y	Absent		NH3-4500(28)
L1736507-01C	Plastic 950ml unpreserved	A	7	7	4.5	Y	Absent		CL-300(28),TRC-4500(1)

*Values in parentheses indicate holding time in days

Project Name:	139 MAIN STREET	**Lab Number:**	L1736507
Project Number:	6231.9.00	**Report Date:**	10/13/17

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

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

Terms

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.

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.

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 Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related

Report Format: Data Usability Report

Project Name:	139 MAIN STREET	**Lab Number:**	L1736507
Project Number:	6231.9.00	**Report Date:**	10/13/17

Data Qualifiers

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.

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

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

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

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

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

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

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

Report Format: Data Usability Report

Project Name:	139 MAIN STREET	**Lab Number:**	L1736507
Project Number:	6231.9.00	**Report Date:**	10/13/17

REFERENCES

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

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: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: NPW and SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
EPA 9012B: NPW: Total Cyanide
EPA 9050A: NPW: Specific Conductance
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
SM 2540D: TSS
EPA 3005A NPW
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: 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**
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, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, 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 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E.**

Mansfield Facility:

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

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, Pb, Mn, Ni, Se, Ag, TL, Zn.
EPA 245.1 Hg.
SM2340B

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

Serial_No:10131718:59

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL

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

Date Rec'd in Lab: 10/10/17

ALPHA Job #: L1736507

Client Information

Client: McPhail Associate
Address: 2269 Mass Ave, Cambridge MA
Phone: 617 868 1420
Email: kseaman@mcphailgeo.com

Project Information

Project Name: 139 Main Street
Project Location: Cambridge
Project #: 6231.9.00
Project Manager: KWS
ALPHA Quote #:

Report Information - Data Deliverables

☒ ADEx ☐ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

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

Turn-Around Time

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

Date Due:

Additional Project Information:

ANALYSIS

VOC: ☐ 8260 ☐ 624 ☐ 524.2; SVOC: ☐ ABN ☐ PAH; METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15; METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13; EPH: ☐ Ranges & Targets ☐ Ranges Only; VPH: ☐ Ranges & Targets ☐ Ranges Only; ☐ PCB ☐ PEST; TPH: ☐ Quant Only ☐ Fingerprint; Ammonia; Cyanide; TRC / Chloride

SAMPLE INFO — Filtration: ☐ Field ☐ Lab to do; Preservation: ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Ammonia	Cyanide	TRC / Chloride	Sample Comments	TOTAL # BOTTLES
36507-01	MW-1					X	X	X		3
Container Type						P	P	P		3
Preservative						D	E	A		

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
Kirk Seaman	10/10 1:00	[signature] AAL	10/10/17 1600
[signature] AAL	10/10/17 1740	[signature]	10/10/17 1740

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

APPENDIX E:

LABORATORY ANALYTICAL DATA – SURFACE WATER

ANALYTICAL REPORT

Lab Number:	L1735516
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	139 MAIN STREET
Project Number:	6231.9.00
Report Date:	10/09/17

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

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

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1735516-01	MW-1	WATER	CAMBRIDGE, MA	10/03/17 09:00	10/03/17
L1735516-02	CHARLES RIVER SURFACE WATER	WATER	CAMBRIDGE, MA	10/03/17 09:30	10/03/17

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively. When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. All specific QC information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications. Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The information is also incorporated in the Data Usability format of our Data Merger tool where it can be reviewed along with any associated usability implications.

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

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

Please contact Client Services at 800-624-9220 with any questions.

Project Name:	139 MAIN STREET	**Lab Number:**	L1735516
Project Number:	6231.9.00	**Report Date:**	10/09/17

Case Narrative (continued)

Sample Receipt

The analyses performed were specified by the client.

Microextractables

WG1049767: An LCS/LCSD was performed in lieu of a Matrix Spike due to insufficient sample volume available for analysis.

Total Metals

The WG1049340-5 MS recovery for selenium (0%), performed on L1735516-01, 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.

The WG1049345-3 MS recovery for hardness (0%), performed on L1735516-01, does not apply because the sample concentration is greater than four times the spike amount added.

Solids, Total Suspended

WG1048775: A Laboratory Duplicate could not be performed due to insufficient sample volume available for analysis.

Hexavalent Chromium

L1735516-02: The sample has an elevated detection limit due to the dilution required by the sample matrix.

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

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 10/09/17

ORGANICS

VOLATILES

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

SAMPLE RESULTS

Lab ID: L1735516-01
Client ID: MW-1
Sample Location: CAMBRIDGE, MA

Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 10/06/17 11:39
Analyst: NS

Date Collected: 10/03/17 09:00
Date Received: 10/03/17
Field Prep: Not Specified
Extraction Method: EPA 504.1
Extraction Date: 10/06/17 09:37

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

Project Name: 139 MAIN STREET **Lab Number:** L1735516

Project Number: 6231.9.00 **Report Date:** 10/09/17

SAMPLE RESULTS

Lab ID: L1735516-01 D
Client ID: MW-1
Sample Location: CAMBRIDGE, MA

Date Collected: 10/03/17 09:00
Date Received: 10/03/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 10/06/17 11:15
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	60	--	20
1,1-Dichloroethane	ND		ug/l	15	--	20
Carbon tetrachloride	ND		ug/l	10	--	20
1,1,2-Trichloroethane	ND		ug/l	15	--	20
Tetrachloroethene	ND		ug/l	10	--	20
1,2-Dichloroethane	ND		ug/l	10	--	20
1,1,1-Trichloroethane	ND		ug/l	10	--	20
Vinyl chloride	2600		ug/l	20	--	20
1,1-Dichloroethene	ND		ug/l	10	--	20
Trichloroethene	ND		ug/l	10	--	20
1,2-Dichlorobenzene	ND		ug/l	50	--	20
1,3-Dichlorobenzene	ND		ug/l	50	--	20
1,4-Dichlorobenzene	ND		ug/l	50	--	20
cis-1,2-Dichloroethene	1600		ug/l	10	--	20

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	95		70-130

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 10/06/17 10:20
Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1049713-5					
Methylene chloride	ND		ug/l	3.0	--
1,1-Dichloroethane	ND		ug/l	0.75	--
Carbon tetrachloride	ND		ug/l	0.50	--
1,1,2-Trichloroethane	ND		ug/l	0.75	--
Tetrachloroethene	ND		ug/l	0.50	--
1,2-Dichloroethane	ND		ug/l	0.50	--
1,1,1-Trichloroethane	ND		ug/l	0.50	--
Vinyl chloride	ND		ug/l	1.0	--
1,1-Dichloroethene	ND		ug/l	0.50	--
Trichloroethene	ND		ug/l	0.50	--
1,2-Dichlorobenzene	ND		ug/l	2.5	--
1,3-Dichlorobenzene	ND		ug/l	2.5	--
1,4-Dichlorobenzene	ND		ug/l	2.5	--
cis-1,2-Dichloroethene	ND		ug/l	0.50	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	99		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	100		70-130
Dibromofluoromethane	97		70-130

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 10/06/17 10:52
Analyst: NS

Extraction Method: EPA 504.1
Extraction Date: 10/06/17 09:37

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westborough Lab for sample(s): 01 Batch: WG1049767-1						
1,2-Dibromoethane	ND		ug/l	0.010	--	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

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: WG1049713-3 WG1049713-4								
Methylene chloride	99		94		70-130	5		20
1,1-Dichloroethane	100		96		70-130	4		20
Carbon tetrachloride	100		99		63-132	1		20
1,1,2-Trichloroethane	100		100		70-130	0		20
Tetrachloroethene	100		100		70-130	0		20
1,2-Dichloroethane	94		92		70-130	2		20
1,1,1-Trichloroethane	96		92		67-130	4		20
Vinyl chloride	110		110		55-140	0		20
1,1-Dichloroethene	97		94		61-145	3		25
Trichloroethene	100		94		70-130	6		25
1,2-Dichlorobenzene	110		100		70-130	10		20
1,3-Dichlorobenzene	110		100		70-130	10		20
1,4-Dichlorobenzene	110		100		70-130	10		20
cis-1,2-Dichloroethene	96		94		70-130	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	101		99		70-130
Toluene-d8	107		107		70-130
4-Bromofluorobenzene	98		97		70-130
Dibromofluoromethane	100		99		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 139 MAIN STREET

Project Number: 6231.9.00

Lab Number: L1735516

Report Date: 10/09/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab	Associated sample(s): 01		Batch: WG1049767-2	WG1049767-3					
1,2-Dibromoethane	106		117		80-120	10			A

METALS

Project Name: 139 MAIN STREET
Project Number: 6231.9.00
Lab Number: L1735516
Report Date: 10/09/17

SAMPLE RESULTS

Lab ID: L1735516-01
Client ID: MW-1
Sample Location: CAMBRIDGE, MA
Matrix: Water
Date Collected: 10/03/17 09:00
Date Received: 10/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	10/05/17 16:45	10/06/17 14:08	EPA 3005A	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	10/05/17 16:45	10/06/17 14:08	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	10/05/17 16:45	10/06/17 14:08	EPA 3005A	3,200.8	AM
Chromium, Total	0.00205		mg/l	0.00100	--	1	10/05/17 16:45	10/06/17 14:08	EPA 3005A	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	10/05/17 16:45	10/06/17 14:08	EPA 3005A	3,200.8	AM
Iron, Total	0.767		mg/l	0.050	--	1	10/05/17 16:45	10/07/17 16:00	EPA 3005A	19,200.7	AM
Lead, Total	0.00121		mg/l	0.00050	--	1	10/05/17 16:45	10/06/17 14:08	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	10/05/17 12:54	10/05/17 15:47	EPA 245.1	3,245.1	MG
Nickel, Total	ND		mg/l	0.00200	--	1	10/05/17 16:45	10/06/17 14:08	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	10/05/17 16:45	10/06/17 14:08	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	10/05/17 16:45	10/06/17 14:08	EPA 3005A	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	10/05/17 16:45	10/06/17 14:08	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	822		mg/l	0.660	NA	1	10/05/17 16:45	10/07/17 16:00	EPA 3005A	19,200.7	AM

Project Name: 139 MAIN STREET
Project Number: 6231.9.00
Lab Number: L1735516
Report Date: 10/09/17

SAMPLE RESULTS

Lab ID: L1735516-02
Client ID: CHARLES RIVER SURFACE WATER
Sample Location: CAMBRIDGE, MA
Matrix: Water
Date Collected: 10/03/17 09:30
Date Received: 10/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	10/05/17 16:45	10/06/17 13:24	EPA 3005A	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	10/05/17 16:45	10/06/17 13:24	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	10/05/17 16:45	10/06/17 13:24	EPA 3005A	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	10/05/17 16:45	10/06/17 13:24	EPA 3005A	3,200.8	AM
Copper, Total	0.00289		mg/l	0.00100	--	1	10/05/17 16:45	10/06/17 13:24	EPA 3005A	3,200.8	AM
Iron, Total	0.192		mg/l	0.050	--	1	10/05/17 16:45	10/07/17 16:14	EPA 3005A	19,200.7	AM
Lead, Total	0.00147		mg/l	0.00050	--	1	10/05/17 16:45	10/06/17 13:24	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	10/05/17 12:54	10/05/17 15:49	EPA 245.1	3,245.1	MG
Nickel, Total	ND		mg/l	0.00200	--	1	10/05/17 16:45	10/06/17 13:24	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	10/05/17 16:45	10/06/17 13:24	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	10/05/17 16:45	10/06/17 13:24	EPA 3005A	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	10/05/17 16:45	10/06/17 13:24	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	126		mg/l	0.660	NA	1	10/05/17 16:45	10/07/17 16:14	EPA 3005A	19,200.7	AM
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.050	--	1		10/06/17 13:24	NA	107,-	

Project Name: 139 MAIN STREET
Project Number: 6231.9.00
Lab Number: L1735516
Report Date: 10/09/17

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: WG1049268-1										
Mercury, Total	ND		mg/l	0.0002	--	1	10/05/17 12:54	10/05/17 15:27	3,245.1	MG

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: WG1049340-1										
Antimony, Total	ND		mg/l	0.00400	--	1	10/05/17 16:45	10/06/17 11:46	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	10/05/17 16:45	10/06/17 11:46	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	10/05/17 16:45	10/06/17 11:46	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	10/05/17 16:45	10/06/17 11:46	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	10/05/17 16:45	10/06/17 11:46	3,200.8	AM
Lead, Total	ND		mg/l	0.00050	--	1	10/05/17 16:45	10/06/17 11:46	3,200.8	AM
Nickel, Total	ND		mg/l	0.00200	--	1	10/05/17 16:45	10/06/17 11:46	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	10/05/17 16:45	10/06/17 11:46	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	10/05/17 16:45	10/06/17 11:46	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	10/05/17 16:45	10/06/17 11:46	3,200.8	AM

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1049345-1										
Iron, Total	ND		mg/l	0.050	--	1	10/05/17 16:45	10/07/17 15:46	19,200.7	AM

Prep Information

Digestion Method: EPA 3005A

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

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: WG1049345-1										
Hardness	ND		mg/l	0.660	NA	1	10/05/17 16:45	10/07/17 15:46	19,200.7	AM

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 139 MAIN STREET

Project Number: 6231.9.00

Lab Number: L1735516

Report Date: 10/09/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1049268-2								
Mercury, Total	91		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1049340-2								
Antimony, Total	99		-		85-115	-		
Arsenic, Total	104		-		85-115	-		
Cadmium, Total	108		-		85-115	-		
Chromium, Total	104		-		85-115	-		
Copper, Total	102		-		85-115	-		
Lead, Total	101		-		85-115	-		
Nickel, Total	102		-		85-115	-		
Selenium, Total	110		-		85-115	-		
Silver, Total	102		-		85-115	-		
Zinc, Total	101		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1049345-2								
Iron, Total	100		-		85-115	-		
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 Batch: WG1049345-2								
Hardness	97		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

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: WG1049268-3 QC Sample: L1735667-01 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.0048	96		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1049340-3 QC Sample: L1734970-01 Client ID: MS Sample												
Antimony, Total	ND	0.5	0.5272	105		-	-		70-130	-		20
Arsenic, Total	0.0055	0.12	0.1274	102		-	-		70-130	-		20
Cadmium, Total	0.00057	0.051	0.05480	106		-	-		70-130	-		20
Chromium, Total	0.0028	0.2	0.2060	102		-	-		70-130	-		20
Copper, Total	0.03404	0.25	0.2892	102		-	-		70-130	-		20
Lead, Total	0.0098	0.51	0.5124	98		-	-		70-130	-		20
Nickel, Total	0.0051	0.5	0.5138	102		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1293	108		-	-		70-130	-		20
Silver, Total	0.0004	0.05	0.05122	102		-	-		70-130	-		20
Zinc, Total	0.07137	0.5	0.5757	101		-	-		70-130	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1049340-5 QC Sample: L1735516-01 Client ID: MW-1										
Antimony, Total	ND	0.5	0.5365	107		-	-	70-130	-	20
Arsenic, Total	ND	0.12	0.1270	106		-	-	70-130	-	20
Cadmium, Total	ND	0.051	0.05380	105		-	-	70-130	-	20
Chromium, Total	0.00205	0.2	0.2151	106		-	-	70-130	-	20
Copper, Total	ND	0.25	0.2649	106		-	-	70-130	-	20
Lead, Total	0.00121	0.51	0.5366	105		-	-	70-130	-	20
Nickel, Total	ND	0.5	0.5149	103		-	-	70-130	-	20
Selenium, Total	ND	0.12	ND	**0**	Q	-	-	70-130	-	20
Silver, Total	ND	0.05	0.05109	102		-	-	70-130	-	20
Zinc, Total	ND	0.5	0.5105	102		-	-	70-130	-	20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1049345-3 QC Sample: L1735516-01 Client ID: MW-1										
Iron, Total	0.767	1	1.75	98		-	-	75-125	-	20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1049345-3 QC Sample: L1735516-01 Client ID: MW-1										
Hardness	822	66.2	822	**0**	Q	-	-	75-125	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1049268-4 QC Sample: L1735667-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1049340-4 QC Sample: L1734970-01 Client ID: DUP Sample						
Cadmium, Total	0.00057	0.00057	mg/l	0		20
Copper, Total	0.03404	0.03292	mg/l	3		20
Zinc, Total	0.07137	0.06895	mg/l	3		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1049340-6 QC Sample: L1735516-01 Client ID: MW-1						
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	0.00205	0.00206	mg/l	1		20
Copper, Total	ND	ND	mg/l	NC		20
Lead, Total	0.00121	0.00118	mg/l	3		20
Nickel, Total	ND	ND	mg/l	NC		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1049345-4 QC Sample: L1735516-01 Client ID: MW-1						
Iron, Total	0.767	0.769	mg/l	0		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1049345-4 QC Sample: L1735516-01 Client ID: MW-1					
Hardness	822	806	mg/l	2	20

INORGANICS
&
MISCELLANEOUS

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

SAMPLE RESULTS

Lab ID: L1735516-01
Client ID: MW-1
Sample Location: CAMBRIDGE, MA
Matrix: Water

Date Collected: 10/03/17 09:00
Date Received: 10/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	43.		mg/l	1.0	NA	1	-	10/04/17 12:45	121,2540D	JT
pH (H)	7.5		SU	-	NA	1	-	10/04/17 04:08	121,4500H+-B	UN

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

SAMPLE RESULTS

Lab ID: L1735516-02
Client ID: CHARLES RIVER SURFACE WATER
Sample Location: CAMBRIDGE, MA
Matrix: Water

Date Collected: 10/03/17 09:30
Date Received: 10/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
pH (H)	7.2		SU	-	NA	1	-	10/04/17 04:08	121,4500H+-B	UN
Chromium, Hexavalent	ND		mg/l	0.050	--	5	10/04/17 03:35	10/04/17 03:42	1,7196A	UN

Project Name: 139 MAIN STREET
Project Number: 6231.9.00
Lab Number: L1735516
Report Date: 10/09/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 02 Batch: WG1048589-1										
Chromium, Hexavalent	ND		mg/l	0.050	--	5	10/04/17 03:35	10/04/17 03:35	1,7196A	UN
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1048775-1										
Solids, Total Suspended	ND		mg/l	1.0	NA	1	-	10/04/17 12:45	121,2540D	JT

Lab Control Sample Analysis

Batch Quality Control

Project Name: 139 MAIN STREET

Project Number: 6231.9.00

Lab Number: L1735516

Report Date: 10/09/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02 Batch: WG1048589-2								
Chromium, Hexavalent	92		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1048652-1								
pH	100		-		99-101	-		5

Matrix Spike Analysis
Batch Quality Control

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1048589-4 QC Sample: L1735516-02 Client ID: CHARLES RIVER SURFACE WATER												
Chromium, Hexavalent	ND	0.5	0.491	98		-	-		85-115	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 02 QC Batch ID: WG1048589-3 QC Sample: L1735516-02 Client ID: CHARLES RIVER SURFACE WATER						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1048652-2 QC Sample: L1735406-01 Client ID: DUP Sample						
pH	10.6	10.6	SU	0		5

Project Name: 139 MAIN STREET
Project Number: 6231.9.00

Lab Number: L1735516
Report Date: 10/09/17

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(*)
L1735516-01A	Vial HCl preserved	A	NA		2.1	Y	Absent		8260(14)
L1735516-01B	Vial HCl preserved	A	NA		2.1	Y	Absent		8260(14)
L1735516-01C	Vial HCl preserved	A	NA		2.1	Y	Absent		504(14)
L1735516-01D	Plastic 500ml unpreserved	A	7	7	2.1	Y	Absent		TSS-2540-LOW(7),PH-4500(.01)
L1735516-01E	Plastic 500ml HNO3 preserved	A	<2	<2	2.1	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),HARDU(180),AG-2008T(180),AS-2008T(180),HG-U(28),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L1735516-02A	Plastic 500ml unpreserved	A	7	7	2.1	Y	Absent		HEXCR-7196(1),PH-4500(.01)
L1735516-02B	Plastic 500ml HNO3 preserved	A	<2	<2	2.1	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),HARDU(180),AG-2008T(180),AS-2008T(180),HG-U(28),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)

*Values in parentheses indicate holding time in days

Project Name:	139 MAIN STREET	**Lab Number:**	L1735516
Project Number:	6231.9.00	**Report Date:**	10/09/17

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

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

Terms

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.

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.

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 Condensation Product".
B	- The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related

Report Format: Data Usability Report

Project Name:	139 MAIN STREET	**Lab Number:**	L1735516
Project Number:	6231.9.00	**Report Date:**	10/09/17

Data Qualifiers

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.

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

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

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

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

NJ - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

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

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

Report Format: Data Usability Report

Project Name:	139 MAIN STREET	**Lab Number:**	L1735516
Project Number:	6231.9.00	**Report Date:**	10/09/17

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.

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.

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: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: NPW and SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
EPA 9012B: NPW: Total Cyanide
EPA 9050A: NPW: Specific Conductance
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
SM 2540D: TSS
EPA 3005A NPW
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: 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**
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, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, 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 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E.**

Mansfield Facility:

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

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, Pb, Mn, Ni, Se, Ag, 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
8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

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

Date Rec'd in Lab: 10/3/17

ALPHA Job #: L1735516

Client Information

Client: MetroPhil Associates

Address: 2269 Mass Ave
Cambridge MA 02140

Phone: 617 868 1420

Email: HJB@mcphailgeo.com
KSeaman@mcphailgeo.com

Additional Project Information:

Project Information

Project Name: 139 Main Street

Project Location: Cambridge MA

Project #: 6231.9.00

Project Manager: HJB / KWS

ALPHA Quote #:

Turn-Around Time

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

Date Due:

Report Information - Data Deliverables

☒ ADEx ☐ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☐ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☐ PAH	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☐ PCB ☐ PEST	TPH: ☐ Quant Only ☐ Fingerprint	RCP TOTAL METALS	8260 Sim	PH / HARDNESS	RCP Recoverable Metals (see Email)			Sample Comments	TOTAL # BOTTLES
35516-01	MW-1	10/3	9:00	GW	KWS									X	X	X					5
-02	Charles River Surface Water	10/3	9:30	SW	KWS											X	X				2
Container Type												P	P	V	P	P					7
Preservative												B	C	B	A	C					

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

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
Kirk Seaman	10/3 11:00	Seaman AAL	10/3/17 1600
Seaman AAL	10/3/17 1740		10/3/17 1740

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

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

APPENDIX F:

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 redevelopment of the 139 Main Street property located 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 building foundation, dewatering effluent is anticipated to be pumped from localized sumps and trenches within the excavation directly into a settling tank. A review of available subgrade sanitary and storm sewer system plans accessed from the Cambridge DPW identified the presence of a dedicated stormwater drain system located beneath Main Street. The discharge then flows east beneath Main Street, south beneath Memorial Drive and then discharges into the Charles River at outfall D4OF0000 adjacent to Memorial Drive. Dewatering effluent treatment will consist of a settling tank, bag filters to remove suspended soil particulates and granular activated carbon filters prior to off-site discharge.

Discharge Monitoring and Compliance

Regular sampling and testing will be conducted of both the influent to the system and the treated effluent as required by the RGP. During the first week of discharge, the operator must sample the untreated influent and treated effluent two times: one (1) sample of untreated influent and one (1) sample of treated effluent be collected on the first day of discharge, and one (1) sample of untreated influent and one (1) sample of treated effluent must be collected on one additional non-consecutive day within the first week of discharge. Samples must be analyzed in accordance with 40 CFR §136 unless otherwise specified by the RGP, with a maximum 5-day turnaround time and results must be reviewed no more than 48 hours from receipt of the results of each sampling event. After the first week, samples may be analyzed with up to a ten (10)-day turnaround time and results must be reviewed no more than 72 hours from receipt of the results. If the treatment system is

operating as designed and achieving the effluent limitations outlined in the RGP, on-going sampling shall be conducted weekly for three (3) additional weeks beginning no earlier than 24 hours following initial sampling, and monthly as described below. Any adjustments/reductions in monitoring frequency must be approved by EPA in writing.

In accordance with Part 4.1 of the RGP, the operator must perform routine monthly monitoring for both influent and effluent beginning no more than 30 days following the completion of the sampling requirements for new discharges or discharges that have been interrupted. The routine monthly monitoring is to be conducted through the end of the scheduled discharge. The routine monthly monitoring must continue for five (5) consecutive months prior to submission of any request for modification of monitoring frequency.

Dewatering activity for the Site is classified as Category III-G: Sites with Known Contamination. Monitoring shall include analysis of influent and effluent samples dictated by the EPA.

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. Any exceedances will be documented and conveyed to the EPA within 24 hours of received concentrations.

System Maintenance

A number of methods will be used to minimize the potential for excursions during the term of this permit discharge. Scheduled regular maintenance and periodic cleaning of the treatment system will be conducted to verify proper operation and shall be conducted in accordance with Section 1.11 of the project earthwork specifications. 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 and 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 closest body of water is the Broad Canal located approximately 150 feet to the north of the subject site. Dewatering effluent will be pumped into a settling tank. Water within the settling tank will pumped through bag filters and GAC filters prior to discharge into the storm drains.

Management of Treatment System Materials

Dewatering effluent will be pumped directly into 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 and GAC filters will be replaced/disposed of as necessary.