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

165 MAIN STREET AND ONE BROADWAY

CAMBRIDGE, MASSACHUSETTS

MARCH 16, 2018

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 One Broadway Fee Owner LLC
&
John Moriarty and Associates

PROJECT NO. 5210

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

March 16, 2018

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: 165 Main Street and One Broadway- 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 two adjoining properties located at 165 Main Street and One Broadway in Cambridge, Massachusetts and collectively referenced hereinafter as "The Project". 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 our proposal dated December 12, 2017 and subsequent authorization of MIT One Broadway Fee Owner LLC (MIT). 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-C is defined as Contaminated Site Dewatering. Subcategory A (Inorganics) constituents were detected in the influent samples thus, Technology Based Effluent Limitations (TBELs) for Type A 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. John Viola

Existing Conditions

The Project encompasses the area of the above referenced adjoining properties, the limits of which are bounded to the north by Broad Canal Way, Main Street to south, and Third Street to the west and by a separate active construction site to the east. The Project is occupied by a multi-story building, the footprint of which occupies a majority of the Project area. The remaining area of the Project is currently covered by an asphalt paved parking lot. Existing ground surface is generally level ranging from about Elevation +18.5 to Elevation +22.

A 54-inch diameter brick drain line runs beneath the northern portion of the Project, parallel to Broad Canal Way, and terminates at an outfall into Broad Canal. The invert elevation of the drain line is at approximately Elevation +9.3.

A site plan showing approximate limits of the Project is included in the enclosed **Figure 2**.

Proposed Scope of Site Development

The proposed scope of development includes the construction of a multi-story residential tower and a low-rise retail building. No below-grade space is planned for either structure. Both structures will be supported on a deep foundation system, the construction of which will require localized excavations ranging in depth from about 4 to 15 feet below the existing ground surface. Additionally, proposed subsurface infrastructure improvements will require localized excavations ranging up to about 15 feet below ground surface across portions of the Project area.

Given that the surface of groundwater measured at the Project is approximately 10 feet below ground surface, temporary construction dewatering will be necessary to facilitate construction of the proposed building foundations and subsurface infrastructure improvements.

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 did not identify any 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 100 feet to the east of the project site. However, the proposed discharge location and thus the receiving water body is 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 History

In summary, historical records indicate that Broad Canal had occupied the northern portion of the Project until the late 1960's. Broad Canal was constructed in the early 1800's and originally extended from the Charles River to Portland Street, running parallel to Broadway and Hampshire Streets. Based on historic maps, the southern portion of the site was occupied by coal distribution companies from the late 1880's through the 1950's. During the late 1960's and early 1970's, the buildings and the portion of Broad Canal that had occupied the area of the project were demolished and backfilled, respectively, to facilitate the construction of the current One Broadway building and parking lot.

Construction Site Dewatering

As indicated above, it is anticipated that excavation activities during site construction will extend below the surface of the groundwater table. As a result, the dewatering of groundwater within these excavations utilizing temporary sumps will be required. Based upon the depth and localized nature of the excavations, the discharge flow rate is anticipated to range from approximately 50 to 100 gallons per minute (gpm). As a result, the design flow for the proposed treatment system that is referenced below is 100 gallons

per minute. 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 storm water 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 January 19, 2018, McPhail Associates, LLC obtained samples of groundwater from monitoring well B-408 (OW) located at the southeast portion of the project site adjacent to 139 Main Street. Analytical results of the testing of groundwater samples obtained in 2018 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, cyanide, total residual chlorine (TRC), RGP Inorganic Compounds, volatile organic compounds (VOCs) and semi volatile organic compounds (SVOCs), and total petroleum hydrocarbons (TPH). A surface water sample obtained from the Charles River on October 3, 2017 was submitted for laboratory analysis including recoverable inorganic metals, ammonia, pH, and hardness. 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 E**.

In summary, groundwater testing performed at the site has detected concentrations of inorganic metals as well as ammonia and chloride. Concentrations of VOC, SVOC, and TPH constituents were not detached above laboratory detection limits in the sample obtained from B-408(OW). Water Quality-Based Effluent Limits (WQBELs) were calculated for each of the detected compounds. Per the calculations, Type A 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**.

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 20,000-gallon capacity settling tank and bag filters in series will be necessary to settle out and remove

particulate matter to meet the limits established by the US EPA prior to the discharge of the effluent. Although not anticipated, if unknown petroleum contaminated groundwater is encountered, a granular activated carbon filter will be included as part of the treatment system. 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 165 Main Street and One Broadway 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 20,000-gallon capacity settling tank and bag 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.

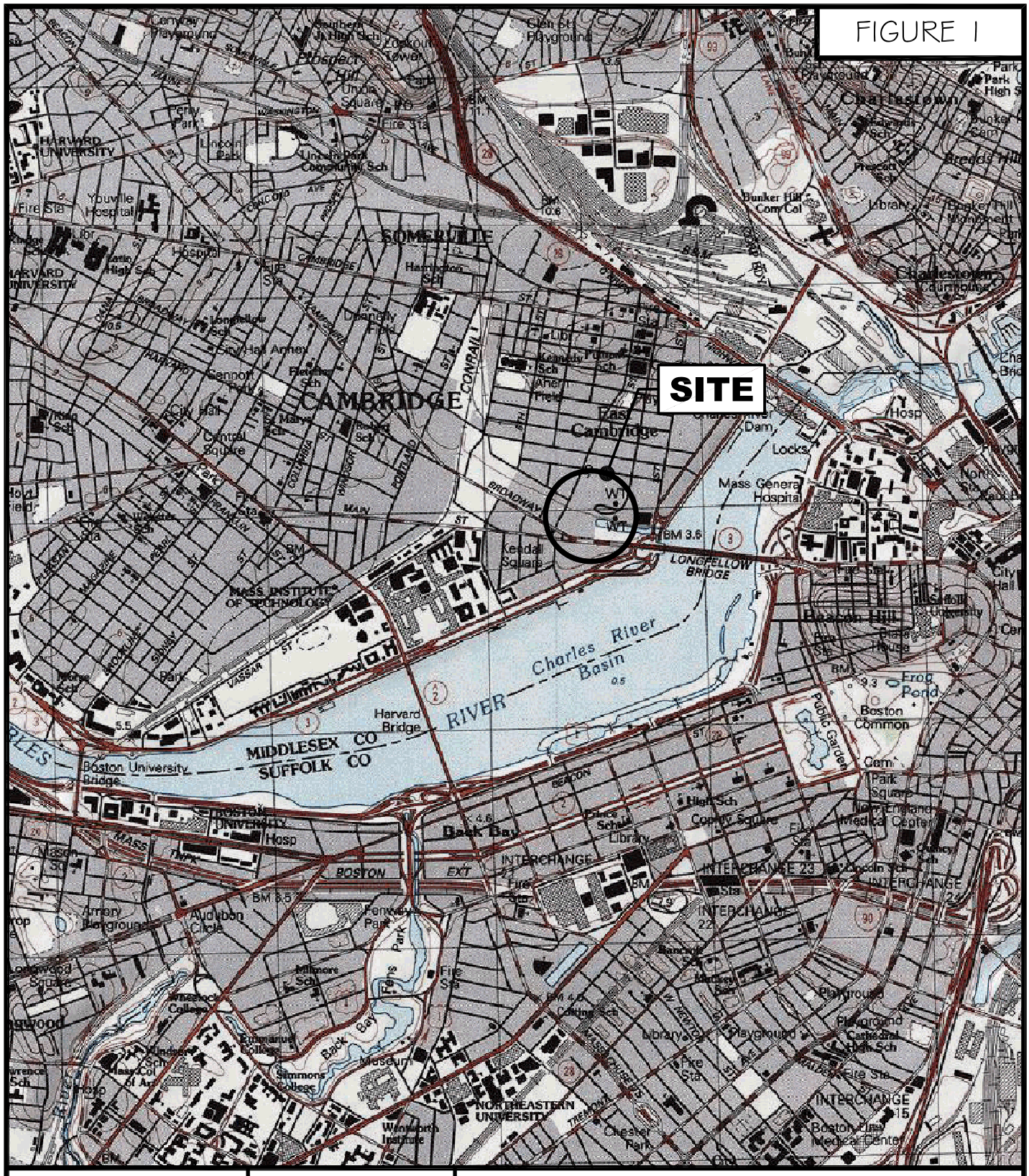
Sincerely,

McPHAIL ASSOCIATES, LLC

Kirk W. Seaman

William J, Burns L.S.P.

FIGURE 1



McPHAIL ASSOCIATES, LLC
Geotechnical and
Geoenvironmental Engineers
2269 Massachusetts Avenue
Cambridge, MA 02140
617/868-1420
617/868-1423 (Fax)
www.mcphailgeo.com

N

SCALE 1:25,000

PROJECT LOCATION PLAN

165 MAIN STREET
AND ONE BROADWAY

CAMBRIDGE MASSACHUSETTS

NORTH

LEGEND

- — APPROXIMATE LOCATION OF BORING PERFORMED BY CARR-DEE CORP. DURING THE PERIOD OF NOVEMBER 15 THROUGH DECEMBER 6, 2017 FOR McPHAIL ASSOCIATES, LLC
- — APPROXIMATE LOCATION OF BORING PERFORMED BY CARR-DEE CORP. ON AUGUST 28 AND AUGUST 29, 2017 FOR MCPHAIL ASSOCIATES, LLC
- — APPROXIMATE LOCATION OF BORING PERFORMED BY CARR-DEE CORP. DURING THE PERIOD OF MARCH 22 THROUGH MARCH 29, 2016 FOR McPHAIL ASSOCIATES, LLC
- — APPROXIMATE LOCATION OF BORING PERFORMED BY CARR-DEE CORP. DURING THE PERIOD OF JULY 23 THROUGH AUGUST 14, 2015 FOR McPHAIL ASSOCIATES, LLC
- — APPROXIMATE LOCATION OF BORING PERFORMED BY CARR-DEE CORP. DURING JANUARY 28 THROUGH FEBRUARY 20, 2014 FOR McPHAIL ASSOCIATES, LLC
- — APPROXIMATE LOCATION OF BORING PERFORMED BY CARR-DEE CORP. ON NOVEMBER 16 AND 17, 2017 FOR McPHAIL ASSOCIATES, LLC
- — APPROXIMATE LOCATION OF BORING PERFORMED BY CARR-DEE CORP. ON DECEMBER 7, 2017 FOR McPHAIL ASSOCIATES, LLC

(OW) — INDICATES OBSERVATION WELL INSTALLED WITHIN COMPLETED BOREHOLE

REFERENCE: THIS PLAN WAS PREPARED FROM AN EXISTING CONDITIONS PLAN PREPARED BY NITSCH ENGINEERING PROVIDED ELECTRONICALLY ON AUGUST 15, 2013, A 30-SCALE DRAWING ENTITLED, "GROUND LEVEL PLAN" DATED AUGUST 20, 2013 PREPARED BY ELKUS MANFREDI ARCHITECTS, A "FOUNDATION PLAN" DATED MAY 22, 1968 PREPARED BY EMERY ROTH & SONS ARCHITECTS, AND A "SUBSURFACE EXPLORATION PLAN" DATED FEBRUARY 1989 PREPARED BY HALEY & ALDRICH, INC.

APPROXIMATE LIMITS OF LOW-RISE STRUCTURE

APPROXIMATE LIMITS OF PROJECT SITE

APPROXIMATE LIMITS OF FORMER CANAL AS PER OCTOBER 30, 1902 DRAWING

APPROXIMATE LIMITS OF HIGH-RISE STRUCTURE

APPROXIMATE AREA OF EXISTING ONE BROADWAY

EXTENT UNKNOWN

EXISTING BROAD CANAL

MA-1
MA-401
MA-201
MA-114 (OW)
MA-107
MA-108
MA-402
MA-2 (OW)
MA-202
MA-109
MA-403
MA-3
MA-110
MA-106 (OW)
MA-404
MA-104
MA-111
MA-105
MA-5
MA-4 (OW)
MA-406
MA-102
B-407 (OW)
MA-405
MA-6 (OW)
MA-6
MA-113 (OW)
MA-103
B-408 (OW)
MA-301
MA-112
MA-307 (OW)
B-409 (OW)
MA-308 (OW)
MA-306 (OW)
MA-309 (OW)
MA-101
MA-302 (OW)
MA-305 (OW)

THIRD STREET (PUBLIC - 80'WIDE)

BROADWAY (PUBLIC - VARIABLE WIDTH)

MAIN STREET

139 MAIN STREET BUILDING

EXISTING BUILDING ADDITION SUPPORTED ON PRESSURE INJECTED FOOTING

EXISTING BUILDING SUPPORTED ON TIMBER PILES

GRAPHIC SCALE
30 0 30 60 120

McPHAIL ASSOCIATES, LLC
Geotechnical and Geoenvironmental Engineers
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617/868-1423 (Fax)
www.mcphailgeo.com

165 MAIN STREET AND ONE BROADWAY

CAMBRIDGE MASSACHUSETTS

SITE PLAN AND COMPLETED SUBSURFACE EXPLORATIONS

FOR

MIT ONE BROADWAY FEE OWNER LLC

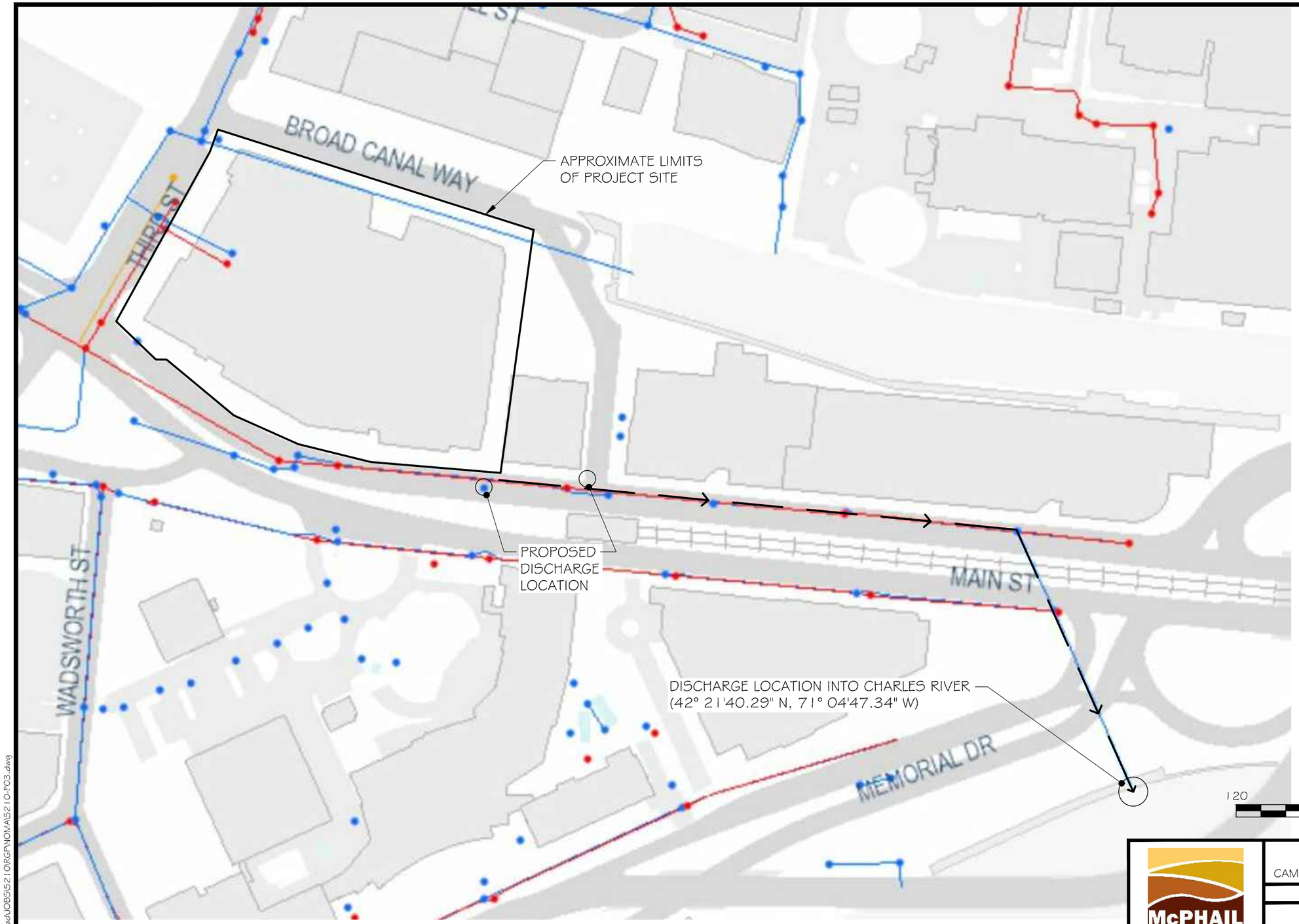
BY

McPHAIL ASSOCIATES, LLC

Date: MARCH 2018	Dwn: F.G.P.	Chkd: K.W.S.	Scale: 1" = 30'
Project No: 5210			FIGURE 2

FILE NAME: N:\Acad\05152\DRGS\MAS210-F02.dwg

FIGURE 3



REFERENCE: THIS PLAN WAS PREPARED FROM A 200-SCALE DRAWING ENTITLED, "CITY OF CAMBRIDGE" DATED FEBRUARY 2018 PROVIDED BY THE CITY OF CAMBRIDGE, MASSACHUSETTS

McPHAIL ASSOCIATES, LLC
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617/868-1423 (Fax)
www.mcphailgeo.com

165 MAIN STREET AND ONE BROADWAY
CAMBRIDGE MASSACHUSETTS

DISCHARGE FLOW PLAN

FOR

MIT ONE BROADWAY FEE OWNER LLC

BY

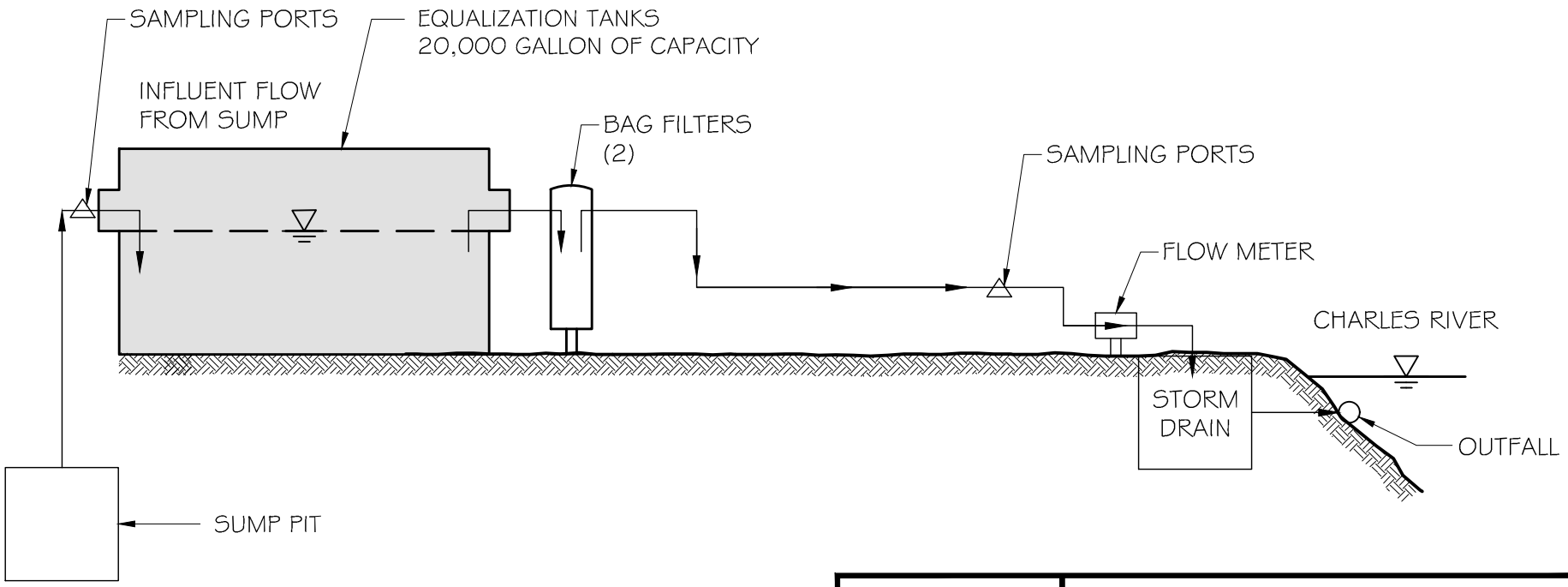
McPHAIL ASSOCIATES, LLC

Date: MARCH 2018	Dwn: F.G.P.	Chkd: K.W.S.	Scale: 1" = 120'
Project No: 5210			

FILE NAME: N:\Acad\JOBS\5210\ORGPIX\MA5210-F03.dwg

FILE NAME: N:\Acad\JOBS\5210\RGP\NOMA\5210-F04.dwg

FIGURE 4



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165 MAIN STREET AND ONE BROADWAY
CAMBRIDGE MASSACHUSETTS

SCHEMATIC OF TREATMENT SYSTEM

FOR
MIT ONE BROADWAY FEE OWNER LLC
BY
McPHAIL ASSOCIATES, LLC
CONSULTING GEOTECHNICAL ENGINEERS

Date: MARCH 2018	Dwn: F.G.P.	Chkd: K.W.S.	Scale: N.T.S.
Project No: 5210			

TABLE 1

LABORATORY TEST RESULTS - GROUNDWATER
165 Main Street and One Broadway; Cambridge, Massachusetts
McPhail Job No. 5210

LOCATION		**B-408 (OW)**
SAMPLING DATE		**1/19/2018**
LAB SAMPLE ID		**L1802085-01**
SAMPLE TYPE		**GROUNDWATER**
	EPA-ALFCMC	
General Chemistry (ug/l)		
Chromium, Trivalent	570	ND(10)
Solids, Total Suspended		35000
Cyanide, Total	22	ND(5)
Chlorine, Total Residual		ND(20)
pH (SU)		6.4
Nitrogen, Ammonia		17800
TPH, SGT-HEM		ND(4000)
Phenolics, Total		ND(30)
Chromium, Hexavalent	16	ND(10)
Total Hardness (ug/l)		
Hardness		1120000
Total Metals (ug/l)		
Antimony, Total		ND(4)
Arsenic, Total	340	ND(1)
Cadmium, Total	2	ND(0.2)
Chromium, Total		ND(1)
Copper, Total		ND(1)
Iron, Total		63700
Lead, Total	65	ND(1)
Mercury, Total	1.4	ND(0.2)
Nickel, Total	470	ND(2)
Selenium, Total		ND(5)
Silver, Total	3.2	ND(0.4)
Zinc, Total	120	19.54
Anions by Ion Chromatography (ug/l)		
Chloride	860000	**3610000**
Microextractables (ug/l)		
1,2-Dibromoethane		ND(0.011)
Semivolatile Organics (ug/l)		
ALL		ND
Volatile Organics (ug/l)		
ALL		ND

ND - Not detected in excess of the detection limit
(#) - Detection Limit
EPA-ALFCMC - National Recommended Water Quality Criteria - Freshwater Aquatic CMC (acute)

TABLE 2

LABORATORY TEST RESULTS - SURFACE WATER
165 Main Street and One Broadway; Cambridge, Massachusetts
McPhail Job No. 5210

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

ND - Not detected in excess of the detection limit
(#) - Detection Limit
EPA-ALFCMC - National Recommended Water Quality Criteria - Freshwater Aquatic CMC (acute)

APPENDIX A:

LIMITATIONS

LIMITATIONS

The purpose of this report is to present the results of testing of a groundwater sample obtained from a monitoring well located at the 165 Main Street and One Broadway properties located in Cambridge, Massachusetts, in support of an application for approval of a 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 One Broadway Fee Owner, 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

PERMIT TO DEWATER

Location: 165 Main Street and One Broadway

Owner: MIT One Broadway Fee Owner LLC

Contractor: John Moriarty & Associates

Temporary ☑

Permanent ☐

The property owner, MIT One Broadway Fee Owner 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 NDPES RGP including NOI

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

n/a

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

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

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

If in the future the EPA requires the City of Cambridge to bring existing stormwater drainage into compliance with EPA quality standards, as a condition to the continuation of discharge of that stormwater (also including groundwater) into an EPA regulated system into which the MIT One Broadway Fee Owner L[illegible] (property owner) drains, the owner will agree to maintain its water discharge with such EPA water quality standards.

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

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

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

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

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

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

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

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

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

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

n/a

City Manager

Date

City Solicitor

Date

Commissioner of Public

Date

DocuSigned by:
Seth D. Alexander
3FFC0D74E1A24EA...

Owner: MIT One Broadway Fee Owner LLC
Name: Seth D. Alexander*
Title: President of MIT Cambridge Real Estate LLC,
the manager of MIT One Broadway Fee Owner LLC
(*as authorized signatory and not individually)

3/16/2018 | 1:11:50 PM PDT
Date

Contractor JOHN M. VIOLA

3.15.18
Date

Contractor

Date

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

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:
165 Main Street and One Broadway</td><td colspan="3">Site address: 165 Main Street and One Broadway
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 One Broadway Fee Owner LLC

Owner is (check one): ☐ Federal ☐ State/Tribal ■ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: Ken Williams</td></tr>
<tr><td colspan="2">Telephone: (617) 253-4900</td><td>Email: kwilliams@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: John Viola</td></tr>
<tr><td colspan="2">Telephone: 781 729 3900</td><td>Email: jviola@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):
☐ 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	MA72-38	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.	132.1

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: 2/13/2018

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: Inorganics	
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): 03/2018 - 8/2019 Indicate if the discharge is expected to occur over a duration of: ☐ less than 12 months ■ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ■ Yes ☐ No	

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

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

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

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✔	1	121,4500	75	17800	17800	Report mg/L	---
Chloride		✔	1	44,300	12500	3610000	3610000	Report µg/l	---
Total Residual Chlorine	✔		1	121,4500	200	<DL	<DL	0.2 mg/L	
Total Suspended Solids		✔	1	121,2540(	5,000	35000	35000	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	<DL	<DL	242 µg/L	
Iron		✔	1	19,200.70	50	63700	63700	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	19.54	19.54	420 µg/L	
Cyanide			1	30.4500C	5	<DL	<DL	178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX	✔		1	8260C-SI	1.0	<DL	<DL	100 µg/L	---
Benzene	✔		1	8260C-SI	0.5	<DL	<DL	5.0 µg/L	---
1,4 Dioxane	✔		1	8260C-SI	3	<DL	<DL	200 µg/L	---
Acetone	✔		1	8260C-SI	5.0	<DL	<DL	7.97 mg/L	---
Phenol	✔		1	4420.1	0.03	<DL	<DL	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	<DL	<DL	70 µg/L	---
Vinyl Chloride	✔		1	8260C	1	<DL	<DL	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✔		1	8270D	5	<DL	<DL	190 µg/L	
Diethylhexyl phthalate	✔		1	8270D	5	<DL	<DL	101 µg/L	
Total Group I PAHs	✔		1	8270D-SI	0.1	<DL	<DL	1.0 µg/L	---
Benzo(a)anthracene	✔		1	8270D-SI	0.1	<DL	<DL	As Total PAHs	
Benzo(a)pyrene	✔		1	8270D-SI	0.1	<DL	<DL		
Benzo(b)fluoranthene	✔		1	8270D-SI	0.1	<DL	<DL		
Benzo(k)fluoranthene	✔		1	8270D-SI	0.1	<DL	<DL		
Chrysene	✔		1	8270D-SI	0.1	<DL	<DL		
Dibenzo(a,h)anthracene	✔		1	8270D-SI	0.1	<DL	<DL		
Indeno(1,2,3-cd)pyrene	✔		1	8270D-SI	0.1	<DL	<DL		

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs	✔		1	8270D-SI	0.1	<DL	<DL	100 µg/L	---
Naphthalene	✔		1	8270D-SI	0.1	<DL	<DL	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	✔		1	74,1664A	4000	<DL	<DL	5.0 mg/L	---
Ethanol			0			<DL	<DL	Report mg/L	---
Methyl-tert-Butyl Ether	✔		1	8260C	1	<DL	<DL	70 µg/L	2636 UG/L
tert-Butyl Alcohol	✔		1	8260C	10	<DL	<DL	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✔		1	8260C	2.0	<DL	<DL	90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									
pH - Inffluent		✔	1	121,2540D	-	6.4			
Hardness - Inffluent		✔	1	19,200.7	660	1120000			
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:

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

3. Provide the **design flow capacity** in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: Fractionation Tank Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	100
Provide the proposed maximum effluent flow in gpm.	100
Provide the average effluent flow in gpm.	50
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: DocuSigned by: Seth D. Alexander 3FFCCD74E1A24EA...	President* Date: 3/16/2018 | 1:11:50 PM PDT
Print Name and Title: Seth D. Alexander - President*	

* : as President of MIT Cambridge Real Estate LLC
which is the Manager of MIT One Broadway Fee Owner LLC,
and not individually.

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

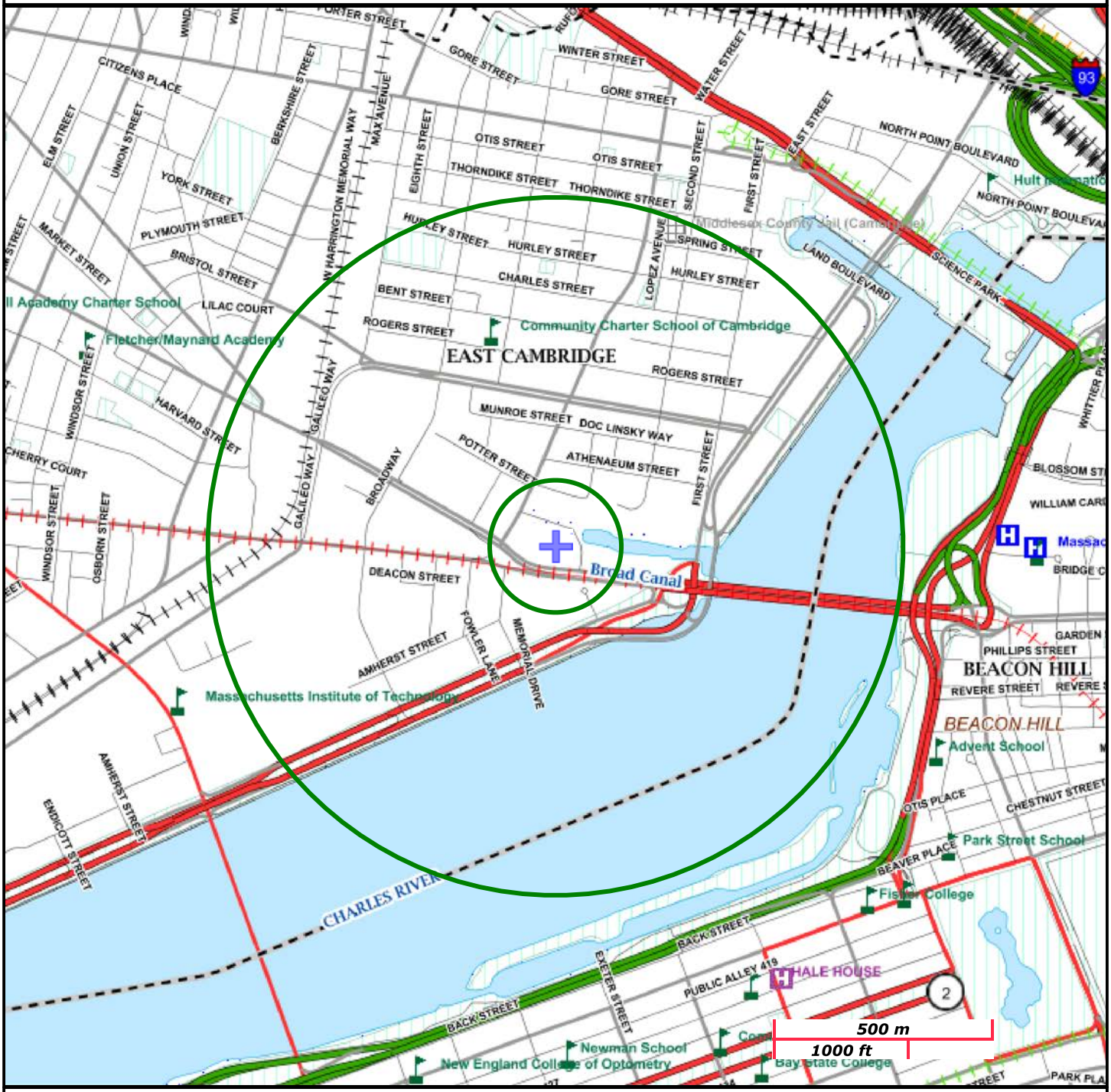
Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:
ONE BROADWAY
165 MAIN STREET CAMBRIDGE, MA

NAD83 UTM Meters:
4692140mN , 328487mE (Zone: 19)
March 2, 2018

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.

Massachusetts Cultural Resource Information System
MACRIS

MACRIS Search Results

Search Criteria: Town(s): Cambridge; Street No: 199; Street Name: Main St; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

United States Department of the Interior

FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
http://www.fws.gov/newengland

In Reply Refer To:
Consultation Code: 05E1NE00-2018-SLI-0748
Event Code: 05E1NE00-2018-E-01737
Project Name: NOMA

January 25, 2018

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: 05E1NE00-2018-SLI-0748

Event Code: 05E1NE00-2018-E-01737

Project Name: NOMA

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/42.362748586896636N71.08271626380085W

Counties: Middlesex, MA

Endangered Species Act Species

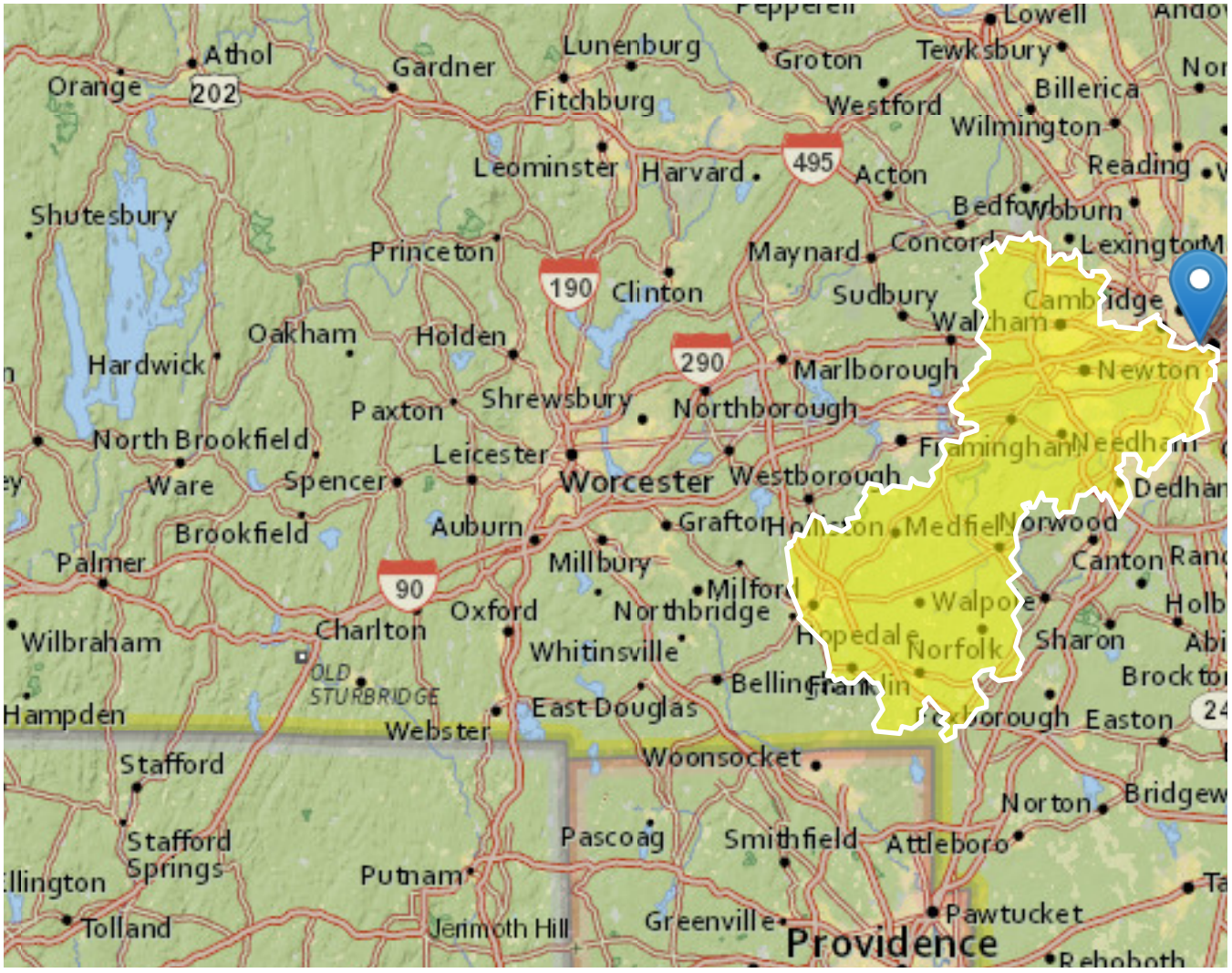
There is a total of 0 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because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

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/)

APPENDIX D:

LABORATORY ANALYTICAL DATA – GROUNDWATER

ANALYTICAL REPORT

Lab Number:	L1802085
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	ONE BROADWAY/NOMA
Project Number:	5210.2.7T
Report Date:	02/05/18

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: ONE BROADWAY/NOMA
Project Number: 5210.2.7T

Lab Number: L1802085
Report Date: 02/05/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1802085-01	B-408 (OW)	WATER	CAMBRIDGE, MA	01/19/18 09:30	01/19/18

Project Name: ONE BROADWAY/NOMA
Project Number: 5210.2.7T
Lab Number: L1802085
Report Date: 02/05/18

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:	ONE BROADWAY/NOMA	**Lab Number:**	L1802085
Project Number:	5210.2.7T	**Report Date:**	02/05/18

Case Narrative (continued)

Report Submission

February 05, 2018: This final report includes the results of all requested analyses.

January 25, 2018: This is a preliminary report.

The analysis of Ethanol was subcontracted. A copy of the laboratory report is included as an addendum.

Please note: This data is only available in PDF format and is not available on Data Merger.

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: 02/05/18

ORGANICS

VOLATILES

Project Name: ONE BROADWAY/NOMA
Lab Number: L1802085
Project Number: 5210.2.7T
Report Date: 02/05/18

SAMPLE RESULTS

Lab ID: L1802085-01
Client ID: B-408 (OW)
Sample Location: CAMBRIDGE, MA
Sample Depth:
Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 01/23/18 09:50
Analyst: MM

Date Collected: 01/19/18 09:30
Date Received: 01/19/18
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	--	1
1,1-Dichloroethane	ND		ug/l	0.75	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	0.75	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	0.50	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	0.75	--	1
Ethylbenzene	ND		ug/l	0.50	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
Trichloroethene	ND		ug/l	0.50	--	1
1,2-Dichlorobenzene	ND		ug/l	2.5	--	1
1,3-Dichlorobenzene	ND		ug/l	2.5	--	1
1,4-Dichlorobenzene	ND		ug/l	2.5	--	1
Methyl tert butyl ether	ND		ug/l	1.0	--	1
p/m-Xylene	ND		ug/l	1.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	--	1
Acetone	ND		ug/l	5.0	--	1
Tert-Butyl Alcohol	ND		ug/l	10	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1

Project Name: ONE BROADWAY/NOMA **Lab Number:** L1802085

Project Number: 5210.2.7T **Report Date:** 02/05/18

SAMPLE RESULTS

Lab ID: L1802085-01 Date Collected: 01/19/18 09:30

Client ID: B-408 (OW) Date Received: 01/19/18

Sample Location: CAMBRIDGE, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Volatile Organics by GC/MS - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	96		70-130

Project Name: ONE BROADWAY/NOMA
Lab Number: L1802085
Project Number: 5210.2.7T
Report Date: 02/05/18

SAMPLE RESULTS

Lab ID: L1802085-01
Client ID: B-408 (OW)
Sample Location: CAMBRIDGE, MA
Sample Depth:
Matrix: Water
Analytical Method: 1,8260C-SIM(M)
Analytical Date: 01/23/18 09:50
Analyst: MM

Date Collected: 01/19/18 09:30
Date Received: 01/19/18
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	3.0	--	1

Project Name: ONE BROADWAY/NOMA
Lab Number: L1802085
Project Number: 5210.2.7T
Report Date: 02/05/18

SAMPLE RESULTS

Lab ID: L1802085-01
Client ID: B-408 (OW)
Sample Location: CAMBRIDGE, MA
Sample Depth:
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 01/24/18 14:11
Analyst: NS

Date Collected: 01/19/18 09:30
Date Received: 01/19/18
Field Prep: Not Specified

Extraction Method: EPA 504.1
Extraction Date: 01/24/18 10:41

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.011	--	1	A

Project Name: ONE BROADWAY/NOMA
Project Number: 5210.2.7T
Lab Number: L1802085
Report Date: 02/05/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C-SIM(M)
Analytical Date: 01/23/18 07:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1083027-5					
1,4-Dioxane	ND		ug/l	3.0	--

Project Name: ONE BROADWAY/NOMA
Project Number: 5210.2.7T
Lab Number: L1802085
Report Date: 02/05/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 01/23/18 07:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1083031-5					
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	--
Benzene	ND		ug/l	0.50	--
Toluene	ND		ug/l	0.75	--
Ethylbenzene	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	--
Methyl tert butyl ether	ND		ug/l	1.0	--
p/m-Xylene	ND		ug/l	1.0	--
o-Xylene	ND		ug/l	1.0	--
Xylenes, Total	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	0.50	--
Acetone	ND		ug/l	5.0	--
Tert-Butyl Alcohol	ND		ug/l	10	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--

Project Name: ONE BROADWAY/NOMA
Project Number: 5210.2.7T
Lab Number: L1802085
Report Date: 02/05/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 01/23/18 07:37
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1083031-5					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	92		70-130
Toluene-d8	109		70-130
4-Bromofluorobenzene	108		70-130
Dibromofluoromethane	94		70-130

Project Name: ONE BROADWAY/NOMA
Project Number: 5210.2.7T
Lab Number: L1802085
Report Date: 02/05/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 01/24/18 12:18
Analyst: NS

Extraction Method: EPA 504.1
Extraction Date: 01/24/18 10:41

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westborough Lab for sample(s): 01 Batch: WG1083479-1						
1,2-Dibromoethane	ND		ug/l	0.010	--	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: ONE BROADWAY/NOMA

Project Number: 5210.2.7T

Lab Number: L1802085

Report Date: 02/05/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1083027-3 WG1083027-4								
1,4-Dioxane	100		120		70-130	18		25

Lab Control Sample Analysis
Batch Quality Control

Project Name: ONE BROADWAY/NOMA
Project Number: 5210.2.7T

Lab Number: L1802085
Report Date: 02/05/18

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: WG1083031-3 WG1083031-4								
Methylene chloride	94		90		70-130	4		20
1,1-Dichloroethane	110		96		70-130	14		20
Carbon tetrachloride	96		89		63-132	8		20
1,1,2-Trichloroethane	120		110		70-130	9		20
Tetrachloroethene	120		110		70-130	9		20
1,2-Dichloroethane	100		94		70-130	6		20
1,1,1-Trichloroethane	100		99		67-130	1		20
Benzene	110		100		70-130	10		25
Toluene	120		110		70-130	9		25
Ethylbenzene	110		110		70-130	0		20
Vinyl chloride	110		96		55-140	14		20
1,1-Dichloroethene	100		94		61-145	6		25
Trichloroethene	110		98		70-130	12		25
1,2-Dichlorobenzene	110		110		70-130	0		20
1,3-Dichlorobenzene	120		110		70-130	9		20
1,4-Dichlorobenzene	110		110		70-130	0		20
Methyl tert butyl ether	79		75		63-130	5		20
p/m-Xylene	115		110		70-130	4		20
o-Xylene	110		105		70-130	5		20
cis-1,2-Dichloroethene	120		110		70-130	9		20
Acetone	110		91		58-148	19		20
Tert-Butyl Alcohol	74		70		70-130	6		20
Tertiary-Amyl Methyl Ether	98		95		66-130	3		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ONE BROADWAY/NOMA

Project Number: 5210.2.7T

Lab Number: L1802085

Report Date: 02/05/18

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: WG1083031-3 WG1083031-4								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	88		87		70-130
Toluene-d8	107		107		70-130
4-Bromofluorobenzene	100		106		70-130
Dibromofluoromethane	95		94		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: ONE BROADWAY/NOMA

Project Number: 5210.2.7T

Lab Number: L1802085

Report Date: 02/05/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab	Associated sample(s): 01		Batch: WG1083479-2						
1,2-Dibromoethane	104		-		80-120	-			A

Matrix Spike Analysis

Batch Quality Control

Project Name: ONE BROADWAY/NOMA

Project Number: 5210.2.7T

Lab Number: L1802085

Report Date: 02/05/18

Parameter	*Native Sample*	*MS Added*	*MS Found*	*MS %Recovery*	*Qual*	*MSD Found*	*MSD %Recovery*	*Qual*	*Recovery Limits*	*RPD*	*Qual*	*RPD Limits*	*Column*
Microextractables by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1083479-3 QC Sample: L1802091-01 Client ID: MS Sample													
1,2-Dibromoethane	ND	0.256	0.231	90		-	-		80-120	-		20	A
1,2-Dibromo-3-chloropropane	ND	0.256	0.229	90		-	-		80-120	-		20	A

SEMIVOLATILES

Project Name: ONE BROADWAY/NOMA
Lab Number: L1802085
Project Number: 5210.2.7T
Report Date: 02/05/18

SAMPLE RESULTS

Lab ID: L1802085-01
Client ID: B-408 (OW)
Sample Location: CAMBRIDGE, MA
Sample Depth:
Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 01/22/18 10:06
Analyst: CB

Date Collected: 01/19/18 09:30
Date Received: 01/19/18
Field Prep: Not Specified

Extraction Method: EPA 3510C
Extraction Date: 01/20/18 23:35

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	--	1
Butyl benzyl phthalate	ND		ug/l	5.0	--	1
Di-n-butylphthalate	ND		ug/l	5.0	--	1
Di-n-octylphthalate	ND		ug/l	5.0	--	1
Diethyl phthalate	ND		ug/l	5.0	--	1
Dimethyl phthalate	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	49		21-120
Phenol-d6	35		10-120
Nitrobenzene-d5	78		23-120
2-Fluorobiphenyl	88		15-120
2,4,6-Tribromophenol	100		10-120
4-Terphenyl-d14	92		41-149

Project Name: ONE BROADWAY/NOMA
Project Number: 5210.2.7T
Lab Number: L1802085
Report Date: 02/05/18

SAMPLE RESULTS

Lab ID: L1802085-01
Client ID: B-408 (OW)
Sample Location: CAMBRIDGE, MA
Sample Depth:
Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 01/22/18 18:10
Analyst: KL

Date Collected: 01/19/18 09:30
Date Received: 01/19/18
Field Prep: Not Specified

Extraction Method: EPA 3510C
Extraction Date: 01/20/18 23:45

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	--	1
Fluoranthene	ND		ug/l	0.10	--	1
Naphthalene	ND		ug/l	0.10	--	1
Benzo(a)anthracene	ND		ug/l	0.10	--	1
Benzo(a)pyrene	ND		ug/l	0.10	--	1
Benzo(b)fluoranthene	ND		ug/l	0.10	--	1
Benzo(k)fluoranthene	ND		ug/l	0.10	--	1
Chrysene	ND		ug/l	0.10	--	1
Acenaphthylene	ND		ug/l	0.10	--	1
Anthracene	ND		ug/l	0.10	--	1
Benzo(ghi)perylene	ND		ug/l	0.10	--	1
Fluorene	ND		ug/l	0.10	--	1
Phenanthrene	ND		ug/l	0.10	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	--	1
Pyrene	ND		ug/l	0.10	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		21-120
Phenol-d6	26		10-120
Nitrobenzene-d5	62		23-120
2-Fluorobiphenyl	59		15-120
2,4,6-Tribromophenol	63		10-120
4-Terphenyl-d14	64		41-149

Project Name: ONE BROADWAY/NOMA
Project Number: 5210.2.7T
Lab Number: L1802085
Report Date: 02/05/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 01/22/18 13:23
Analyst: KL

Extraction Method: EPA 3510C
Extraction Date: 01/20/18 07:16

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1082429-1					
Acenaphthene	ND		ug/l	0.10	--
Fluoranthene	ND		ug/l	0.10	--
Naphthalene	ND		ug/l	0.10	--
Benzo(a)anthracene	ND		ug/l	0.10	--
Benzo(a)pyrene	ND		ug/l	0.10	--
Benzo(b)fluoranthene	ND		ug/l	0.10	--
Benzo(k)fluoranthene	ND		ug/l	0.10	--
Chrysene	ND		ug/l	0.10	--
Acenaphthylene	ND		ug/l	0.10	--
Anthracene	ND		ug/l	0.10	--
Benzo(ghi)perylene	ND		ug/l	0.10	--
Fluorene	ND		ug/l	0.10	--
Phenanthrene	ND		ug/l	0.10	--
Dibenzo(a,h)anthracene	ND		ug/l	0.10	--
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	--
Pyrene	ND		ug/l	0.10	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		21-120
Phenol-d6	27		10-120
Nitrobenzene-d5	69		23-120
2-Fluorobiphenyl	66		15-120
2,4,6-Tribromophenol	67		10-120
4-Terphenyl-d14	72		41-149

Project Name: ONE BROADWAY/NOMA
Project Number: 5210.2.7T
Lab Number: L1802085
Report Date: 02/05/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 01/21/18 19:37
Analyst: TT

Extraction Method: EPA 3510C
Extraction Date: 01/20/18 23:35

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1082551-1					
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	--
Butyl benzyl phthalate	ND		ug/l	5.0	--
Di-n-butylphthalate	ND		ug/l	5.0	--
Di-n-octylphthalate	ND		ug/l	5.0	--
Diethyl phthalate	ND		ug/l	5.0	--
Dimethyl phthalate	ND		ug/l	5.0	--
Tentatively Identified Compounds					
No Tentatively Identified Compounds	ND		ug/l		

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		21-120
Phenol-d6	30		10-120
Nitrobenzene-d5	79		23-120
2-Fluorobiphenyl	76		15-120
2,4,6-Tribromophenol	91		10-120
4-Terphenyl-d14	95		41-149

Lab Control Sample Analysis
Batch Quality Control

Project Name: ONE BROADWAY/NOMA
Project Number: 5210.2.7T

Lab Number: L1802085
Report Date: 02/05/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1082429-2 WG1082429-3								
Acenaphthene	69		67		40-140	3		40
Fluoranthene	67		68		40-140	1		40
Naphthalene	69		66		40-140	4		40
Benzo(a)anthracene	69		68		40-140	1		40
Benzo(a)pyrene	70		68		40-140	3		40
Benzo(b)fluoranthene	69		68		40-140	1		40
Benzo(k)fluoranthene	73		72		40-140	1		40
Chrysene	74		72		40-140	3		40
Acenaphthylene	82		80		40-140	2		40
Anthracene	76		75		40-140	1		40
Benzo(ghi)perylene	74		75		40-140	1		40
Fluorene	70		68		40-140	3		40
Phenanthrene	69		67		40-140	3		40
Dibenzo(a,h)anthracene	76		78		40-140	3		40
Indeno(1,2,3-cd)pyrene	73		75		40-140	3		40
Pyrene	65		66		40-140	2		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: ONE BROADWAY/NOMA

Project Number: 5210.2.7T

Lab Number: L1802085

Report Date: 02/05/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1082429-2 WG1082429-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	42		42		21-120
Phenol-d6	29		29		10-120
Nitrobenzene-d5	76		73		23-120
2-Fluorobiphenyl	69		67		15-120
2,4,6-Tribromophenol	63		61		10-120
4-Terphenyl-d14	68		67		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: ONE BROADWAY/NOMA

Project Number: 5210.2.7T

Lab Number: L1802085

Report Date: 02/05/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1082551-2 WG1082551-3								
Bis(2-ethylhexyl)phthalate	82		96		40-140	16		30
Butyl benzyl phthalate	90		104		40-140	14		30
Di-n-butylphthalate	82		95		40-140	15		30
Di-n-octylphthalate	85		99		40-140	15		30
Diethyl phthalate	78		92		40-140	16		30
Dimethyl phthalate	78		92		40-140	16		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	45		52		21-120
Phenol-d6	33		38		10-120
Nitrobenzene-d5	77		89		23-120
2-Fluorobiphenyl	74		86		15-120
2,4,6-Tribromophenol	92		107		10-120
4-Terphenyl-d14	86		101		41-149

METALS

Project Name: ONE BROADWAY/NOMA
Lab Number: L1802085
Project Number: 5210.2.7T
Report Date: 02/05/18

SAMPLE RESULTS

Lab ID: L1802085-01
Client ID: B-408 (OW)
Sample Location: CAMBRIDGE, MA
Sample Depth:
Matrix: Water

Date Collected: 01/19/18 09:30
Date Received: 01/19/18
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	01/22/18 08:50	01/23/18 10:54	EPA 3005A	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	01/22/18 08:50	01/23/18 10:54	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	01/22/18 08:50	01/23/18 10:54	EPA 3005A	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	01/22/18 08:50	01/23/18 10:54	EPA 3005A	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	01/22/18 08:50	01/23/18 10:54	EPA 3005A	3,200.8	AM
Iron, Total	63.7		mg/l	0.050	--	1	01/22/18 08:50	01/25/18 15:16	EPA 3005A	19,200.7	LC
Lead, Total	ND		mg/l	0.00100	--	1	01/22/18 08:50	01/23/18 10:54	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	01/22/18 14:14	01/23/18 14:25	EPA 245.1	3,245.1	MG
Nickel, Total	ND		mg/l	0.00200	--	1	01/22/18 08:50	01/23/18 10:54	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	01/22/18 08:50	01/23/18 10:54	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	01/22/18 08:50	01/23/18 10:54	EPA 3005A	3,200.8	AM
Zinc, Total	0.01954		mg/l	0.01000	--	1	01/22/18 08:50	01/23/18 10:54	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	1120		mg/l	0.660	NA	1	01/22/18 08:50	01/25/18 15:16	EPA 3005A	19,200.7	LC
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		01/23/18 10:54	NA	107,-	

Project Name: ONE BROADWAY/NOMA **Lab Number:** L1802085

Project Number: 5210.2.7T **Report Date:** 02/05/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1082659-1										
Iron, Total	ND		mg/l	0.050	--	1	01/22/18 08:50	01/25/18 15:45	19,200.7	LC

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab for sample(s): 01 Batch: WG1082659-1										
Hardness	ND		mg/l	0.660	NA	1	01/22/18 08:50	01/25/18 15:45	19,200.7	LC

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1082660-1										
Antimony, Total	ND		mg/l	0.00400	--	1	01/22/18 08:50	01/23/18 09:00	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	01/22/18 08:50	01/23/18 09:00	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	01/22/18 08:50	01/23/18 09:00	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	01/22/18 08:50	01/23/18 09:00	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	01/22/18 08:50	01/23/18 09:00	3,200.8	AM
Lead, Total	ND		mg/l	0.0005	--	1	01/22/18 08:50	01/23/18 09:00	3,200.8	AM
Nickel, Total	ND		mg/l	0.00200	--	1	01/22/18 08:50	01/23/18 09:00	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	01/22/18 08:50	01/23/18 09:00	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	01/22/18 08:50	01/23/18 09:00	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	01/22/18 08:50	01/23/18 09:00	3,200.8	AM

Prep Information

Digestion Method: EPA 3005A

Project Name: ONE BROADWAY/NOMA
Project Number: 5210.2.7T
Lab Number: L1802085
Report Date: 02/05/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1082779-1										
Mercury, Total	ND		mg/l	0.00020	--	1	01/22/18 14:14	01/23/18 14:21	3,245.1	MG

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: ONE BROADWAY/NOMA

Project Number: 5210.2.7T

Lab Number: L1802085

Report Date: 02/05/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1082659-2								
Iron, Total	94		-		85-115	-		
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 Batch: WG1082659-2								
Hardness	105		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1082660-2								
Antimony, Total	98		-		85-115	-		
Arsenic, Total	107		-		85-115	-		
Cadmium, Total	111		-		85-115	-		
Chromium, Total	107		-		85-115	-		
Copper, Total	105		-		85-115	-		
Lead, Total	106		-		85-115	-		
Nickel, Total	104		-		85-115	-		
Selenium, Total	106		-		85-115	-		
Silver, Total	99		-		85-115	-		
Zinc, Total	107		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1082779-2								
Mercury, Total	98		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: ONE BROADWAY/NOMA
Project Number: 5210.2.7T

Lab Number: L1802085
Report Date: 02/05/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1082659-3 QC Sample: L1802061-01 Client ID: MS Sample												
Iron, Total	47.5	1	46.5	**0**	Q	-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1082659-3 QC Sample: L1802061-01 Client ID: MS Sample												
Hardness	525	66.2	571	**70**	Q	-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1082660-3 QC Sample: L1801854-01 Client ID: MS Sample												
Antimony, Total	ND	0.5	0.4990	100		-	-		70-130	-		20
Arsenic, Total	ND	0.12	0.1348	112		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.05478	107		-	-		70-130	-		20
Chromium, Total	ND	0.2	0.2091	104		-	-		70-130	-		20
Copper, Total	ND	0.25	0.2643	106		-	-		70-130	-		20
Lead, Total	ND	0.51	0.5385	106		-	-		70-130	-		20
Nickel, Total	ND	0.5	0.5189	104		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1253	104		-	-		70-130	-		20
Silver, Total	ND	0.05	0.04945	99		-	-		70-130	-		20
Zinc, Total	ND	0.5	0.5344	107		-	-		70-130	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: ONE BROADWAY/NOMA
Project Number: 5210.2.7T

Lab Number: L1802085
Report Date: 02/05/18

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 QC Batch ID: WG1082660-5 QC Sample: L1802061-01 Client ID: MS Sample									
Antimony, Total	ND	0.5	0.5554	111	-	-	70-130	-	20
Arsenic, Total	0.00227	0.12	0.1314	108	-	-	70-130	-	20
Cadmium, Total	ND	0.051	0.05474	107	-	-	70-130	-	20
Chromium, Total	0.00214	0.2	0.2062	102	-	-	70-130	-	20
Copper, Total	0.00125	0.25	0.2523	100	-	-	70-130	-	20
Lead, Total	0.00522	0.51	0.5528	107	-	-	70-130	-	20
Nickel, Total	0.01153	0.5	0.5179	101	-	-	70-130	-	20
Selenium, Total	ND	0.12	0.1269	106	-	-	70-130	-	20
Silver, Total	ND	0.05	0.04952	99	-	-	70-130	-	20
Zinc, Total	0.01927	0.5	0.5256	101	-	-	70-130	-	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1082779-3 QC Sample: L1802085-01 Client ID: B-408 (OW)									
Mercury, Total	ND	0.005	0.00479	96	-	-	70-130	-	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1082779-5 QC Sample: L1802091-01 Client ID: MS Sample									
Mercury, Total	ND	0.005	0.00478	96	-	-	70-130	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: ONE BROADWAY/NOMA
Project Number: 5210.2.7T

Lab Number: L1802085
Report Date: 02/05/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1082659-4 QC Sample: L1802061-01 Client ID: DUP Sample						
Iron, Total	47.5	45.8	mg/l	4		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1082660-4 QC Sample: L1801854-01 Client ID: DUP Sample						
Lead, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1082660-6 QC Sample: L1802061-01 Client ID: DUP Sample						
Antimony, Total	ND	ND	mg/l	NC		20
Arsenic, Total	0.00227	0.00207	mg/l	9		20
Cadmium, Total	ND	ND	mg/l	NC		20
Chromium, Total	0.00214	0.00186	mg/l	14		20
Copper, Total	0.00125	0.00127	mg/l	2		20
Lead, Total	0.00522	0.0052	mg/l	1		20
Nickel, Total	0.01153	0.00993	mg/l	15		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	0.01927	0.01748	mg/l	10		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1082779-4 QC Sample: L1802085-01 Client ID: B-408 (OW)						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1082779-6 QC Sample: L1802091-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: ONE BROADWAY/NOMA
Project Number: 5210.2.7T
Lab Number: L1802085
Report Date: 02/05/18

SAMPLE RESULTS

Lab ID: L1802085-01
Client ID: B-408 (OW)
Sample Location: CAMBRIDGE, MA
Sample Depth:
Matrix: Water

Date Collected: 01/19/18 09:30
Date Received: 01/19/18
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	35.		mg/l	5.0	NA	1	-	01/20/18 05:30	121,2540D	VB
Cyanide, Total	ND		mg/l	0.005	--	1	01/20/18 14:32	01/22/18 10:27	121,4500CN-CE	LH
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	01/19/18 21:50	121,4500CL-D	MM
pH (H)	6.4		SU	-	NA	1	-	01/20/18 06:49	121,4500H+-B	GD
Nitrogen, Ammonia	17.8		mg/l	0.750	--	10	01/20/18 16:00	01/22/18 22:51	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.00	--	1	01/20/18 08:30	01/20/18 12:30	74,1664A	KZ
Phenolics, Total	ND		mg/l	0.030	--	1	01/23/18 11:20	01/23/18 17:11	4,420.1	BR
Chromium, Hexavalent	ND		mg/l	0.010	--	1	01/20/18 05:05	01/20/18 05:25	1,7196A	VB
Anions by Ion Chromatography - Westborough Lab										
Chloride	3610		mg/l	50.0	--	100	-	01/22/18 22:52	44,300.0	AU

Project Name: ONE BROADWAY/NOMA **Lab Number:** L1802085

Project Number: 5210.2.7T **Report Date:** 02/05/18

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: WG1082368-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	01/19/18 21:50	121,4500CL-D	MM
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1082406-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	01/20/18 05:05	01/20/18 05:24	1,7196A	VB
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1082421-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	01/20/18 05:30	121,2540D	VB
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1082443-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	01/20/18 08:30	01/20/18 12:30	74,1664A	KZ
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1082513-1										
Cyanide, Total	ND		mg/l	0.005	--	1	01/20/18 14:32	01/22/18 10:09	121,4500CN-CE	LH
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1082536-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	01/20/18 16:00	01/22/18 22:26	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1083018-1										
Phenolics, Total	ND		mg/l	0.030	--	1	01/23/18 11:20	01/23/18 17:08	4,420.1	BR
Anions by Ion Chromatography - Westborough Lab for sample(s): 01 Batch: WG1083209-1										
Chloride	ND		mg/l	0.500	--	1	-	01/22/18 17:28	44,300.0	AU

Lab Control Sample Analysis

Batch Quality Control

Project Name: ONE BROADWAY/NOMA

Project Number: 5210.2.7T

Lab Number: L1802085

Report Date: 02/05/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1082368-2								
Chlorine, Total Residual	101		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1082374-1								
pH	100		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1082406-2								
Chromium, Hexavalent	92		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1082443-2								
TPH	88		-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1082513-2								
Cyanide, Total	92		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1082536-2								
Nitrogen, Ammonia	96		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1083018-2								
Phenolics, Total	99		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: ONE BROADWAY/NOMA

Project Number: 5210.2.7T

Lab Number: L1802085

Report Date: 02/05/18

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 Batch: WG1083209-2					
Chloride	104	-	90-110	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: ONE BROADWAY/NOMA
Project Number: 5210.2.7T

Lab Number: L1802085
Report Date: 02/05/18

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: WG1082368-4 QC Sample: L1802035-02 Client ID: MS Sample												
Chlorine, Total Residual	25	24.8	48	94		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1082406-4 QC Sample: L1802085-01 Client ID: B-408 (OW)												
Chromium, Hexavalent	ND	0.1	0.096	96		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1082443-4 QC Sample: L1802061-02 Client ID: MS Sample												
TPH	ND	20	10.9	**54**	Q	-	-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1082513-4 QC Sample: L1802085-01 Client ID: B-408 (OW)												
Cyanide, Total	ND	0.2	0.196	98		-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1082536-4 QC Sample: L1802085-01 Client ID: B-408 (OW)												
Nitrogen, Ammonia	17.8	4	21.0	80		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1083018-4 QC Sample: L1802091-01 Client ID: MS Sample												
Phenolics, Total	ND	0.4	0.41	104		-	-		70-130	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1083209-3 QC Sample: L1802061-02 Client ID: MS Sample												
Chloride	320	100	405	**85**	Q	-	-		90-110	-		18

Lab Duplicate Analysis
Batch Quality Control

Project Name: ONE BROADWAY/NOMA
Project Number: 5210.2.7T

Lab Number: L1802085
Report Date: 02/05/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1082368-3 QC Sample: L1802061-02 Client ID: DUP Sample						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1082374-2 QC Sample: L1802061-01 Client ID: DUP Sample						
pH	6.6	6.6	SU	0		5
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1082406-3 QC Sample: L1802085-01 Client ID: B-408 (OW)						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1082421-2 QC Sample: L1802008-01 Client ID: DUP Sample						
Solids, Total Suspended	63	62	mg/l	2		29
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1082443-3 QC Sample: L1802085-01 Client ID: B-408 (OW)						
TPH, SGT-HEM	ND	ND	mg/l	NC		34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1082513-3 QC Sample: L1802085-01 Client ID: B-408 (OW)						
Cyanide, Total	ND	ND	mg/l	NC		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1082536-3 QC Sample: L1802085-01 Client ID: B-408 (OW)						
Nitrogen, Ammonia	17.8	18.0	mg/l	1		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1083018-3 QC Sample: L1802091-01 Client ID: DUP Sample						
Phenolics, Total	ND	ND	mg/l	NC		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1083209-4 QC Sample: L1802061-02 Client ID: DUP Sample						
Chloride	320	317	mg/l	1		18

Project Name: ONE BROADWAY/NOMA
Project Number: 5210.2.7T

Lab Number: L1802085
Report Date: 02/05/18

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(*)
L1802085-01A	Vial HCl preserved	A	NA		5.3	Y	Absent		8260-SIM(14),8260(14)
L1802085-01B	Vial HCl preserved	A	NA		5.3	Y	Absent		8260-SIM(14),8260(14)
L1802085-01C	Vial HCl preserved	A	NA		5.3	Y	Absent		8260-SIM(14),8260(14)
L1802085-01D	Vial Na2S2O3 preserved	A	NA		5.3	Y	Absent		504(14)
L1802085-01E	Vial Na2S2O3 preserved	A	NA		5.3	Y	Absent		504(14)
L1802085-01F	Vial HCl preserved	A	NA		5.3	Y	Absent		SUB-ETHANOL(14)
L1802085-01G	Vial HCl preserved	A	NA		5.3	Y	Absent		SUB-ETHANOL(14)
L1802085-01H	Vial HCl preserved	A	NA		5.3	Y	Absent		SUB-ETHANOL(14)
L1802085-01I	Plastic 250ml NaOH preserved	A	>12	>12	5.3	Y	Absent		TCN-4500(14)
L1802085-01J	Plastic 250ml HNO3 preserved	A	<2	<2	5.3	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)
L1802085-01K	Plastic 500ml H2SO4 preserved	A	<2	<2	5.3	Y	Absent		NH3-4500(28)
L1802085-01L	Plastic 950ml unpreserved	A	7	7	5.3	Y	Absent		TSS-2540(7)
L1802085-01M	Plastic 950ml unpreserved	A	7	7	5.3	Y	Absent		CL-300(28),HEXCR-7196(1),TRC-4500(1),PH-4500(.01)
L1802085-01N	Amber 950ml H2SO4 preserved	A	<2	<2	5.3	Y	Absent		TPHENOL-420(28)
L1802085-01O	Amber 1000ml HCl preserved	A	NA		5.3	Y	Absent		TPH-1664(28)
L1802085-01P	Amber 1000ml HCl preserved	A	NA		5.3	Y	Absent		TPH-1664(28)
L1802085-01Q	Amber 1000ml unpreserved	A	7	7	5.3	Y	Absent		8270TCL(7),8270TCL-SIM(7)
L1802085-01R	Amber 1000ml unpreserved	A	7	7	5.3	Y	Absent		8270TCL(7),8270TCL-SIM(7)
L1802085-01S	Amber 1000ml Na2S2O3	A	7	7	5.3	Y	Absent		ARCHIVE()
L1802085-01T	Amber 1000ml Na2S2O3	A	7	7	5.3	Y	Absent		ARCHIVE()

*Values in parentheses indicate holding time in days

Project Name:	ONE BROADWAY/NOMA	**Lab Number:**	L1802085
Project Number:	5210.2.7T	**Report Date:**	02/05/18

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:	ONE BROADWAY/NOMA	**Lab Number:**	L1802085
Project Number:	5210.2.7T	**Report Date:**	02/05/18

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:	ONE BROADWAY/NOMA	**Lab Number:**	L1802085
Project Number:	5210.2.7T	**Report Date:**	02/05/18

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.

4 Methods for Chemical Analysis of Water and Wastes. EPA 600/4-79-020. Revised March 1983.

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

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

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

74 Method 1664,Revision A: N-Hexane Extractable Material (HEM; Oil & Grease) and Silica Gel Treated N-Hexane Extractable Material (SGT-HEM; Non-polar Material) by Extraction and Gravimetry, EPA-821-R-98-002, February 1999.

107 Alpha Analytical - In-house calculation method.

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

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: SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.

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

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

Westborough Facility:

Drinking Water
EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500CI-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: Ammonia-N and Kjeldahl-N, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2**: Nitrate-N**, 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, SM9222D.**

Mansfield Facility:

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

Non-Potable Water
EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.
EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, 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:02051819:00

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL — World Class Chemistry

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

Date Rec'd in Lab: 1/19/18

ALPHA Job #: L1802085

Client Information

Client: McPhail Associates, LLC

Address: 2269 Massachusetts Avenue

Cambrdige, MA 02140

Phone: (617) 868-1420

Fax:

Email: Kseaman@mcphailgeo.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name: One Bradway / Noma

Project Location: Cambridge MA

Project #: 5210-2. 7T

Project Manager: KWS / BED

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☐ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program: NPDES RGP (circled)

Criteria:

Other Project Specific Requirements/Comments/Detection Limits:

Circle the following if required:

SALINITY (HARDNESS) (circled) (pH) (circled)

Sect. A inorganics: Ammonia, Chloride, TRC,TSS,CrVI,CrIII, Tot-CN, RGP Metals — A, B, C, ~~D~~, F
B- Non-Hal- VOC- 8260, 8260-SIM, Tot. Phenol Sect C- VOC- 8260 & 504
D: 8270/8270-SIM: E- PCB's, PCP(8270/8270-SIM): F-TPH, 8260, Sub-Ethanol

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	RGP Metals (200.8) (A)	TSS- (A)	Ammonia (4500 (A))	TCN (A)	HexCr (7196), TRC, Cl- (A)	8260 (B, C, F)/8260SIM (F)	TPhenol-420 (B)	504-EDB (C)	~~8270/8270SIM-(D)~~	PCB-608- (E)	TPH-1664-(F)	SUB-ETHANOL (F)	Sample Specific Comments	TOTAL # BOTTLES
02085-01	B-408(OW)	1/19/18	930	MW	TM	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☒	☒		20

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

	RGP Metals	TSS	Ammonia	TCN	HexCr	8260	TPhenol	504-EDB	8270	PCB-608	TPH-1664	SUB-ETHANOL
Container Type	P	P	P	P	D	V	A	V	A	A	A	V
Preservative	C	A	D	E	A	B	D	H	A	H	B	B

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	1/19/18 1130	John S… AAL	1/19/18 16:35
John S… AAL	1/19/18 1:45	Danielle …	1/19/18 18:4

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

FORM NO: 01-01(I-NJ) (rev. 5-JAN-12)

ALPHA ANALYTICAL
World Class Chemistry

Subcontract Chain of Custody

Test America (Nashville)
2960 Foster Creighton Drive
Nashville, TN 37204

Alpha Job Number
L1802085

Client Information

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

Phone: 603.319.5010
Email: mgulli@alphalab.com

Project Information

Project Location: MA
Project Manager: Melissa Gulli

Turnaround & Deliverables Information

Due Date: 01/26/18
Deliverables:

Regulatory Requirements/Report Limits

State/Federal Program:
Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L1802085

Report to include Method Blank, LCS/LCSD:

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

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	B-408 (OW)	01-19-18 09:30	WATER	Ethanol by EPA 1671 Revision A	

	Relinquished By:	Date/Time:	Received By:	Date/Time:
Form No: AL_subcoc				

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Nashville
2960 Foster Creighton Drive
Nashville, TN 37204
Tel: (615)726-0177

TestAmerica Job ID: 490-145044-1
Client Project/Site: L1802085

For:
Alpha Analytical Inc
145 Flanders Road
Westborough, Massachusetts 01581-1019

Attn: Melissa Gulli

Authorized for release by:
1/30/2018 4:15:36 PM

Ken Hayes, Project Manager II
(615)301-5035
ken.hayes@testamericainc.com

Table of Contents

Sample Summary

Client: Alpha Analytical Inc
Project/Site: L1802085

TestAmerica Job ID: 490-145044-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-145044-1	B-408 (OW)	Water	01/19/18 09:30	01/23/18 08:00

Case Narrative

Client: Alpha Analytical Inc
Project/Site: L1802085

TestAmerica Job ID: 490-145044-1

Job ID: 490-145044-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-145044-1

Comments
No additional comments.

Receipt
The sample was received on 1/23/2018 8:00 AM; the sample arrived in good condition, properly preserved and, where required, on ice.
The temperature of the cooler at receipt was 1.7º C.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Alpha Analytical Inc
Project/Site: L1802085

TestAmerica Job ID: 490-145044-1

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Client Sample Results

Client: Alpha Analytical Inc
Project/Site: L1802085

TestAmerica Job ID: 490-145044-1

Client Sample ID: B-408 (OW)
Date Collected: 01/19/18 09:30
Date Received: 01/23/18 08:00

Lab Sample ID: 490-145044-1
Matrix: Water

Method: 1671A - Ethanol (GC/FID)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		2000	500	ug/L			01/24/18 09:09	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Isopropyl acetate (Surr)	*77*		*70 - 130*		*01/24/18 09:09*	*1*

QC Sample Results

Client: Alpha Analytical Inc
Project/Site: L1802085

TestAmerica Job ID: 490-145044-1

Method: 1671A - Ethanol (GC/FID)

Lab Sample ID: MB 490-490975/5
Matrix: Water
Analysis Batch: 490975

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		2000	500	ug/L			01/24/18 08:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Isopropyl acetate (Surr)	*94*		*70 - 130*		*01/24/18 08:54*	*1*

Lab Sample ID: LCS 490-490975/6
Matrix: Water
Analysis Batch: 490975

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ethanol			50200	49120		ug/L		98	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Isopropyl acetate (Surr)	*105*		*70 - 130*

Lab Sample ID: 490-145044-1 MS
Matrix: Water
Analysis Batch: 490975

Client Sample ID: B-408 (OW)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ethanol	ND		50200	56940		ug/L		113	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Isopropyl acetate (Surr)	*85*		*70 - 130*

Lab Sample ID: 490-145044-1 MSD
Matrix: Water
Analysis Batch: 490975

Client Sample ID: B-408 (OW)
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol	ND		50200	53390		ug/L		106	70 - 130	6	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Isopropyl acetate (Surr)	*87*		*70 - 130*

QC Association Summary

Client: Alpha Analytical Inc
Project/Site: L1802085

TestAmerica Job ID: 490-145044-1

GC VOA

Analysis Batch: 490975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-145044-1	B-408 (OW)	Total/NA	Water	1671A	
MB 490-490975/5	Method Blank	Total/NA	Water	1671A	
LCS 490-490975/6	Lab Control Sample	Total/NA	Water	1671A	
490-145044-1 MS	B-408 (OW)	Total/NA	Water	1671A	
490-145044-1 MSD	B-408 (OW)	Total/NA	Water	1671A	

Lab Chronicle

Client: Alpha Analytical Inc
Project/Site: L1802085

TestAmerica Job ID: 490-145044-1

Client Sample ID: B-408 (OW)

Date Collected: 01/19/18 09:30
Date Received: 01/23/18 08:00

Lab Sample ID: 490-145044-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1671A		1			490975	01/24/18 09:09	NMB	TAL NSH

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Method Summary

Client: Alpha Analytical Inc
Project/Site: L1802085

TestAmerica Job ID: 490-145044-1

Method	Method Description	Protocol	Laboratory
1671A	Ethanol (GC/FID)	EPA	TAL NSH

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL NSH = TestAmerica Nashville, 2960 Foster Creighton Drive, Nashville, TN 37204, TEL (615)726-0177

Accreditation/Certification Summary

Client: Alpha Analytical Inc
Project/Site: L1802085

TestAmerica Job ID: 490-145044-1

Laboratory: TestAmerica Nashville

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2938	10-31-18

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
1671A		Water	Ethanol

Maine	State Program	1	TN00032	11-03-19

The following analytes are included in this report, but accreditation/certification is not offered by the governing authority:

Analysis Method	Prep Method	Matrix	Analyte
1671A		Water	Ethanol

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-145044 Chain of Custody

Cooler Received/Opened On 1/23/2018 @ 0800

Time Samples Removed From Cooler 17:06 Time Samples Placed In Storage 17:15 (2 Hour Window)

1. Tracking # 1ZE306540190719657 (last 4 digits, FedEx) Courier: UPS Next Day Air

IR Gun ID Raynger pH Strip Lot N/A Chlorine Strip Lot N/A

2. Temperature of rep. sample or temp blank when opened: 1.7 *Degrees Celsius*

3. If Item #2 temperature is 0°C or less, was the representative sample or temp blank frozen? YES NO NA

4. Were custody seals on outside of cooler? YES NO NA

If yes, how many and where: _____

5. Were the seals intact, signed, and dated correctly? YES...NO...NA

6. Were custody papers inside cooler? YES...NO...NA

I certify that I opened the cooler and answered questions 1-6 (intial) AOT

7. Were custody seals on containers: YES NO and Intact YES...NO...NA

Were these signed and dated correctly? YES...NO...NA

8. Packing mat'l used? Bubblewrap Plastic bag Peanuts Vermiculite Foam Insert Paper Other None

9. Cooling process: Ice Ice-pack Ice (direct contact) Dry ice Other None

10. Did all containers arrive in good condition (unbroken)? YES...NO...NA

11. Were all container labels complete (#, date, signed, pres., etc)? YES...NO...NA

12. Did all container labels and tags agree with custody papers? YES...NO...NA

13a. Were VOA vials received? YES...NO...NA

b. Was there any observable headspace present in any VOA vial? YES...NO...NA

● ← Larger than this.

14. Was there a Trip Blank in this cooler? YES...NO...NA If multiple coolers, sequence #_____

I certify that I unloaded the cooler and answered questions 7-14 (intial) KD

15a. On pres'd bottles, did pH test strips suggest preservation reached the correct pH level? YES...NO...NA

b. Did the bottle labels indicate that the correct preservatives were used YES...NO...NA

16. Was residual chlorine present? YES...NO...NA

I certify that I checked for chlorine and pH as per SOP and answered questions 15-16 (intial) KD

17. Were custody papers properly filled out (ink, signed, etc)? YES...NO...NA

18. Did you sign the custody papers in the appropriate place? YES...NO...NA

19. Were correct containers used for the analysis requested? YES...NO...NA

20. Was sufficient amount of sample sent in each container? YES...NO...NA

I certify that I entered this project into LIMS and answered questions 17-20 (intial) KD

I certify that I attached a label with the unique LIMS number to each container (intial) KD

21. Were there Non-Conformance issues at login? YES...NO Was a NCM generated? YES...NO...#_____

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17

ALPHA ANALYTICAL
World Class Chemistry

Subcontract Chain of Custody

Test America (Nashville)
2960 Foster Creighton Drive
Nashville, TN 37204

Alpha Job Number
L1802085

Client Information

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

Phone: 603.319.5010
Email: mgulli@alphalab.com

Project Information

Project Location: MA
Project Manager: Melissa Gulli

Turnaround & Deliverables Information

Due Date: 01/26/18
Deliverables:

Regulatory Requirements/Report Limits

State/Federal Program:
Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L1802085

Report to include Method Blank, LCS/LCSD:

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

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	B-408 (OW)	01-19-18 09:30	WATER	Ethanol by EPA 1671 Revision A	

Loc: 490
145044

	Relinquished By:	Date/Time:	Received By:	Date/Time:
	[signature]	1/22/18	[signature] TA-NAS	01-23-2018 08:00
Form No: AL_subcoc				

1.7

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 **Lab Number:** L1735516

Project Number: 6231.9.00 **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
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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

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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 165 Main Street and One Broadway properties 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 storm water 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 and bag filters to remove suspended soil particulates prior to off-site discharge.

Discharge Monitoring and Compliance

Regular sampling and testing will be conducted concerning 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 100 feet to the east of the project site. Dewatering effluent will be pumped into a settling tank. Water within the settling tank will pumped through bag filters prior to discharge into the storm drains.

Management of Treatment System Materials

Dewatering effluent will be pumped directly 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.