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

PIPEFITTERS LOCAL 537 TRAINING CENTER
40 ENTERPRISE STREET

DORCHESTER, MASSACHUSETTS

OCTOBER 4, 2017

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

On Behalf Of:
Pipefitters Local 537 Education Trust
35 Travis Street
Allston, MA 02134

PROJECT NO. 6364

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

October 4, 2017

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

Attention: EPA RGP Applications Coordinator

Reference: Pipefitters Local 537 Training Center – 40 Enterprise Street Dorchester, 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 into the Bass River via the City of Boston storm drain system. The temporary discharge of construction dewatering will occur as part of the proposed redevelopment of the above referenced property. Refer to **Figure 1,** Project Location Plan for the general site locus.

These services were performed and this permit application was prepared in accordance with our proposal dated May 9, 2017, and the subsequent authorization of the Pipefitters Local 537 Educational Trust. 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**, and supporting information is included in **Appendix C**. This project is considered Activity Category III-G as defined in the RGP. Category III-G is defined as Contaminated Site Dewatering from Sites with Know Contamination. Based on historical and current soil and groundwater analysis completed at the site and constituents of concern (COCs) detected, subcategories A (Inorganics), D (Non-Halogenated Semi-Volatile Organic Compounds), and F (Fuel Parameters) apply.

Thus, Technology Based Effluent Limitations (TBELs) for Type A, D, and F 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. Stan Durlacher

Existing Conditions

Fronting onto Enterprise Street to the north, the subject site is comprised of an approximately 1.68-acre parcel of land which is bounded by Clapp Street to the south, and commercial properties to the east and west. Currently, the subject parcel is occupied by the existing Pipefitters Local 537 training center, which consists of a 1 to 2-story structure and is surrounded by a parking lot with landscaped margins. The lowest level floor slab within the existing training center is understood to be at approximately Elevation +20. There is also a small 2-story wood framed structure located in the southwestern corner of the site along Clapp Street. Ground surface across the site is relatively level, varying from about Elevation +17 to Elevation +20. Refer to **Figure 2,** Site Plan for the general site features including existing conditions.

Proposed Scope of Site Development

The proposed development is understood to consist of the demolition of the existing training center and small wood framed building followed by the construction of a new 4-story structure. It is understood that the new building will contain no below-grade space and the lowest level slab will be at ground surface, approximately Elevation +18.35. The new structure will occupy a footprint of approximately 20,200 square feet.

The remainder of the site will consist of surface parking and landscaped areas. Several subsurface infiltration systems will be installed below the parking areas.

Dewatering will be necessary for the removal of in-place structures as well as the excavation and removal of a former underground storage tank (UST) located in the south section of the site.

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 subject site.

Furthermore, per documentation provided by the U.S. Fish and Wildlife Information for Planning and Consultation (IPaC), the proposed site discharge has the potential to adversely affect the Red Knot bird which is a threatened species in the northeast coastal regions. However, because of the urban region of redevelopment, lack of similarities associated with the habitats of the Red Knot, and no sightings of the species near the project site since 1900 (**Appendix C**), NMFS Criterion in section G of the RGP applies. It is not expected that adverse effects of discharge will impact the listed threatened species.

The Resource Map indicates that there are no water bodies or wetland areas at the subject 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 Dorchester Old Harbor located approximately 3,500 feet to the east of the subject site. However, the proposed discharge location and thus the receiving water body, is noted as the Bass River which is classified as Brackish and flows east into the Fort Point Channel of 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 Boston dedicated storm drain system that flows into the Bass 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 Bass River, construction dewatering activities are not considered to affect historical listings. Hence, the site meets Permit Eligibility Criterion A in accordance with Appendix III of the RGP.

Site & Release History

In summary, historical use of the subject site is understood to consist of residential properties from the late 1800s until the 1960s and the existing Pipefitters Local 537 Training Facility since 1965.

There is currently one MADEP listed MCP release associated with the project site. As part of site demolition activities, a 6,000-gallon underground storage tank (UST) containing diesel fuel was removed from the site at the end of July 2017. During removal of the UST, more than ½-inch of floating product was observed within the tank grave. The tank had not been damaged during removal, so the visible product met the criteria for notification of the DEP as a 72-hour release condition as defined in the MCP. The DEP was verbally notified of the release on July 31, 2017, and the DEP assigned Release Tracking Number (RTN) 3-34390.

It should be noted that groundwater sampling at observation well B-6 OW was completed in the vicinity of the leaking UST and analytical results did not indicate elevated levels of TPH in groundwater or the presence of LNAPL in the monitoring well.

Construction Site Dewatering

It is anticipated small excavation during site construction will extend below groundwater elevation and due to the scarcity of probably dewatering, the discharge observed will likely be on order of 5 to 25 gallons per minute (gpm). These estimates do not include surface run-off which will be removed from the excavation during periods of precipitation.

Groundwater was observed on two separate accounts at elevation +9.0 and +9.2 or approximately 10.5 feet below ground surface. In consideration of the indicated depth of groundwater below the existing ground surface, it is not anticipated that groundwater will adversely impact the proposed foundation construction in the areas with no below grade space. However, surface water may become trapped and accumulate in excavations after periods of heavy precipitation and may necessitate localized sumping. Dewatering for the site will be short-term and the effluent will either be recharged on-site or legally discharged off-site.

Given that the area of excavation will occupy a majority of the subject site, temporary on-site collection and recharge of groundwater may not be feasible during construction. As a result, construction dewatering will discharge collected groundwater into the storm drain system under the requested Remediation General Permit. Additionally, a Notice of Intent for dewatering under a NPDES General Permit for Discharges from Construction Activities (CGP) will be filed since the area that is subject to dewatering is greater the 1 acre. In accordance with the provisions of the CGP, a Stormwater Pollution Prevention Plan (SWPPP) will be prepared to address potential stormwater runoff from the project site as well as the dewatering of groundwater during construction of the proposed subsurface utilities.

A review of available subgrade sanitary and storm sewer system plans accessed from the BWSC indicates the presence of a dedicated stormwater drain system located beneath Enterprise Street. The discharge flow, indicated by BWSC plans, goes west and south beneath Enterprise Street, northwest on Massachusetts Avenue, and then follows the MBTA railway line north where the storm drain discharges into the Bass River of the Fort Point Channel as shown on the enclosed **Figure 3**.

Summary of Groundwater Analysis

McPhail Associates, LLC obtained samples of groundwater at the development parcels from monitoring well B-6 (OW) on June 21, 2017. Analytical results of the testing of groundwater samples obtained in 2017 are summarized in **Table 1** and the laboratory data are enclosed in **Appendix D**. In addition, a surface water sample was obtained from an upstream location of the discharge into the Bass River receiving water also on April 3, 2017

and April 10, 2017. The approximate location of sample collection is indicated on the enclosed **Figure 3**, and analytical test results are included in the enclosed **Appendix E**.

Above referenced groundwater was submitted to a certified laboratory for analysis for the presence of compounds required under the EPA's RGP application, including total suspended solids (TSS), pH, total residual chlorine, total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs) including total benzene, toluene, ethylbenzene and xylenes (BTEX), semi-volatile organic compounds (SVOCs), and total recoverable metals. The results of the laboratory analysis are summarized in **Table 2** and laboratory data is included in **Appendix D**. The receiving water sample was analyzed for the presence of total metals, hardness and ammonia nitrogen. Additionally, at the time of sample collection, the temperature and pH of the surface water sample were analyzed. Receiving water data and laboratory data are included in **Appendix E**.

In summary, groundwater testing performed at the subject site has detected concentrations of suspended solids, ammonia, arsenic, chloride, cadmium, copper, chromium, iron, lead, nickel, zinc. Water Quality-Based Effluent Limits (WQBELs) were calculated for each of the detected compounds. With the exception of Total Residual Chlorine (TRC), Type A, D, and F compounds do not exceed the applicable Technology Based Effluent Limits (TBELs). For detected compounds, based on calculations performed in accordance with Appendix V of the RGP, WQBEL only applies to TRC. Documentation of NOI support calculations is included in **Appendix C**.

Non-aqueous phase liquid (NAPL) may be encountered within a localized area in the central to southern portions of the project site as indicated from release site history. Petroleum constituents have been detected in fill material in this area as well as the underlying natural soil at depths which extend to approximately 10 to 15 feet below ground surface. Elevated levels of dissolved petroleum hydrocarbons are not expected to be encountered in groundwater, however, it is possible that measurable levels of NAPL will be encountered within the soil pore space near the surface of groundwater.

In accordance with the RGP, and given that the Site is a remediation site, the proposed dewatering associated with this permit application is considered Contaminated/Formerly Contaminated Site Dewatering (Category III). The Site has been fully characterized and data utilized in characterization meets minimum data validation requirements; therefore, the Site contamination is considered "Known" (Contamination Type G). Accordingly, the known contaminations fall in the following categories; A (Inorganics), D (Non-Halogenated Semi-Organic Compounds), and F (Fuel Parameters. This project is considered Activity Category III-G; A, D, and F as defined in the RGP. Based on the activity category, and in accordance with the RGP, contamination Type A, D, and F as defined in Table 4 of the RGP applies. Thus, Technology Based Effluent Limitations (TBELs) for all above contamination categories apply. Water Quality Based Effluent Limitations (WQBELs) were calculated in accordance with Appendix V of the RGP for the parameters detected.

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, bag filters, and, if required, a granular activated carbon (GAC) filter in series will be used to settle out and remove particulate matter as well as to remove free phase petroleum product in groundwater to meet the effluent limits established by the US EPA prior to discharge.

A schematic of the treatment system is shown on **Figure 4**.

A Best Management Practices Plan (BMPP) has been prepared as **Appendix 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 off-site discharge of dewatered groundwater which will be encountered at 40 Enterprise Street in Boston, 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 a one 20,000-gallon capacity settling tank, bag filters and, if required, granular activated carbon (GAC) filters in series. However, should the effluent monitoring results identify concentrations of contaminants that are in excess of the limits established by the RGP, additional mitigative measures will be implemented to meet the allowable discharge limits.

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

Sincerely,

McPHAIL ASSOCIATES, LLC

Kirk W. Seaman

William J. Burns, L.S.P.

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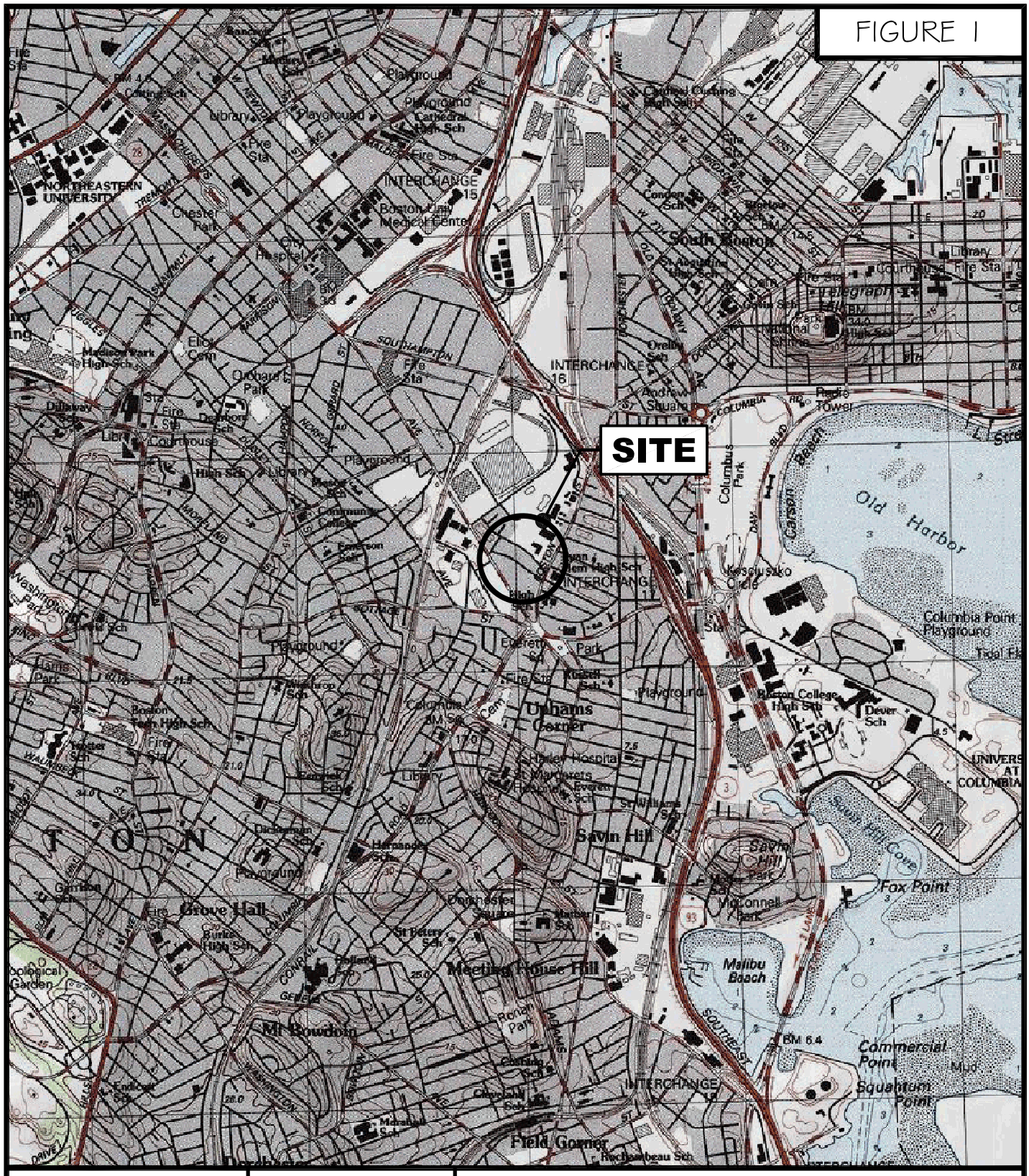
KWS/jwp/wjb

FIGURE 1



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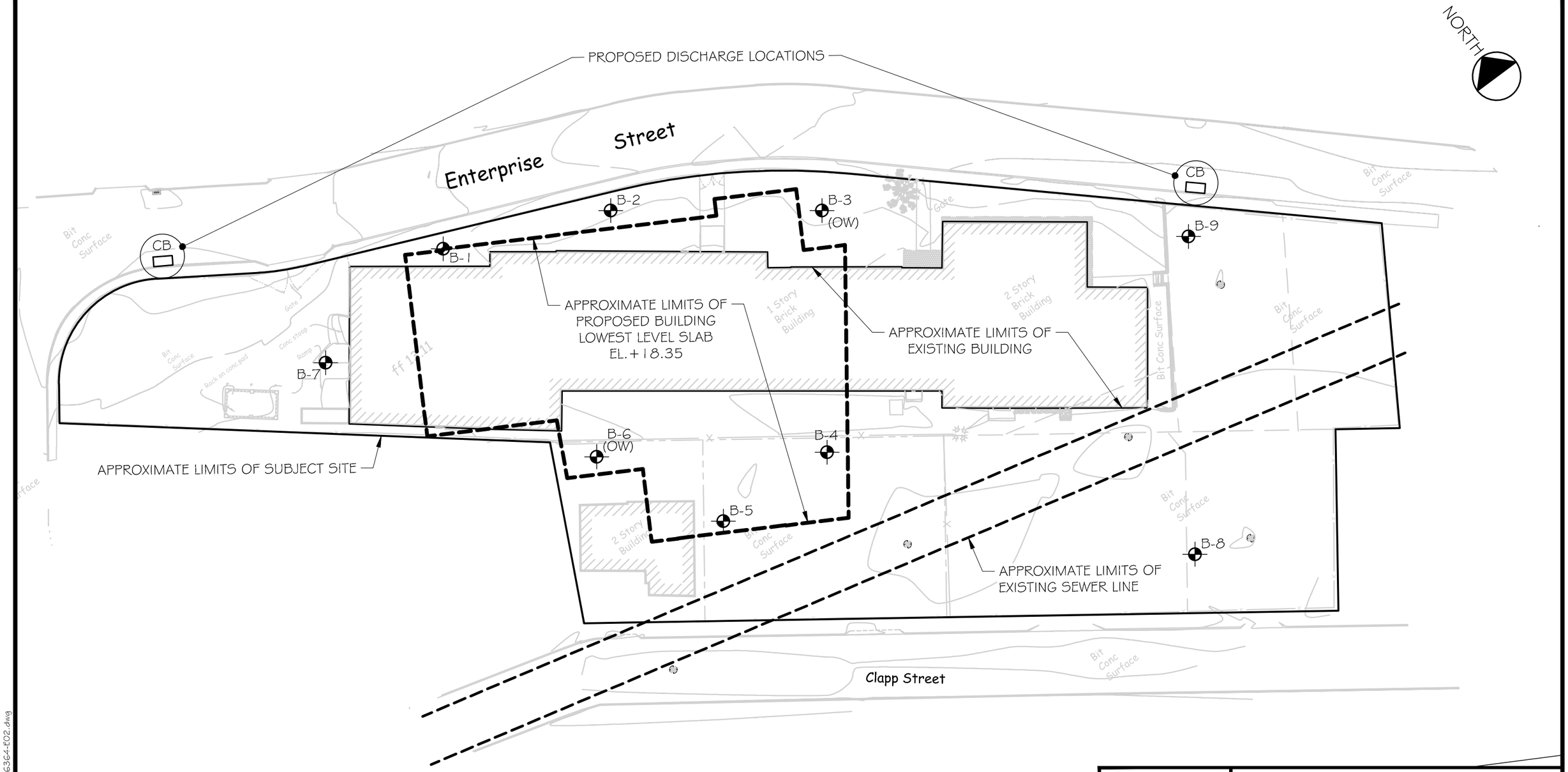
SCALE 1:25,000

PROJECT LOCATION PLAN

PIPEFITTERS TRAINING CENTER

BOSTON MASSACHUSETTS

FIGURE 2



LEGEND

⌖ — APPROXIMATE LOCATION OF BORING PERFORMED BY CARR-DEE CORP. FROM MAY 24 THROUGH MAY 26, 2017 FOR McPHAIL ASSOCIATES, LLC

(OW) — INDICATES OBSERVATION WELL INSTALLED WITHIN COMPLETED BOREHOLE

REFERENCE: THIS PLAN WAS PREPARED FROM A 30-SCALE DRAWING ENTITLED, "EXISTING CONDITIONS PLAN" DATED MARCH 17, 2017 PREPARED BY CANAVAN & ASSOCIATES, INC.

GRAPHIC SCALE

40 0 40 80

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PIPEFITTERS TRAINING CENTER
DORCHESTER MASSACHUSETTS

SITE PLAN

FOR

PIPEFITTERS LOCAL 537 EDUCATIONAL TRUST

BY

McPHAIL ASSOCIATES, LLC

Date: OCTOBER 2017	Dwn: I.J.M.	Chkd: K.W.S.	Scale: 1" = 40'
Project No: 6364			

FILE NAME: N:\Acad\JOB\6364\RGP6364-F02.dwg

NORTH

REFERENCE: THIS PLAN WAS PREPARED FROM AN UNTITLED 350-SCALE DRAWING DATED AUGUST 16, 2017 PROVIDED BY BOSTON WATER AND SEWER

GRAPHIC SCALE

400 0 400 800 1600

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PIPEFITTERS TRAINING CENTER

DORCHESTER MASSACHUSETTS

DISCHARGE FLOW PLAN

FOR

PIPEFITTERS LOCAL 537 EDUCATIONAL TRUST

BY

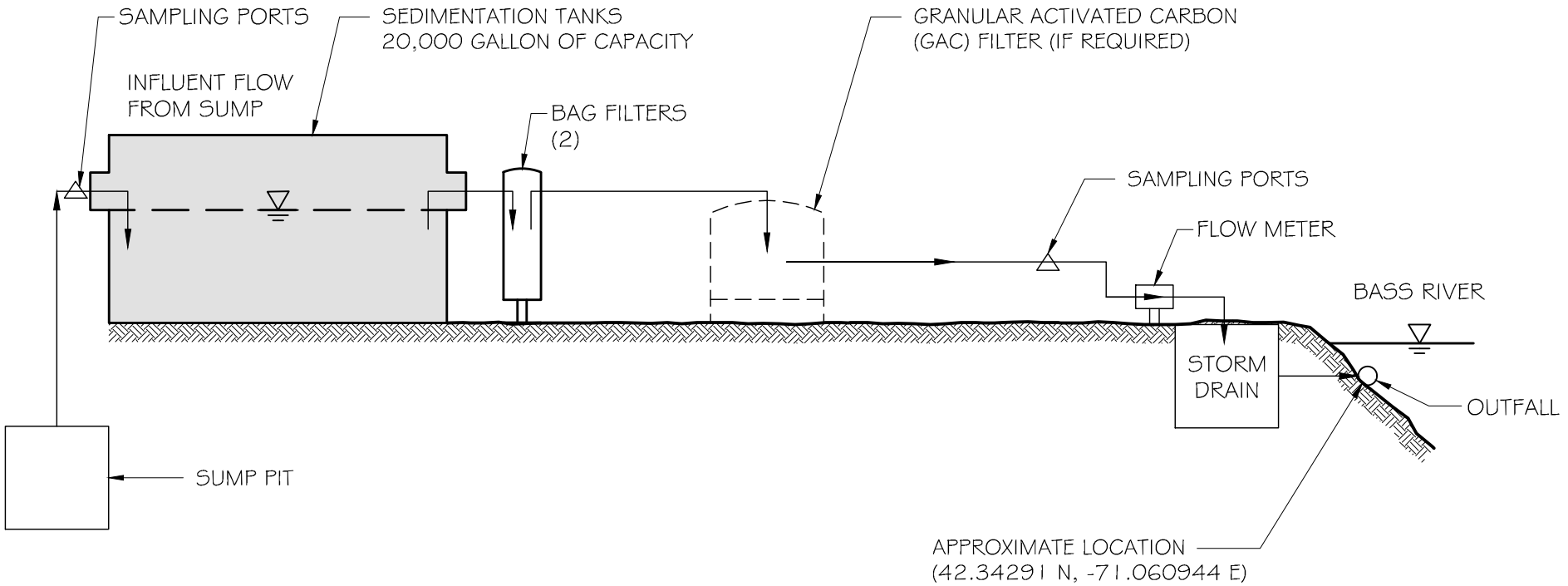
McPHAIL ASSOCIATES, LLC

Date: OCTOBER 2017	Dwn: M.B.S.	Chkd: K.W.S.	Scale: 1" = 400'
Project No: 6364			FIGURE 3

FILE NAME: N:\Acad\JOBS\6364\RGP\6364-E03.dwg

FILE NAME: N:\Acad\JOBS\6364\RGP\6364-E04.dwg

FIGURE 4



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PIPEFITTERS LOCAL 537 TRAINING CENTER - 40 ENTERPRISE STREET
DORCHESTER MASSACHUSETTS

SCHEMATIC OF TREATMENT SYSTEM

FOR

PIPEFITTERS LOCAL 537 EDUCATIONAL TRUST

BY

McPHAIL ASSOCIATES, LLC
CONSULTING GEOTECHNICAL ENGINEERS

Date: OCTOBER 2017	Dwn: I.J.M.	Chkd: K.W.S.	Scale: N.T.S.
Project No: 6364			

TABLE 1

CHEMICAL TEST RESULTS - GROUNDWATER
Pipefitter's Training Center; Boston, Massachusetts
McPhail Job No. 6364

LOCATION	EPA-ALSCMC	B-6 (OW)
SAMPLING DATE		6/21/2017
LAB SAMPLE ID		L1721071-01
General Chemistry		
Chromium, Trivalent		10
SALINITY		2
Solids, Total Suspended		92000
Cyanide, Total	1	5
Chlorine, Total Residual		20
pH (H)		6.9
Nitrogen, Ammonia		669
TPH, SGT-HEM		4400
Chromium, Hexavalent	1100	10
MCP Total Metals (mg/l)		
Antimony, Total		4
Arsenic, Total	69	1.9
Cadmium, Total	40	0.23
Chromium, Total		2.63
Copper, Total	4.8	10.22
Iron, Total		2450
Lead, Total	210	14.11
Mercury, Total	1.8	0.2
Nickel, Total	74	3.49
Selenium, Total	290	5
Silver, Total	1.9	1
Zinc, Total	90	28.43
MCP Semivolatile Organics (mg/l)		
Naphthalene		ND(0.0001)
Benzo(a)anthracene		ND(0.0001)
Benzo(a)pyrene		ND(0.0001)
Benzo(b)fluoranthene		ND(0.0001)
Benzo(k)fluoranthene		ND(0.0001)
Chrysene		ND(0.0001)
Acenaphthylene		ND(0.0001)
Anthracene		ND(0.0001)
Benzo(ghi)perylene		ND(0.0001)
Fluorene		ND(0.0001)
Phenanthrene		ND(0.0001)
Dibenzo(a,h)anthracene		ND(0.0001)
Indeno(1,2,3-cd)pyrene		ND(0.0001)
Pyrene		ND(0.0001)
2-Methylnaphthalene		ND(0.0001)
Pentachlorophenol		ND(0.0008)
Hexachlorobenzene		ND(0.0008)
Hexachloroethane		ND(0.0008)
Total SVOC's		ND
MCP Volatile Organics (mg/l)		
Benzene		ND(0.0005)
Toluene		ND(0.00075)
Ethylbenzene		ND(0.0005)
Xylenes, Total		ND(0.001)
Acetone		ND(0.005)
1,4-Dioxane	6	ND(0.003)
Total VOC's		ND

ND - Not detected above laboratory
method detection limits in ()
Highlighted - Exceeds EPA-ALSCMC Standards

TABLE 2

ANALYTICAL TEST RESULTS--SURFACE WATER

Pipefitter's Training Center; Boston, Massachusetts
McPhail Job No. 6364

LOCATION	BASS RIVER SURFACE WATER	BASS RIVER SURFACE WATER
SAMPLING DATE	**4/3/2017**	**4/3/2017**
LAB SAMPLE ID	**L1710103-01**	**L1711081-01**
SAMPLE TYPE		
SAMPLE DEPTH (ft.)		
Ethyl Alcohol	ND	-
Total Metals (ug/l)		
Antimony, Total	4.7	-
Arsenic, Total	4.9	-
Cadmium, Total	ND	-
Chromium, Total	1.4	-
Copper, Total	4.3	-
Iron, Total	1800	-
Lead, Total	4.8	-
Mercury, Total	ND	-
Nickel, Total	ND	-
Selenium, Total	ND	-
Silver, Total	ND	-
Zinc, Total	72.1	-
Total Hardness by SM 2340B (ug/l)		
Hardness	-	1850000

ND - Not detected in excess of the laboratory method detection limit
Blank - Not analyzed

APPENDIX A:

LIMITATIONS

LIMITATIONS

The purpose of this report is to present the results of testing of groundwater samples obtained from a monitoring well located at 40 Enterprise Street in Dorchester, Massachusetts, in support of an application for approval of construction site dewatering discharge into surface waters of the Commonwealth of Massachusetts under EPA's Massachusetts Remediation General Permit MAG910000.

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

The conclusions submitted in this report are based in part upon laboratory test data obtained from analysis of groundwater samples, and are contingent upon their validity. The data have been reviewed, and interpretations have been made in the text. It should also be noted that fluctuations in the types and levels of contaminants and variations in their flow paths may occur due to changes in seasonal water table, past practices used in disposal 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 Pipefitters Local 537 Educational Trust. 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
BOSTON WATER & SEWER DEWATERING DISCHARGE PERMIT

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

A. General site information:

<table>
<tr><td rowspan="3">1. Name of site:
Pipefitters Local 537 Training Center</td><td colspan="3">Site address: 40 Enterprise Street
Street:</td></tr>
<tr><td colspan="2">City: Dorchester</td><td>State: MA
Zip: 02125</td></tr>
<tr><td colspan="3"></td></tr>
<tr><td rowspan="4">2. Site owner
Pipefitters Local 537 Education Trust

Owner is (check one): ☐ Federal ■ State/Tribal ☐ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: Mr. Brain Kelly</td></tr>
<tr><td colspan="2">Telephone: 617 787 5370</td><td>Email: bkelly@pipefitters537.com</td></tr>
<tr><td colspan="3">Mailing address: 35 Travis Street
Street:</td></tr>
<tr><td colspan="2">City: Allston</td><td>State: MA
Zip: 02134</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner</td><td colspan="3">Contact Person:</td></tr>
<tr><td colspan="2">Telephone:</td><td>Email:</td></tr>
<tr><td colspan="3">Mailing address:
Street:</td></tr>
<tr><td colspan="2">City:</td><td>State:
Zip:</td></tr>
<tr><td>4. NPDES permit number assigned by EPA:

NPDES permit is (check all that apply: ☐ RGP ☐ DGP ☐ CGP
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td><td colspan="3">5. Other regulatory program(s) that apply to the site (check all that apply):
■ MA Chapter 21e; list RTN(s):
RTN 3-34390
☐ 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):
Bass River (Fort Point Channel)	MA70-02	SB

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.

4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.	n/a
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.	0

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

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

C. Source water information:

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

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

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

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ☐ Existing discharge ■ New discharge ☐ New source	
Outfall(s): CSO 070	Outfall location(s): (Latitude, Longitude) 42.342961, -71.060944
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 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): 10/2017 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	121,4500N	75	0.669	0.669	Report mg/L	---
Chloride	✔		1	44,300.0	500	<DL	<DL	Report µg/l	---
Total Residual Chlorine	✔		1	44,300.0	500	<DL	<DL	0.2 mg/L	
Total Suspended Solids		✔	1	121,2540D	5000	92	92	30 mg/L	
Antimony	✔		1	1,6020A	4	<DL	<DL	206 µg/L	
Arsenic		✔	1	1,6020A	0.5	1.9	1.9	104 µg/L	
Cadmium	✔		1	1,6020A	2	0.23	0.23	10.2 µg/L	
Chromium III		✔	1	1,6020A	1	2.63	2.63	323 µg/L	
Chromium VI	✔		1	1,6020A	1	<DL	<DL	323 µg/L	
Copper		✔	1	1,6020A	1	10.22	10.22	242 µg/L	
Iron		✔	1	19,200.7	500	2450	2450	5,000 µg/L	
Lead		✔	1	1,6020A	0.5	14.11	14.11	160 µg/L `	
Mercury	✔		1	3,245.1	0.2	<DL	<DL	0.739 µg/L	
Nickel		✔	1	1,6020A	0.5	3.49	3.49	1,450 µg/L	
Selenium	✔		1	1,6020A	5	<DL	<DL	235.8 µg/L	
Silver	✔		1	1,6020A	0.4	<DL	<DL	35.1 µg/L	
Zinc		✔	1	1,6020A	10	28.43	28.43	420 µg/L	
Cyanide	✔		1	121,4500C	5	<DL	<DL127.3	178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX	✔		1	1,8260C	1.0	<DL	<DL	100 µg/L	---
Benzene	✔		1	1,8260C	0.50	<DL	<DL	5.0 µg/L	---
1,4 Dioxane	✔		1	1,8260C	3.0	<DL	<DL	200 µg/L	---
Acetone	✔		1	1,8260C	5.0	<DL	<DL	7.97 mg/L	---
Phenol	✔		1	1,8260C	5.0	<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	1,8260C	0.5	<DL	<DL,127.3	4.4 µg/L	
1,2 Dichlorobenzene	✔		1	1,8260C	2.5	<DL	<DL	600 µg/L	---
1,3 Dichlorobenzene	✔		1	1,8260C	2.5	<DL	<DL	320 µg/L	---
1,4 Dichlorobenzene	✔		1	1,8260C	2.5	<DL	<DL	5.0 µg/L	---
Total dichlorobenzene	✔		1	1,8260C	2.5	<DL	<DL	763 µg/L in NH	---
1,1 Dichloroethane	✔		1	1,8260C	0.5	<DL	<DL	70 µg/L	---
1,2 Dichloroethane	✔		1	1,8260C	0.5	<DL	<DL	5.0 µg/L	---
1,1 Dichloroethylene			0					3.2 µg/L	---
Ethylene Dibromide			0					0.05 µg/L	---
Methylene Chloride	✔		1	1,8260C	3.0	<DL	<DL	4.6 µg/L	---
1,1,1 Trichloroethane	✔		1	1,8260C	0.75	<DL	ND	200 µg/L	---
1,1,2 Trichloroethane	✔		1	1,8260C	0.75	<DL	ND	5.0 µg/L	---
Trichloroethylene	✔		0					5.0 µg/L	---
Tetrachloroethylene			1	1,8260C	0.5	<DL	<DL	5.0 µg/L	
cis-1,2 Dichloroethylene			0					70 µg/L	---
Vinyl Chloride	✔		1	1,8260C	1.0	<DL	<DL	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✔		1	1,8270D	5.0	<DL	<DL	190 µg/L	
Diethylhexyl phthalate	✔		1	1,8270D	5.0	<DL	<DL	101 µg/L	
Total Group I PAHs	✔		1	1,8270D	0.10	<DL	<DL	1.0 µg/L	---
Benzo(a)anthracene	✔		1	1,8270D	0.10	<DL	<DL	As Total PAHs	
Benzo(a)pyrene	✔		1	1,8270D	0.10	<DL	<DL		
Benzo(b)fluoranthene	✔		1	1,8270D	0.10	<DL	<DL		
Benzo(k)fluoranthene	✔		1	1,8270D	0.10	<DL	<DL		
Chrysene	✔		1	1,8270D	0.10	<DL	<DL		
Dibenzo(a,h)anthracene	✔		1	1,8270D	0.10	<DL	<DL		
Indeno(1,2,3-cd)pyrene	✔		1	1,8270D	0.10	<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	1,8270D	0.10	<DL	<DL	100 µg/L	---
Naphthalene	✔		1	1,8270D	2.5	<DL	<DL	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✔		1	5,608	0.250	<DL	<DL	0.000064 µg/L	---
Pentachlorophenol	✔		1	18270D	0.250	<DL	<DL	1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons		✔	1	74,1664A	400	<DL	<DL	5.0 mg/L	---
Ethanol			0					Report mg/L	---
Methyl-tert-Butyl Ether		✔	1	1,8260C	1.0	<DL	<DL	70 µg/L	
tert-Butyl Alcohol		✔	1	1,8260C	10	<DL	<DL	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether		✔	1	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			1	YSI		8.31			
Temperature			1	YSI		25 C			
Hardness			1	19,200.7		1850 mg/l			

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:
Use of GAC filter if necessary

2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.
Frac Tank, Bag Filters, and GAC/Ion Resin Exchange if Necessary

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: Frac Tank(s) Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	25
Provide the proposed maximum effluent flow in gpm.	25
Provide the average effluent flow in gpm.	5
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	n/a

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

F. Chemical and additive information

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

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

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

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

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

G. Endangered Species Act eligibility determination

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

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

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

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

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

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

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

H. National Historic Preservation Act eligibility determination

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

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

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

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

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

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.

NMFS Supporting Information

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 has been prepared in accordance with good engineering practices following Part 2.5 of the RGP and shall be implemented upon initiation of discharge.
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ■ No ☐
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested. 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 ☐ Submission of documentation to and approval from BWSC in tandem with this NOI Check one: Yes ☐ No ■ NA ☐
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ■ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Check one: Yes ■ No ☐ NA ☐
Signature: B.P. Kelly	Date: 9-28-17
Print Name and Title: Brian Kelly, Business Manager/FST/Trustee	

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

DEWATERING DISCHARGE PERMIT APPLICATION

OWNER / AUTHORIZED APPLICANT PROVIDE INFORMATION HERE:

Company Name: John Moriarty & Associates Address: 3 Church Street, Winchester MA 01890

Phone Number: _____ Fax number: _____

Contact person name: Stan Durlacher Title: _____

Cell number: 781-290-8580 Email address: sdurlacher@jm-a.com

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

Owner's Information (if different from above):

Owner of property being dewatered: Pipefitters Local 537 Educational Trust

Owner's mailing address: 35 Travis Street, Allston MA 02134 Phone number: 617 787 5370

Location of Discharge & Proposed Treatment System(s):

Street number and name: 40 Enterprise Street Neighborhood Dorchester

Discharge is to a: ☐ Sanitary Sewer ☐ Combined Sewer ☒ Storm Drain ☐ Other (specify): _____

Describe Proposed Pre-Treatment System(s): Frac Tank and Bag Filters - GAC and ION Resin (if necessary)

BWSC Outfall No. CSO 070 Receiving Waters Fort Point Channel via The Bass River

---

Temporary Discharges (Provide Anticipated Dates of Discharge): From 10/2017 To 09/2018

☐ Groundwater Remediation	☒ Tank Removal/Installation	☒ Foundation Excavation
☐ Utility/Manhole Pumping	☐ Test Pipe	☐ Trench Excavation
☒ Accumulated Surface Water	☐ Hydrogeologic Testing	☐ Other _____

Permanent Discharges

☐ Foundation Drainage	☐ Crawl Space/Footing Drain
☐ Accumulated Surface Water	☐ Non-contact/Uncontaminated Cooling
☐ Non-contact/Uncontaminated Process	☐ Other; _____

---

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

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

Signature of Authorized Representative for Property Owner: B.P.Kelly Date: 9-28-17

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

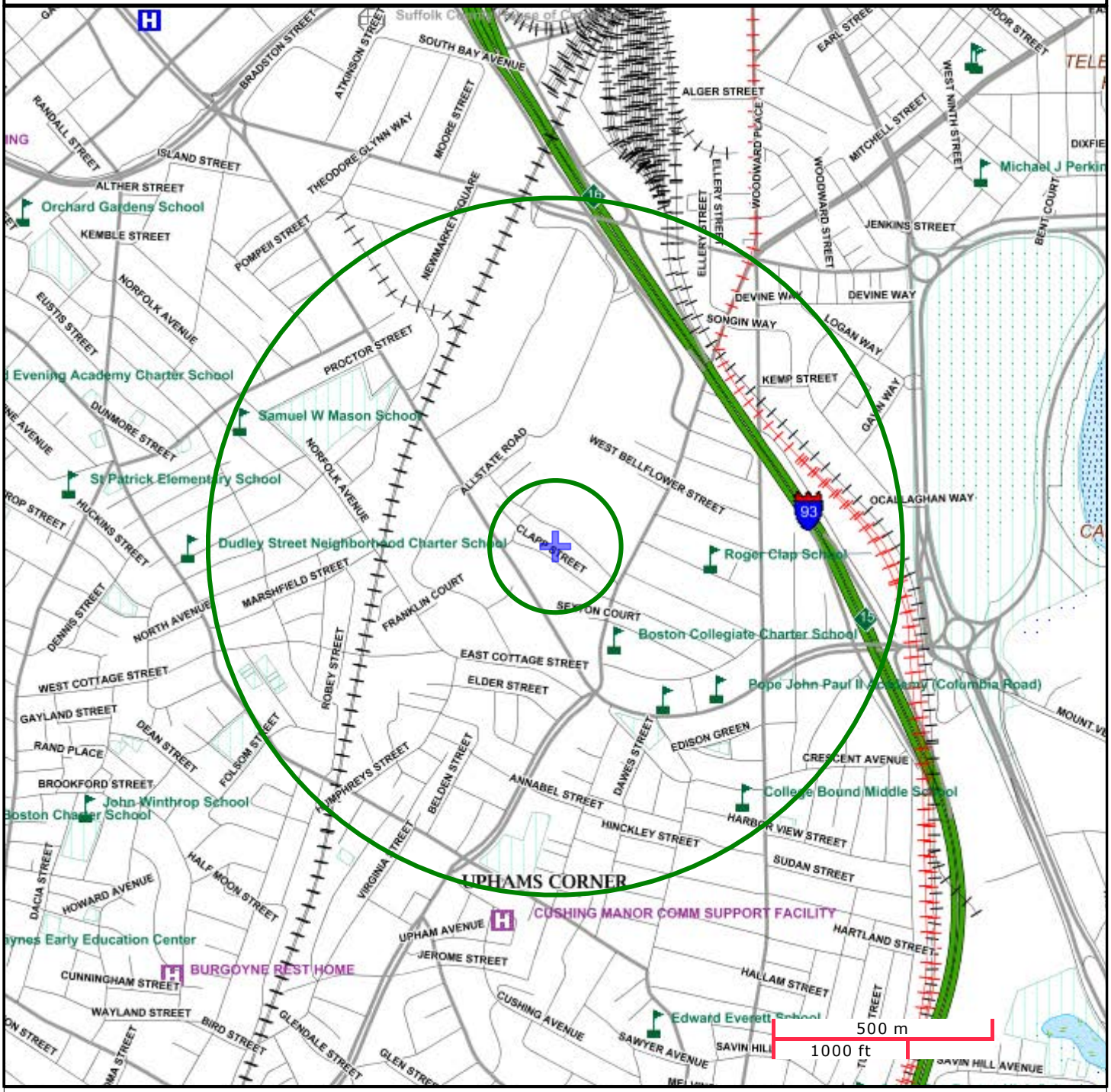
Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:
PIPEFITTERS
40 ENTERPRISE STREET BOSTON, MA

NAD83 UTM Meters:
4687759mN , 330044mE (Zone: 19)
July 31, 2017

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

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



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

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

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

Aquifers: Medium Yield, High Yield, EPA Sole Source

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

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

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

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

Flow Statistics Ungaged Site Report

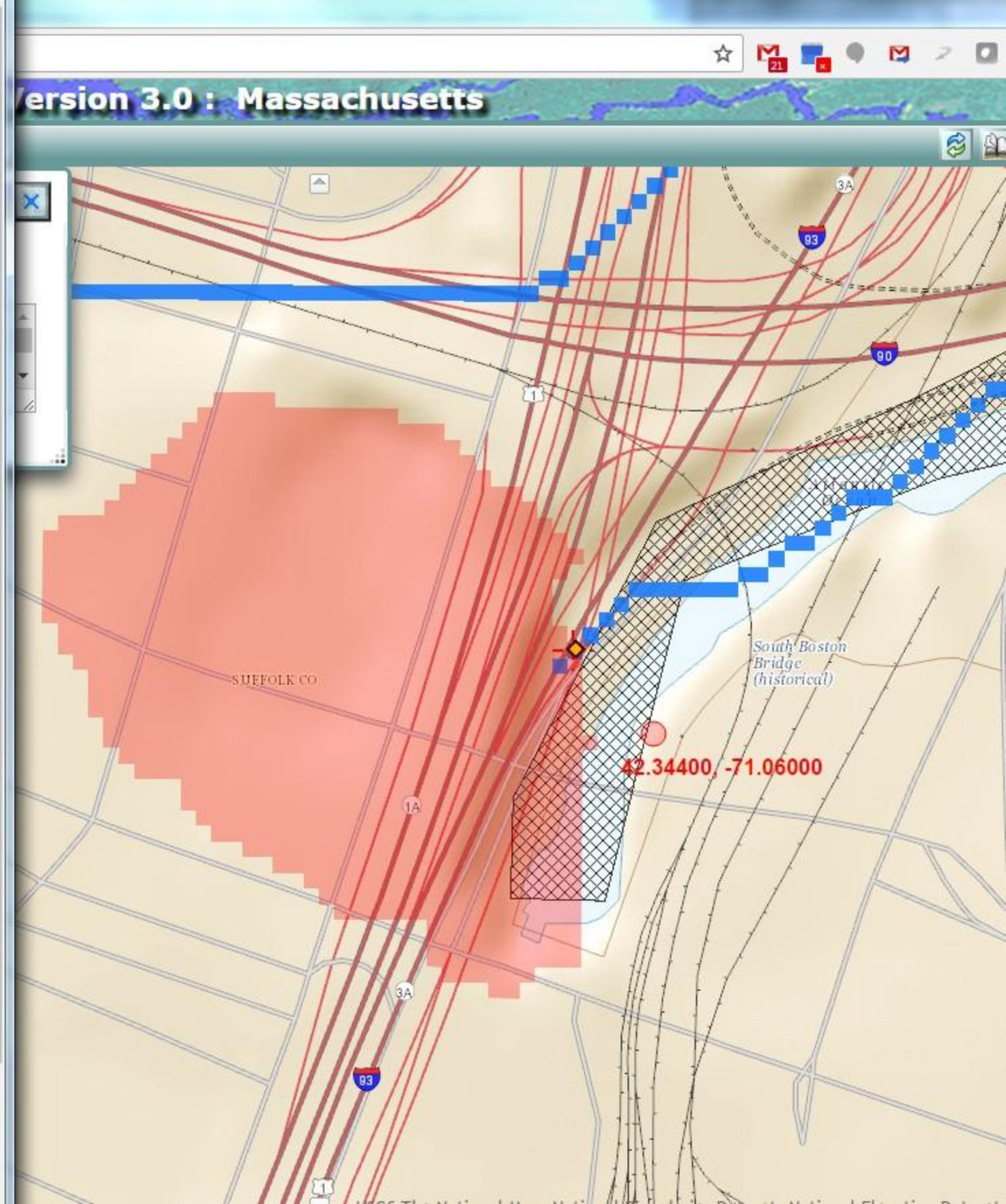
Date: Mon May 1, 2017 1:12:00 PM GMT-4
Study Area: Massachusetts
NAD 1983 Latitude: 42.3445 (42 20 40)
NAD 1983 Longitude: -71.0605 (-71 03 38)
Drainage_Area: 0.0361 mi2

Low Flows Basin Characteristics			
100% Statewide Low Flow WRIR00 4135 (0.0361 mi2)			
Parameter	Value	Regression Equation Valid Range	
		Min	Max
Drainage Area (square miles)	0.0361 (below min value 1.61)	1.61	149
Mean Basin Slope from 250K DEM (percent)	0.221 (below min value 0.32)	0.32	24.6
Stratified Drift per Stream Length (square mile per mile)	-100000 (below min value 0)	0	1.29
Massachusetts Region (dimensionless)	0	0	1

Warning: Some parameters are outside the suggested range. Estimates will be extrapolations with unknown errors.

Low Flows Statistics						
Statistic	Value	Unit	Prediction Error (percent)	Equivalent years of record	90-Percent Prediction Interval	
					Min	Max
D50	0.0323	ft3/s				
D60		ft3/s				
D70		ft3/s				
D75		ft3/s				
D80		ft3/s				
D85		ft3/s				
D90		ft3/s				
D95		ft3/s				
D98		ft3/s				
D99		ft3/s				
M7D2Y		ft3/s				
AUGD50		ft3/s				
M7D10Y		ft3/s				

http://pubs.usgs.gov/wri/wri004135/
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.



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: July 31, 2017
Consultation Code: 05E1NE00-2017-SLI-2329
Event Code: 05E1NE00-2017-E-05077
Project Name: 40 Enterprise Street - Pipefitters

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 05E1NE00-2017-SLI-2329

Event Code: 05E1NE00-2017-E-05077

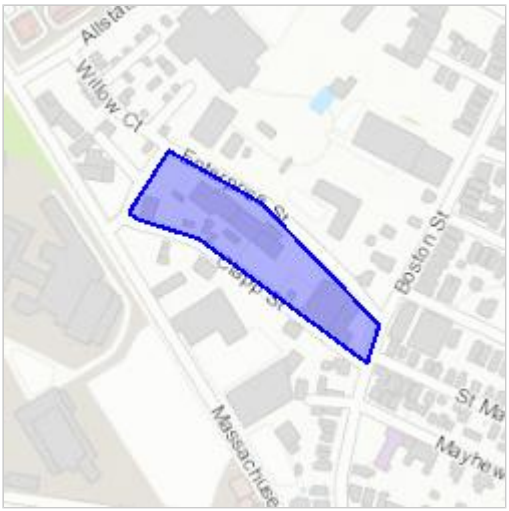
Project Name: 40 Enterprise Street - Pipefitters

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/42.32328614328346N71.06220839909119W



Counties: Suffolk, MA

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. 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.

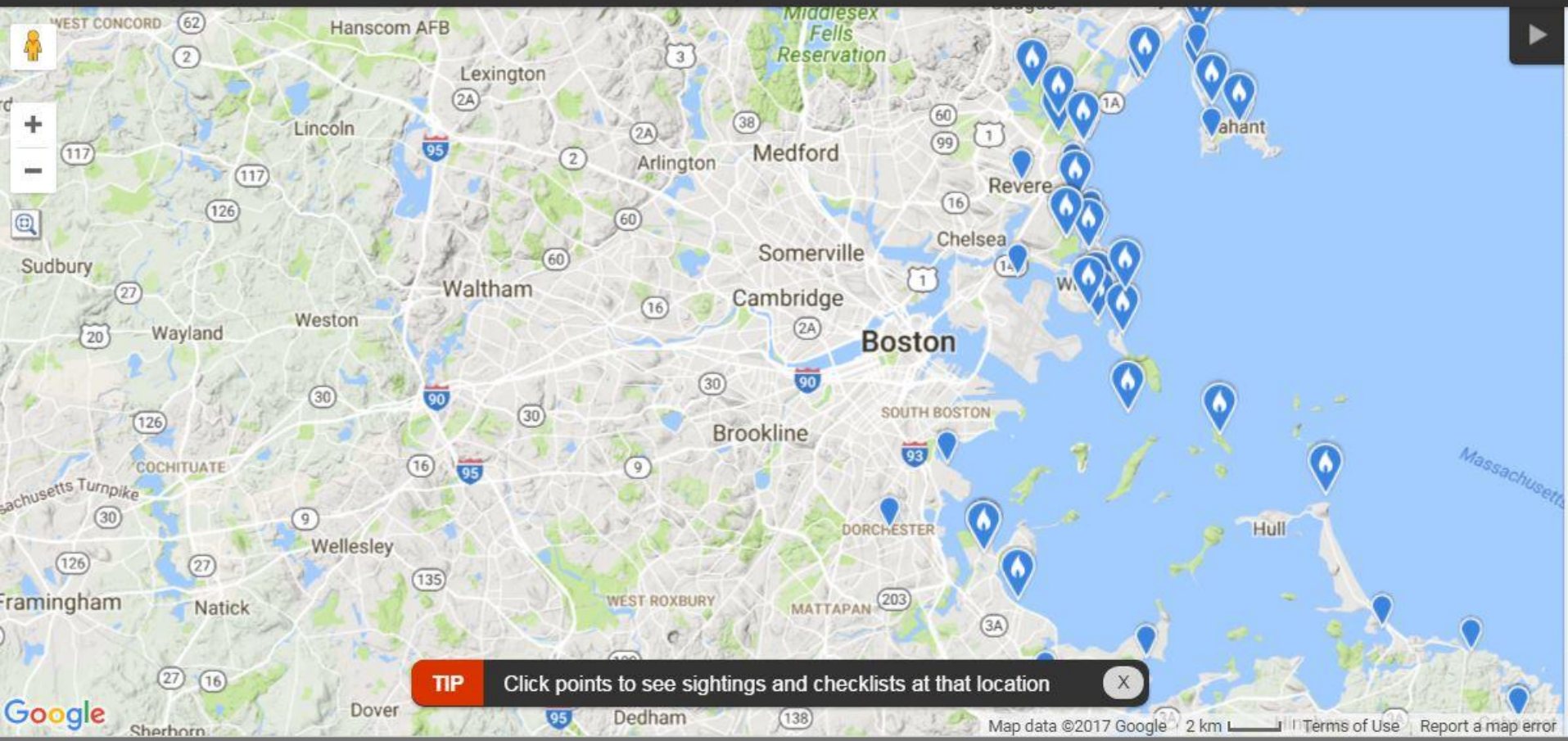
Birds

NAME	STATUS
Red Knot *Calidris canutus rufa* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened

Critical habitats

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

Species: Red Knot | Date: Year-Round, All Years | Location: Enter place name or address...



TIP Click points to see sightings and checklists at that location X

Zoom Tool

Full Species Range

- Terrain
- Street
- Satellite
- Hybrid

Explore Rich Media
Only show locations with photos, audio, or video

RECENT OLDER (30+ DAYS)

Show Points Sooner
Display points at broader scales when possible (2000 points max)

Birding Hotspot

Personal Location

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Street No: 40; Street Name: Enterprise St; Resource Type(s): Building, Area, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

APPENDIX D:

LABORATORY ANALYTICAL DATA – GROUNDWATER

ANALYTICAL REPORT

Lab Number:	L1721071
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	PIPEFITTERS TRAINING CENTER
Project Number:	6364.9.02
Report Date:	07/10/17

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: PIPEFITTERS TRAINING CENTER
Project Number: 6364.9.02

Lab Number: L1721071
Report Date: 07/10/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1721071-01	B-6 (OW)	WATER	BOSTON, MA	06/21/17 10:00	06/21/17

Project Name: PIPEFITTERS TRAINING CENTER **Lab Number:** L1721071
Project Number: 6364.9.02 **Report Date:** 07/10/17

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:	PIPEFITTERS TRAINING CENTER	**Lab Number:**	L1721071
Project Number:	6364.9.02	**Report Date:**	07/10/17

Case Narrative (continued)

Report Submission

This final report replaces the partial report issued June 27, 2017, and includes the results of all requested analyses.

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.

Semivolatile Organics

The WG1015820-3 LCSD recovery, associated with L1721071-01, is below the acceptance criteria for benzidine (8%); however, it has been identified as a "difficult" analyte. The results of the associated samples are reported.

TPH, SGT-HEM

The WG1015756-4 MS recovery (54%), performed on L1721071-01, is outside the acceptance criteria; however, the associated LCS recovery is within criteria. No further action was taken.

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

Authorized Signature:  Cristin Walker

Title: Technical Director/Representative Date: 07/10/17

ORGANICS

VOLATILES

Project Name: PIPEFITTERS TRAINING CENTER **Lab Number:** L1721071

Project Number: 6364.9.02 **Report Date:** 07/10/17

SAMPLE RESULTS

Lab ID: L1721071-01
Client ID: B-6 (OW)
Sample Location: BOSTON, MA

Date Collected: 06/21/17 10:00
Date Received: 06/21/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 06/27/17 08:48
Analyst: MM

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
Chloroform	ND		ug/l	0.75	--	1
Carbon tetrachloride	ND		ug/l	0.50	--	1
1,2-Dichloropropane	ND		ug/l	1.8	--	1
Dibromochloromethane	ND		ug/l	0.50	--	1
1,1,2-Trichloroethane	ND		ug/l	0.75	--	1
Tetrachloroethene	ND		ug/l	0.50	--	1
Chlorobenzene	ND		ug/l	0.50	--	1
Trichlorofluoromethane	ND		ug/l	2.5	--	1
1,2-Dichloroethane	ND		ug/l	0.50	--	1
1,1,1-Trichloroethane	ND		ug/l	0.50	--	1
Bromodichloromethane	ND		ug/l	0.50	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.5	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	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
Chloromethane	ND		ug/l	2.5	--	1
Bromomethane	ND		ug/l	1.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	1.0	--	1
1,1-Dichloroethene	ND		ug/l	0.50	--	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	--	1
1,2-Dichloroethene, Total	ND		ug/l	0.50	--	1
Trichloroethene	ND		ug/l	0.50	--	1

Project Name: PIPEFITTERS TRAINING CENTER **Lab Number:** L1721071

Project Number: 6364.9.02 **Report Date:** 07/10/17

SAMPLE RESULTS

Lab ID: L1721071-01 Date Collected: 06/21/17 10:00

Client ID: B-6 (OW) Date Received: 06/21/17

Sample Location: BOSTON, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
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
Dibromomethane	ND		ug/l	5.0	--	1
1,4-Dichlorobutane	ND		ug/l	5.0	--	1
1,2,3-Trichloropropane	ND		ug/l	5.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	5.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	5.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
Vinyl acetate	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Ethyl methacrylate	ND		ug/l	5.0	--	1
Acrylonitrile	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.5	--	1
Tetrahydrofuran	ND		ug/l	5.0	--	1
2,2-Dichloropropane	ND		ug/l	2.5	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.5	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	--	1
Bromobenzene	ND		ug/l	2.5	--	1
n-Butylbenzene	ND		ug/l	0.50	--	1
sec-Butylbenzene	ND		ug/l	0.50	--	1
tert-Butylbenzene	ND		ug/l	2.5	--	1
o-Chlorotoluene	ND		ug/l	2.5	--	1
p-Chlorotoluene	ND		ug/l	2.5	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	--	1
Hexachlorobutadiene	ND		ug/l	0.50	--	1
Isopropylbenzene	ND		ug/l	0.50	--	1
p-Isopropyltoluene	ND		ug/l	0.50	--	1
Naphthalene	ND		ug/l	2.5	--	1
n-Propylbenzene	ND		ug/l	0.50	--	1

Project Name: PIPEFITTERS TRAINING CENTER **Lab Number:** L1721071

Project Number: 6364.9.02 **Report Date:** 07/10/17

SAMPLE RESULTS

Lab ID: L1721071-01 Date Collected: 06/21/17 10:00

Client ID: B-6 (OW) Date Received: 06/21/17

Sample Location: BOSTON, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.5	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	--	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	--	1
Ethyl ether	ND		ug/l	2.5	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	86		70-130
Dibromofluoromethane	91		70-130

Project Name: PIPEFITTERS TRAINING CENTER **Lab Number:** L1721071

Project Number: 6364.9.02 **Report Date:** 07/10/17

SAMPLE RESULTS

Lab ID: L1721071-01
Client ID: B-6 (OW)
Sample Location: BOSTON, MA

Date Collected: 06/21/17 10:00
Date Received: 06/21/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C-SIM(M)
Analytical Date: 06/27/17 08:48
Analyst: MM

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: PIPEFITTERS TRAINING CENTER
Project Number: 6364.9.02
Lab Number: L1721071
Report Date: 07/10/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C-SIM(M)
Analytical Date: 06/27/17 06:34
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1017391-5					
1,4-Dioxane	ND		ug/l	3.0	--

Project Name: PIPEFITTERS TRAINING CENTER **Lab Number:** L1721071

Project Number: 6364.9.02 **Report Date:** 07/10/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/27/17 06:34
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1017399-5					
Methylene chloride	ND		ug/l	3.0	--
1,1-Dichloroethane	ND		ug/l	0.75	--
Chloroform	ND		ug/l	0.75	--
Carbon tetrachloride	ND		ug/l	0.50	--
1,2-Dichloropropane	ND		ug/l	1.8	--
Dibromochloromethane	ND		ug/l	0.50	--
1,1,2-Trichloroethane	ND		ug/l	0.75	--
2-Chloroethylvinyl ether	ND		ug/l	10	--
Tetrachloroethene	ND		ug/l	0.50	--
Chlorobenzene	ND		ug/l	0.50	--
Trichlorofluoromethane	ND		ug/l	2.5	--
1,2-Dichloroethane	ND		ug/l	0.50	--
1,1,1-Trichloroethane	ND		ug/l	0.50	--
Bromodichloromethane	ND		ug/l	0.50	--
trans-1,3-Dichloropropene	ND		ug/l	0.50	--
cis-1,3-Dichloropropene	ND		ug/l	0.50	--
1,3-Dichloropropene, Total	ND		ug/l	0.50	--
1,1-Dichloropropene	ND		ug/l	2.5	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	--
Benzene	ND		ug/l	0.50	--
Toluene	ND		ug/l	0.75	--
Ethylbenzene	ND		ug/l	0.50	--
Chloromethane	ND		ug/l	2.5	--
Bromomethane	ND		ug/l	1.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	1.0	--
1,1-Dichloroethene	ND		ug/l	0.50	--
trans-1,2-Dichloroethene	ND		ug/l	0.75	--

Project Name: PIPEFITTERS TRAINING CENTER **Lab Number:** L1721071

Project Number: 6364.9.02 **Report Date:** 07/10/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/27/17 06:34
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1017399-5					
1,2-Dichloroethene, Total	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	--
Dibromomethane	ND		ug/l	5.0	--
1,4-Dichlorobutane	ND		ug/l	5.0	--
1,2,3-Trichloropropane	ND		ug/l	5.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	5.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	5.0	--
2-Butanone	ND		ug/l	5.0	--
Vinyl acetate	ND		ug/l	5.0	--
4-Methyl-2-pentanone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Ethyl methacrylate	ND		ug/l	5.0	--
Acrylonitrile	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.5	--
Tetrahydrofuran	ND		ug/l	5.0	--
2,2-Dichloropropane	ND		ug/l	2.5	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.5	--
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	--

Project Name: PIPEFITTERS TRAINING CENTER **Lab Number:** L1721071

Project Number: 6364.9.02 **Report Date:** 07/10/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/27/17 06:34
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1017399-5					
Bromobenzene	ND		ug/l	2.5	--
n-Butylbenzene	ND		ug/l	0.50	--
sec-Butylbenzene	ND		ug/l	0.50	--
tert-Butylbenzene	ND		ug/l	2.5	--
o-Chlorotoluene	ND		ug/l	2.5	--
p-Chlorotoluene	ND		ug/l	2.5	--
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	--
Hexachlorobutadiene	ND		ug/l	0.50	--
Isopropylbenzene	ND		ug/l	0.50	--
p-Isopropyltoluene	ND		ug/l	0.50	--
Naphthalene	ND		ug/l	2.5	--
n-Propylbenzene	ND		ug/l	0.50	--
1,2,3-Trichlorobenzene	ND		ug/l	2.5	--
1,2,4-Trichlorobenzene	ND		ug/l	2.5	--
1,3,5-Trimethylbenzene	ND		ug/l	2.5	--
1,3,5-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.5	--
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	--
Halothane	ND		ug/l	2.5	--
Ethyl ether	ND		ug/l	2.5	--
Methyl Acetate	ND		ug/l	10	--
Ethyl Acetate	ND		ug/l	10	--
Isopropyl Ether	ND		ug/l	2.0	--
Cyclohexane	ND		ug/l	10	--
Tert-Butyl Alcohol	ND		ug/l	10	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	10	--
Methyl cyclohexane	ND		ug/l	10	--

Project Name: PIPEFITTERS TRAINING CENTER
Project Number: 6364.9.02
Lab Number: L1721071
Report Date: 07/10/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 06/27/17 06:34
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1017399-5					
p-Diethylbenzene	ND		ug/l	2.0	--
4-Ethyltoluene	ND		ug/l	2.0	--
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	88		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	88		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: PIPEFITTERS TRAINING CENTER

Project Number: 6364.9.02

Lab Number: L1721071

Report Date: 07/10/17

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: WG1017391-3 WG1017391-4								
1,4-Dioxane	100		100		70-130	0		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: PIPEFITTERS TRAINING CENTER

Project Number: 6364.9.02

Lab Number: L1721071

Report Date: 07/10/17

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: WG1017399-3 WG1017399-4								
Methylene chloride	110		100		70-130	10		20
1,1-Dichloroethane	99		99		70-130	0		20
Chloroform	98		100		70-130	2		20
Carbon tetrachloride	100		98		63-132	2		20
1,2-Dichloropropane	110		110		70-130	0		20
Dibromochloromethane	110		100		63-130	10		20
1,1,2-Trichloroethane	110		110		70-130	0		20
2-Chloroethylvinyl ether	120		120		70-130	0		20
Tetrachloroethene	100		110		70-130	10		20
Chlorobenzene	110		110		75-130	0		25
Trichlorofluoromethane	96		94		62-150	2		20
1,2-Dichloroethane	100		100		70-130	0		20
1,1,1-Trichloroethane	100		100		67-130	0		20
Bromodichloromethane	100		110		67-130	10		20
trans-1,3-Dichloropropene	100		100		70-130	0		20
cis-1,3-Dichloropropene	120		110		70-130	9		20
1,1-Dichloropropene	100		100		70-130	0		20
Bromoform	100		100		54-136	0		20
1,1,2,2-Tetrachloroethane	100		96		67-130	4		20
Benzene	100		100		70-130	0		25
Toluene	110		110		70-130	0		25
Ethylbenzene	110		110		70-130	0		20
Chloromethane	81		78		64-130	4		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: PIPEFITTERS TRAINING CENTER

Project Number: 6364.9.02

Lab Number: L1721071

Report Date: 07/10/17

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: WG1017399-3 WG1017399-4								
Bromomethane	61		74		39-139	19		20
Vinyl chloride	89		86		55-140	3		20
Chloroethane	83		83		55-138	0		20
1,1-Dichloroethene	90		90		61-145	0		25
trans-1,2-Dichloroethene	97		95		70-130	2		20
Trichloroethene	100		97		70-130	3		25
1,2-Dichlorobenzene	110		110		70-130	0		20
1,3-Dichlorobenzene	100		100		70-130	0		20
1,4-Dichlorobenzene	110		110		70-130	0		20
Methyl tert butyl ether	110		100		63-130	10		20
p/m-Xylene	120		115		70-130	4		20
o-Xylene	110		110		70-130	0		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Dibromomethane	100		100		70-130	0		20
1,4-Dichlorobutane	100		97		70-130	3		20
1,2,3-Trichloropropane	100		100		64-130	0		20
Styrene	115		120		70-130	4		20
Dichlorodifluoromethane	94		89		36-147	5		20
Acetone	120		120		58-148	0		20
Carbon disulfide	75		66		51-130	13		20
2-Butanone	120		130		63-138	8		20
Vinyl acetate	110		110		70-130	0		20
4-Methyl-2-pentanone	120		130		59-130	8		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: PIPEFITTERS TRAINING CENTER

Project Number: 6364.9.02

Lab Number: L1721071

Report Date: 07/10/17

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: WG1017399-3 WG1017399-4								
2-Hexanone	110		120		57-130	9		20
Ethyl methacrylate	120		120		70-130	0		20
Acrylonitrile	120		120		70-130	0		20
Bromochloromethane	99		98		70-130	1		20
Tetrahydrofuran	120		130		58-130	8		20
2,2-Dichloropropane	100		100		63-133	0		20
1,2-Dibromoethane	100		100		70-130	0		20
1,3-Dichloropropane	110		110		70-130	0		20
1,1,1,2-Tetrachloroethane	110		110		64-130	0		20
Bromobenzene	94		89		70-130	5		20
n-Butylbenzene	110		120		53-136	9		20
sec-Butylbenzene	100		98		70-130	2		20
tert-Butylbenzene	100		100		70-130	0		20
o-Chlorotoluene	100		100		70-130	0		20
p-Chlorotoluene	100		100		70-130	0		20
1,2-Dibromo-3-chloropropane	86		110		41-144	**24**	Q	20
Hexachlorobutadiene	84		92		63-130	9		20
Isopropylbenzene	99		100		70-130	1		20
p-Isopropyltoluene	110		110		70-130	0		20
Naphthalene	100		110		70-130	10		20
n-Propylbenzene	100		100		69-130	0		20
1,2,3-Trichlorobenzene	110		110		70-130	0		20
1,2,4-Trichlorobenzene	110		110		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: PIPEFITTERS TRAINING CENTER

Project Number: 6364.9.02

Lab Number: L1721071

Report Date: 07/10/17

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: WG1017399-3 WG1017399-4								
1,3,5-Trimethylbenzene	110		110		64-130	0		20
1,3,5-Trichlorobenzene	130		120		70-130	8		20
1,2,4-Trimethylbenzene	110		120		70-130	9		20
trans-1,4-Dichloro-2-butene	91		88		70-130	3		20
Halothane	100		100		70-130	0		20
Ethyl ether	99		100		59-134	1		20
Methyl Acetate	98		110		70-130	12		20
Ethyl Acetate	110		110		70-130	0		20
Isopropyl Ether	110		110		70-130	0		20
Cyclohexane	100		100		70-130	0		20
Tert-Butyl Alcohol	122		126		70-130	3		20
Ethyl-Tert-Butyl-Ether	110		120		70-130	9		20
Tertiary-Amyl Methyl Ether	120		120		66-130	0		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	100		97		70-130	3		20
Methyl cyclohexane	110		100		70-130	10		20
p-Diethylbenzene	120		120		70-130	0		20
4-Ethyltoluene	110		110		70-130	0		20
1,2,4,5-Tetramethylbenzene	130		130		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: PIPEFITTERS TRAINING CENTER

Project Number: 6364.9.02

Lab Number: L1721071

Report Date: 07/10/17

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: WG1017399-3 WG1017399-4								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	94		90		70-130
Toluene-d8	107		106		70-130
4-Bromofluorobenzene	90		86		70-130
Dibromofluoromethane	95		93		70-130

SEMIVOLATILES

Project Name: PIPEFITTERS TRAINING CENTER **Lab Number:** L1721071

Project Number: 6364.9.02 **Report Date:** 07/10/17

SAMPLE RESULTS

Lab ID: L1721071-01
Client ID: B-6 (OW)
Sample Location: BOSTON, MA

Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 06/25/17 06:01
Analyst: CB

Date Collected: 06/21/17 10:00
Date Received: 06/21/17
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 06/22/17 21:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzidine	ND		ug/l	20	--	1
1,2,4-Trichlorobenzene	ND		ug/l	5.0	--	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	--	1
1,2-Dichlorobenzene	ND		ug/l	2.0	--	1
1,3-Dichlorobenzene	ND		ug/l	2.0	--	1
1,4-Dichlorobenzene	ND		ug/l	2.0	--	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	--	1
2,4-Dinitrotoluene	ND		ug/l	5.0	--	1
2,6-Dinitrotoluene	ND		ug/l	5.0	--	1
Azobenzene	ND		ug/l	2.0	--	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	--	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	--	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	--	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	--	1
Hexachlorocyclopentadiene	ND		ug/l	20	--	1
Isophorone	ND		ug/l	5.0	--	1
Nitrobenzene	ND		ug/l	2.0	--	1
NDPA/DPA	ND		ug/l	2.0	--	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	--	1
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
Biphenyl	ND		ug/l	2.0	--	1
Aniline	ND		ug/l	2.0	--	1
4-Chloroaniline	ND		ug/l	5.0	--	1
2-Nitroaniline	ND		ug/l	5.0	--	1
3-Nitroaniline	ND		ug/l	5.0	--	1

Project Name: PIPEFITTERS TRAINING CENTER **Lab Number:** L1721071

Project Number: 6364.9.02 **Report Date:** 07/10/17

SAMPLE RESULTS

Lab ID: L1721071-01 Date Collected: 06/21/17 10:00

Client ID: B-6 (OW) Date Received: 06/21/17

Sample Location: BOSTON, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
4-Nitroaniline	ND		ug/l	5.0	--	1
Dibenzofuran	ND		ug/l	2.0	--	1
n-Nitrosodimethylamine	ND		ug/l	2.0	--	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	--	1
p-Chloro-m-cresol	ND		ug/l	2.0	--	1
2-Chlorophenol	ND		ug/l	2.0	--	1
2,4-Dichlorophenol	ND		ug/l	5.0	--	1
2,4-Dimethylphenol	ND		ug/l	5.0	--	1
2-Nitrophenol	ND		ug/l	10	--	1
4-Nitrophenol	ND		ug/l	10	--	1
2,4-Dinitrophenol	ND		ug/l	20	--	1
4,6-Dinitro-o-cresol	ND		ug/l	10	--	1
Phenol	ND		ug/l	5.0	--	1
2-Methylphenol	ND		ug/l	5.0	--	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	--	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	--	1
Benzoic Acid	ND		ug/l	50	--	1
Benzyl Alcohol	ND		ug/l	2.0	--	1
Carbazole	ND		ug/l	2.0	--	1
Pyridine	ND		ug/l	3.5	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	49		21-120
Phenol-d6	36		10-120
Nitrobenzene-d5	80		23-120
2-Fluorobiphenyl	82		15-120
2,4,6-Tribromophenol	97		10-120
4-Terphenyl-d14	86		41-149

Project Name: PIPEFITTERS TRAINING CENTER
Lab Number: L1721071
Project Number: 6364.9.02
Report Date: 07/10/17

SAMPLE RESULTS

Lab ID: L1721071-01
Client ID: B-6 (OW)
Sample Location: BOSTON, MA

Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 06/23/17 19:56
Analyst: KL

Date Collected: 06/21/17 10:00
Date Received: 06/21/17
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 06/22/17 21:21

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	--	1
2-Chloronaphthalene	ND		ug/l	0.20	--	1
Fluoranthene	ND		ug/l	0.10	--	1
Hexachlorobutadiene	ND		ug/l	0.50	--	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
1-Methylnaphthalene	ND		ug/l	0.10	--	1
2-Methylnaphthalene	ND		ug/l	0.10	--	1
Pentachlorophenol	ND		ug/l	0.80	--	1
Hexachlorobenzene	ND		ug/l	0.80	--	1
Hexachloroethane	ND		ug/l	0.80	--	1

Project Name: PIPEFITTERS TRAINING CENTER **Lab Number:** L1721071

Project Number: 6364.9.02 **Report Date:** 07/10/17

SAMPLE RESULTS

Lab ID: L1721071-01 Date Collected: 06/21/17 10:00

Client ID: B-6 (OW) Date Received: 06/21/17

Sample Location: BOSTON, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		21-120
Phenol-d6	41		10-120
Nitrobenzene-d5	99		23-120
2-Fluorobiphenyl	95		15-120
2,4,6-Tribromophenol	**124**	Q	10-120
4-Terphenyl-d14	106		41-149

Project Name: PIPEFITTERS TRAINING CENTER
Project Number: 6364.9.02
Lab Number: L1721071
Report Date: 07/10/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 06/23/17 00:47
Analyst: RC

Extraction Method: EPA 3510C
Extraction Date: 06/22/17 10:25

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1015820-1					
Acenaphthene	ND		ug/l	2.0	--
Benzidine	ND		ug/l	20	--
1,2,4-Trichlorobenzene	ND		ug/l	5.0	--
Hexachlorobenzene	ND		ug/l	2.0	--
Bis(2-chloroethyl)ether	ND		ug/l	2.0	--
2-Chloronaphthalene	ND		ug/l	2.0	--
1,2-Dichlorobenzene	ND		ug/l	2.0	--
1,3-Dichlorobenzene	ND		ug/l	2.0	--
1,4-Dichlorobenzene	ND		ug/l	2.0	--
3,3'-Dichlorobenzidine	ND		ug/l	5.0	--
2,4-Dinitrotoluene	ND		ug/l	5.0	--
2,6-Dinitrotoluene	ND		ug/l	5.0	--
Azobenzene	ND		ug/l	2.0	--
Fluoranthene	ND		ug/l	2.0	--
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	--
4-Bromophenyl phenyl ether	ND		ug/l	2.0	--
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	--
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	--
Hexachlorobutadiene	ND		ug/l	2.0	--
Hexachlorocyclopentadiene	ND		ug/l	20	--
Hexachloroethane	ND		ug/l	2.0	--
Isophorone	ND		ug/l	5.0	--
Naphthalene	ND		ug/l	2.0	--
Nitrobenzene	ND		ug/l	2.0	--
NDPA/DPA	ND		ug/l	2.0	--
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	--
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	--

Project Name: PIPEFITTERS TRAINING CENTER
Project Number: 6364.9.02
Lab Number: L1721071
Report Date: 07/10/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 06/23/17 00:47
Analyst: RC

Extraction Method: EPA 3510C
Extraction Date: 06/22/17 10:25

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1015820-1					
Di-n-octylphthalate	ND		ug/l	5.0	--
Diethyl phthalate	ND		ug/l	5.0	--
Dimethyl phthalate	ND		ug/l	5.0	--
Benzo(a)anthracene	ND		ug/l	2.0	--
Benzo(a)pyrene	ND		ug/l	2.0	--
Benzo(b)fluoranthene	ND		ug/l	2.0	--
Benzo(k)fluoranthene	ND		ug/l	2.0	--
Chrysene	ND		ug/l	2.0	--
Acenaphthylene	ND		ug/l	2.0	--
Anthracene	ND		ug/l	2.0	--
Benzo(ghi)perylene	ND		ug/l	2.0	--
Fluorene	ND		ug/l	2.0	--
Phenanthrene	ND		ug/l	2.0	--
Dibenzo(a,h)anthracene	ND		ug/l	2.0	--
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	--
Pyrene	ND		ug/l	2.0	--
Biphenyl	ND		ug/l	2.0	--
Aniline	ND		ug/l	2.0	--
4-Chloroaniline	ND		ug/l	5.0	--
1-Methylnaphthalene	ND		ug/l	2.0	--
2-Nitroaniline	ND		ug/l	5.0	--
3-Nitroaniline	ND		ug/l	5.0	--
4-Nitroaniline	ND		ug/l	5.0	--
Dibenzofuran	ND		ug/l	2.0	--
2-Methylnaphthalene	ND		ug/l	2.0	--
n-Nitrosodimethylamine	ND		ug/l	2.0	--
2,4,6-Trichlorophenol	ND		ug/l	5.0	--
p-Chloro-m-cresol	ND		ug/l	2.0	--
2-Chlorophenol	ND		ug/l	2.0	--

Project Name: PIPEFITTERS TRAINING CENTER
Project Number: 6364.9.02
Lab Number: L1721071
Report Date: 07/10/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 06/23/17 00:47
Analyst: RC

Extraction Method: EPA 3510C
Extraction Date: 06/22/17 10:25

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1015820-1					
2,4-Dichlorophenol	ND		ug/l	5.0	--
2,4-Dimethylphenol	ND		ug/l	5.0	--
2-Nitrophenol	ND		ug/l	10	--
4-Nitrophenol	ND		ug/l	10	--
2,4-Dinitrophenol	ND		ug/l	20	--
4,6-Dinitro-o-cresol	ND		ug/l	10	--
Pentachlorophenol	ND		ug/l	10	--
Phenol	ND		ug/l	5.0	--
2-Methylphenol	ND		ug/l	5.0	--
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	--
2,4,5-Trichlorophenol	ND		ug/l	5.0	--
Benzoic Acid	ND		ug/l	50	--
Benzyl Alcohol	ND		ug/l	2.0	--
Carbazole	ND		ug/l	2.0	--
Pyridine	ND		ug/l	3.5	--
Tentatively Identified Compounds					
No Tentatively Identified Compounds	ND		ug/l		

Project Name: PIPEFITTERS TRAINING CENTER
Project Number: 6364.9.02
Lab Number: L1721071
Report Date: 07/10/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 06/23/17 00:47
Analyst: RC

Extraction Method: EPA 3510C
Extraction Date: 06/22/17 10:25

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1015820-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	40		21-120
Phenol-d6	30		10-120
Nitrobenzene-d5	74		23-120
2-Fluorobiphenyl	67		15-120
2,4,6-Tribromophenol	70		10-120
4-Terphenyl-d14	73		41-149

Project Name: PIPEFITTERS TRAINING CENTER
Project Number: 6364.9.02
Lab Number: L1721071
Report Date: 07/10/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 06/23/17 01:15
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 06/22/17 10:27

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1015821-1					
Acenaphthene	ND		ug/l	0.10	--
2-Chloronaphthalene	ND		ug/l	0.20	--
Fluoranthene	ND		ug/l	0.10	--
Hexachlorobutadiene	ND		ug/l	0.50	--
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	--
1-Methylnaphthalene	ND		ug/l	0.10	--
2-Methylnaphthalene	ND		ug/l	0.10	--
Pentachlorophenol	ND		ug/l	0.80	--
Hexachlorobenzene	ND		ug/l	0.80	--
Hexachloroethane	ND		ug/l	0.80	--

Project Name: PIPEFITTERS TRAINING CENTER
Project Number: 6364.9.02

Lab Number: L1721071
Report Date: 07/10/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 06/23/17 01:15
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 06/22/17 10:27

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1015821-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	36		21-120
Phenol-d6	25		10-120
Nitrobenzene-d5	63		23-120
2-Fluorobiphenyl	60		15-120
2,4,6-Tribromophenol	73		10-120
4-Terphenyl-d14	64		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: PIPEFITTERS TRAINING CENTER

Project Number: 6364.9.02

Lab Number: L1721071

Report Date: 07/10/17

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: WG1015820-2 WG1015820-3								
Acenaphthene	65		62		37-111	5		30
Benzidine	18		**8**	Q	10-75	**74**	Q	30
1,2,4-Trichlorobenzene	63		59		39-98	7		30
Hexachlorobenzene	70		75		40-140	7		30
Bis(2-chloroethyl)ether	73		70		40-140	4		30
2-Chloronaphthalene	68		65		40-140	5		30
1,2-Dichlorobenzene	59		56		40-140	5		30
1,3-Dichlorobenzene	58		53		40-140	9		30
1,4-Dichlorobenzene	60		54		36-97	11		30
3,3'-Dichlorobenzidine	50		52		40-140	4		30
2,4-Dinitrotoluene	76		77		48-143	1		30
2,6-Dinitrotoluene	78		79		40-140	1		30
Azobenzene	67		67		40-140	0		30
Fluoranthene	69		71		40-140	3		30
4-Chlorophenyl phenyl ether	72		73		40-140	1		30
4-Bromophenyl phenyl ether	77		81		40-140	5		30
Bis(2-chloroisopropyl)ether	60		59		40-140	2		30
Bis(2-chloroethoxy)methane	76		76		40-140	0		30
Hexachlorobutadiene	61		54		40-140	12		30
Hexachlorocyclopentadiene	56		55		40-140	2		30
Hexachloroethane	54		52		40-140	4		30
Isophorone	76		79		40-140	4		30
Naphthalene	65		61		40-140	6		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: PIPEFITTERS TRAINING CENTER

Project Number: 6364.9.02

Lab Number: L1721071

Report Date: 07/10/17

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: WG1015820-2 WG1015820-3								
Nitrobenzene	78		76		40-140	3		30
NDPA/DPA	71		79		40-140	11		30
n-Nitrosodi-n-propylamine	75		74		29-132	1		30
Bis(2-ethylhexyl)phthalate	67		72		40-140	7		30
Butyl benzyl phthalate	70		72		40-140	3		30
Di-n-butylphthalate	65		68		40-140	5		30
Di-n-octylphthalate	69		71		40-140	3		30
Diethyl phthalate	67		70		40-140	4		30
Dimethyl phthalate	76		76		40-140	0		30
Benzo(a)anthracene	67		67		40-140	0		30
Benzo(a)pyrene	72		73		40-140	1		30
Benzo(b)fluoranthene	71		72		40-140	1		30
Benzo(k)fluoranthene	72		72		40-140	0		30
Chrysene	66		68		40-140	3		30
Acenaphthylene	71		71		45-123	0		30
Anthracene	64		66		40-140	3		30
Benzo(ghi)perylene	68		66		40-140	3		30
Fluorene	67		69		40-140	3		30
Phenanthrene	66		66		40-140	0		30
Dibenzo(a,h)anthracene	70		68		40-140	3		30
Indeno(1,2,3-cd)pyrene	70		68		40-140	3		30
Pyrene	68		71		26-127	4		30
Biphenyl	71		69		40-140	3		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: PIPEFITTERS TRAINING CENTER

Project Number: 6364.9.02

Lab Number: L1721071

Report Date: 07/10/17

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: WG1015820-2 WG1015820-3								
Aniline	46		41		40-140	11		30
4-Chloroaniline	50		47		40-140	6		30
1-Methylnaphthalene	65		60		41-103	8		30
2-Nitroaniline	84		88		52-143	5		30
3-Nitroaniline	58		63		25-145	8		30
4-Nitroaniline	77		83		51-143	8		30
Dibenzofuran	68		67		40-140	1		30
2-Methylnaphthalene	63		62		40-140	2		30
n-Nitrosodimethylamine	45		42		22-74	7		30
2,4,6-Trichlorophenol	83		80		30-130	4		30
p-Chloro-m-cresol	79		80		23-97	1		30
2-Chlorophenol	73		72		27-123	1		30
2,4-Dichlorophenol	79		80		30-130	1		30
2,4-Dimethylphenol	81		81		30-130	0		30
2-Nitrophenol	84		85		30-130	1		30
4-Nitrophenol	47		46		10-80	2		30
2,4-Dinitrophenol	93		96		20-130	3		30
4,6-Dinitro-o-cresol	86		88		20-164	2		30
Pentachlorophenol	81		80		9-103	1		30
Phenol	37		36		12-110	3		30
2-Methylphenol	67		68		30-130	1		30
3-Methylphenol/4-Methylphenol	65		64		30-130	2		30
2,4,5-Trichlorophenol	80		82		30-130	2		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: PIPEFITTERS TRAINING CENTER

Project Number: 6364.9.02

Lab Number: L1721071

Report Date: 07/10/17

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: WG1015820-2 WG1015820-3								
Benzoic Acid	44		44		10-164	0		30
Benzyl Alcohol	64		64		26-116	0		30
Carbazole	67		68		55-144	1		30
Pyridine	22		15		10-66	**38**	Q	30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	47		46		21-120
Phenol-d6	36		33		10-120
Nitrobenzene-d5	78		80		23-120
2-Fluorobiphenyl	70		66		15-120
2,4,6-Tribromophenol	76		79		10-120
4-Terphenyl-d14	69		73		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: PIPEFITTERS TRAINING CENTER

Project Number: 6364.9.02

Lab Number: L1721071

Report Date: 07/10/17

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: WG1015821-2 WG1015821-3								
Acenaphthene	75		67		37-111	11		40
2-Chloronaphthalene	77		70		40-140	10		40
Fluoranthene	82		72		40-140	13		40
Hexachlorobutadiene	73		68		40-140	7		40
Naphthalene	72		67		40-140	7		40
Benzo(a)anthracene	79		70		40-140	12		40
Benzo(a)pyrene	79		70		40-140	12		40
Benzo(b)fluoranthene	82		72		40-140	13		40
Benzo(k)fluoranthene	76		68		40-140	11		40
Chrysene	75		66		40-140	13		40
Acenaphthylene	86		77		40-140	11		40
Anthracene	78		68		40-140	14		40
Benzo(ghi)perylene	75		66		40-140	13		40
Fluorene	81		72		40-140	12		40
Phenanthrene	74		65		40-140	13		40
Dibenzo(a,h)anthracene	77		69		40-140	11		40
Indeno(1,2,3-cd)pyrene	82		73		40-140	12		40
Pyrene	81		71		26-127	13		40
1-Methylnaphthalene	76		70		40-140	8		40
2-Methylnaphthalene	75		70		40-140	7		40
Pentachlorophenol	67		59		9-103	13		40
Hexachlorobenzene	79		70		40-140	12		40
Hexachloroethane	71		68		40-140	4		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: PIPEFITTERS TRAINING CENTER

Project Number: 6364.9.02

Lab Number: L1721071

Report Date: 07/10/17

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: WG1015821-2 WG1015821-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	49		45		21-120
Phenol-d6	34		30		10-120
Nitrobenzene-d5	77		71		23-120
2-Fluorobiphenyl	75		69		15-120
2,4,6-Tribromophenol	97		85		10-120
4-Terphenyl-d14	78		69		41-149

METALS

Project Name: PIPEFITTERS TRAINING CENTER
Lab Number: L1721071
Project Number: 6364.9.02
Report Date: 07/10/17

SAMPLE RESULTS

Lab ID: L1721071-01
Client ID: B-6 (OW)
Sample Location: BOSTON, MA
Matrix: Water

Date Collected: 06/21/17 10:00
Date Received: 06/21/17
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	06/23/17 11:12	06/24/17 13:44	EPA 3005A	3,200.8	BV
Arsenic, Total	0.00190		mg/l	0.00100	--	1	06/23/17 11:12	06/24/17 13:44	EPA 3005A	3,200.8	BV
Cadmium, Total	0.00023		mg/l	0.00020	--	1	06/23/17 11:12	06/24/17 13:44	EPA 3005A	3,200.8	BV
Chromium, Total	0.00263		mg/l	0.00100	--	1	06/23/17 11:12	06/24/17 13:44	EPA 3005A	3,200.8	BV
Copper, Total	0.01022		mg/l	0.00100	--	1	06/23/17 11:12	06/24/17 13:44	EPA 3005A	3,200.8	BV
Iron, Total	2.45		mg/l	0.050	--	1	06/23/17 11:12	06/24/17 14:05	EPA 3005A	19,200.7	AM
Lead, Total	0.01411		mg/l	0.00100	--	1	06/23/17 11:12	06/24/17 13:44	EPA 3005A	3,200.8	BV
Mercury, Total	ND		mg/l	0.00020	--	1	06/23/17 14:14	06/23/17 18:17	EPA 245.1	3,245.1	EA
Nickel, Total	0.00349		mg/l	0.00200	--	1	06/23/17 11:12	06/24/17 13:44	EPA 3005A	3,200.8	BV
Selenium, Total	ND		mg/l	0.00500	--	1	06/23/17 11:12	06/24/17 13:44	EPA 3005A	3,200.8	BV
Silver, Total	ND		mg/l	0.00100	--	1	06/23/17 11:12	06/24/17 13:44	EPA 3005A	3,200.8	BV
Zinc, Total	0.02843		mg/l	0.01000	--	1	06/23/17 11:12	06/24/17 13:44	EPA 3005A	3,200.8	BV
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		06/24/17 13:44	NA	107,-	

Project Name: PIPEFITTERS TRAINING CENTER **Lab Number:** L1721071

Project Number: 6364.9.02 **Report Date:** 07/10/17

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 Batch: WG1016252-1										
Iron, Total	ND		mg/l	0.050	--	1	06/23/17 11:12	06/24/17 10:38	19,200.7	AM

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1016254-1										
Antimony, Total	ND		mg/l	0.00400	--	1	06/23/17 11:12	06/24/17 12:55	3,200.8	BV
Arsenic, Total	ND		mg/l	0.00100	--	1	06/23/17 11:12	06/24/17 12:55	3,200.8	BV
Cadmium, Total	ND		mg/l	0.00020	--	1	06/23/17 11:12	06/24/17 12:55	3,200.8	BV
Chromium, Total	ND		mg/l	0.00100	--	1	06/23/17 11:12	06/24/17 12:55	3,200.8	BV
Copper, Total	ND		mg/l	0.00100	--	1	06/23/17 11:12	06/24/17 12:55	3,200.8	BV
Lead, Total	ND		mg/l	0.00100	--	1	06/23/17 11:12	06/24/17 12:55	3,200.8	BV
Nickel, Total	ND		mg/l	0.00200	--	1	06/23/17 11:12	06/24/17 12:55	3,200.8	BV
Selenium, Total	ND		mg/l	0.00500	--	1	06/23/17 11:12	06/24/17 12:55	3,200.8	BV
Silver, Total	ND		mg/l	0.00100	--	1	06/23/17 11:12	06/24/17 12:55	3,200.8	BV
Zinc, Total	ND		mg/l	0.01000	--	1	06/23/17 11:12	06/24/17 12:55	3,200.8	BV

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: WG1016397-1										
Mercury, Total	ND		mg/l	0.00020	--	1	06/23/17 14:14	06/23/17 17:51	3,245.1	EA

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: PIPEFITTERS TRAINING CENTER

Project Number: 6364.9.02

Lab Number: L1721071

Report Date: 07/10/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1016252-2								
Iron, Total	104		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1016254-2								
Antimony, Total	101		-		85-115	-		
Arsenic, Total	108		-		85-115	-		
Cadmium, Total	112		-		85-115	-		
Chromium, Total	101		-		85-115	-		
Copper, Total	102		-		85-115	-		
Lead, Total	104		-		85-115	-		
Nickel, Total	101		-		85-115	-		
Selenium, Total	115		-		85-115	-		
Silver, Total	103		-		85-115	-		
Zinc, Total	112		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1016397-2								
Mercury, Total	111		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: PIPEFITTERS TRAINING CENTER
Project Number: 6364.9.02

Lab Number: L1721071
Report Date: 07/10/17

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 QC Batch ID: WG1016252-3 QC Sample: L1721204-06 Client ID: MS Sample												
Iron, Total	2.06	1	3.13	107		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1016252-7 QC Sample: L1720567-01 Client ID: MS Sample												
Iron, Total	2.92	1	3.72	80		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1016254-3 QC Sample: L1721204-06 Client ID: MS Sample												
Antimony, Total	ND	0.5	0.5088	102		-	-		70-130	-		20
Arsenic, Total	0.02420	0.12	0.1530	107		-	-		70-130	-		20
Cadmium, Total	0.00042	0.051	0.05806	113		-	-		70-130	-		20
Chromium, Total	0.00252	0.2	0.2013	99		-	-		70-130	-		20
Copper, Total	0.0070	0.25	0.2566	100		-	-		70-130	-		20
Lead, Total	0.00189	0.51	0.5280	103		-	-		70-130	-		20
Nickel, Total	0.01654	0.5	0.5115	99		-	-		70-130	-		20
Selenium, Total	0.2020	0.12	0.3544	127		-	-		70-130	-		20
Silver, Total	ND	0.05	0.05027	100		-	-		70-130	-		20
Zinc, Total	0.04036	0.5	0.5908	110		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1016397-3 QC Sample: L1720003-02 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00542	108		-	-		70-130	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: PIPEFITTERS TRAINING CENTER
Project Number: 6364.9.02

Lab Number: L1721071
Report Date: 07/10/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1016252-4 QC Sample: L1721204-06 Client ID: DUP Sample						
Iron, Total	2.06	2.36	mg/l	14		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1016252-8 QC Sample: L1720567-01 Client ID: DUP Sample						
Iron, Total	2.92	2.75	mg/l	6		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1016254-4 QC Sample: L1721204-06 Client ID: DUP Sample						
Antimony, Total	ND	ND	mg/l	NC		20
Arsenic, Total	0.02420	0.02562	mg/l	6		20
Cadmium, Total	0.00042	0.00038	mg/l	9		20
Chromium, Total	0.00252	0.00283	mg/l	12		20
Lead, Total	0.00189	0.00211	mg/l	11		20
Nickel, Total	0.01654	0.01746	mg/l	5		20
Selenium, Total	0.2020	0.2135	mg/l	6		20
Zinc, Total	0.04036	0.04187	mg/l	4		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1016397-4 QC Sample: L1720003-02 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: PIPEFITTERS TRAINING CENTER
Project Number: 6364.9.02
Lab Number: L1721071
Report Date: 07/10/17

SAMPLE RESULTS

Lab ID: L1721071-01
Client ID: B-6 (OW)
Sample Location: BOSTON, MA
Matrix: Water

Date Collected: 06/21/17 10:00
Date Received: 06/21/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
SALINITY	ND		SU	2.0	--	1	-	06/22/17 00:01	121,2520B	AS
Solids, Total Suspended	92.		mg/l	5.0	NA	1	-	06/22/17 05:57	121,2540D	VB
Cyanide, Total	ND		mg/l	0.005	--	1	06/22/17 20:20	06/23/17 13:05	121,4500CN-CE	LK
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	06/21/17 23:26	121,4500CL-D	AS
pH (H)	6.9		SU	-	NA	1	-	06/22/17 02:39	121,4500H+-B	KA
Nitrogen, Ammonia	0.669		mg/l	0.075	--	1	06/24/17 14:20	06/26/17 21:54	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.40	--	1.1	06/22/17 08:45	06/22/17 13:01	74,1664A	AW
Chromium, Hexavalent	ND		mg/l	0.010	--	1	06/22/17 01:45	06/22/17 01:53	1,7196A	KA
Anions by Ion Chromatography - Westborough Lab										
Chloride	ND		mg/l	0.500	--	1	-	06/26/17 22:41	44,300.0	AU

Project Name: PIPEFITTERS TRAINING CENTER **Lab Number:** L1721071

Project Number: 6364.9.02 **Report Date:** 07/10/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1015592-4										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	06/21/17 23:26	121,4500CL-D	AS
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1015632-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	06/22/17 01:45	06/22/17 01:52	1,7196A	KA
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1015650-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	06/22/17 05:57	121,2540D	VB
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1015756-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	06/22/17 08:45	06/22/17 13:01	74,1664A	AW
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1016004-1										
Cyanide, Total	ND		mg/l	0.005	--	1	06/22/17 20:20	06/23/17 12:45	121,4500CN-CE	LK
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1016682-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	06/24/17 14:20	06/26/17 21:50	121,4500NH3-BH	AT
Anions by Ion Chromatography - Westborough Lab for sample(s): 01 Batch: WG1017210-1										
Chloride	ND		mg/l	0.500	--	1	-	06/26/17 17:18	44,300.0	AU

Lab Control Sample Analysis

Batch Quality Control

Project Name: PIPEFITTERS TRAINING CENTER
Project Number: 6364.9.02

Lab Number: L1721071
Report Date: 07/10/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1015592-1								
Chlorine, Total Residual	93		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1015620-1								
SALINITY	99		-			-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1015632-2								
Chromium, Hexavalent	94		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1015636-1								
pH	99		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1015756-2								
TPH	68		-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1016004-2								
Cyanide, Total	94		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1016682-2								
Nitrogen, Ammonia	99		-		80-120	-		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: PIPEFITTERS TRAINING CENTER
Project Number: 6364.9.02

Lab Number: L1721071
Report Date: 07/10/17

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 Batch: WG1017210-2					
Chloride	99	-	90-110	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: PIPEFITTERS TRAINING CENTER
Project Number: 6364.9.02

Lab Number: L1721071
Report Date: 07/10/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1015592-3 QC Sample: L1721071-01 Client ID: B-6 (OW)												
Chlorine, Total Residual	ND	0.248	0.25	101		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1015632-4 QC Sample: L1721071-01 Client ID: B-6 (OW)												
Chromium, Hexavalent	ND	0.1	0.095	95		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1015756-4 QC Sample: L1721071-01 Client ID: B-6 (OW)												
TPH	ND	21.7	11.6	**54**	Q	-	-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1016004-4 QC Sample: L1720803-03 Client ID: MS Sample												
Cyanide, Total	1.50	0.2	1.77	**135**	Q	-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1016682-4 QC Sample: L1721071-01 Client ID: B-6 (OW)												
Nitrogen, Ammonia	0.669	4	4.57	98		-	-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1017210-3 WG1017210-4 QC Sample: L1720400-10 Client ID: MS Sample												
Chloride	102	100	200	99		200	99		90-110	0		18

Lab Duplicate Analysis
Batch Quality Control

Project Name: PIPEFITTERS TRAINING CENTER
Project Number: 6364.9.02

Lab Number: L1721071
Report Date: 07/10/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1015592-2 QC Sample: L1721071-01 Client ID: B-6 (OW)						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1015620-2 QC Sample: L1721071-01 Client ID: B-6 (OW)						
SALINITY	ND	ND	SU	NC		
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1015632-3 QC Sample: L1721071-01 Client ID: B-6 (OW)						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1015636-2 QC Sample: L1720944-01 Client ID: DUP Sample						
pH	7.7	7.6	SU	1		5
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1015650-2 QC Sample: L1720723-01 Client ID: DUP Sample						
Solids, Total Suspended	27	28	mg/l	4		29
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1015756-3 QC Sample: L1720785-01 Client ID: DUP Sample						
TPH	ND	ND	mg/l	NC		34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1016004-3 QC Sample: L1721071-01 Client ID: B-6 (OW)						
Cyanide, Total	ND	ND	mg/l	NC		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1016682-3 QC Sample: L1721071-01 Client ID: B-6 (OW)						
Nitrogen, Ammonia	0.669	0.713	mg/l	6		20

Project Name: PIPEFITTERS TRAINING CENTER
Project Number: 6364.9.02

Lab Number: L1721071
Report Date: 07/10/17

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1721071-01A	Vial HCl preserved	B	NA		4.9	Y	Present/Intact		8260-SIM(14),8260(14)
L1721071-01B	Vial HCl preserved	B	NA		4.9	Y	Present/Intact		8260-SIM(14),8260(14)
L1721071-01C	Vial HCl preserved	B	NA		4.9	Y	Present/Intact		8260-SIM(14),8260(14)
L1721071-01D	Vial HCl preserved	B	N/A	N/A	4.9	Y	Present/Intact		SUB-ETHANOL(14)
L1721071-01E	Vial HCl preserved	B	N/A	N/A	4.9	Y	Present/Intact		SUB-ETHANOL(14)
L1721071-01F	Vial HCl preserved	B	N/A	N/A	4.9	Y	Present/Intact		SUB-ETHANOL(14)
L1721071-01G	Plastic 500ml H2SO4 preserved	B	<2	<2	4.9	Y	Present/Intact		NH3-4500(28)
L1721071-01H	Plastic 250ml NaOH preserved	B	>12	>12	4.9	Y	Present/Intact		TCN-4500(14)
L1721071-01J	Plastic 950ml unpreserved	B	7	7	4.9	Y	Present/Intact		CL-300(28),HEXCR-7196(1),SALINITY(28),TRC-4500(1),PH-4500(.01)
L1721071-01K	Plastic 950ml unpreserved	B	7	7	4.9	Y	Present/Intact		TSS-2540(7)
L1721071-01M	Amber 1000ml HCl preserved	B	NA		4.9	Y	Present/Intact		TPH-1664(28)
L1721071-01N	Amber 1000ml HCl preserved	B	NA		4.9	Y	Present/Intact		TPH-1664(28)
L1721071-01P	Plastic 250ml HNO3 preserved	B	<2	<2	4.9	Y	Present/Intact		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),AG-2008T(180),AS-2008T(180),HG-U(28),SE-2008T(180),TRICR-CALC(1),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L1721071-01Q	Amber 1000ml unpreserved	B	7	7	4.9	Y	Present/Intact		8270TCL(7),8270TCL-SIM(7)
L1721071-01R	Amber 1000ml unpreserved	B	7	7	4.9	Y	Present/Intact		8270TCL(7),8270TCL-SIM(7)

*Values in parentheses indicate holding time in days

Project Name:	PIPEFITTERS TRAINING CENTER	**Lab Number:**	L1721071
Project Number:	6364.9.02	**Report Date:**	07/10/17

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:	PIPEFITTERS TRAINING CENTER	**Lab Number:**	L1721071
Project Number:	6364.9.02	**Report Date:**	07/10/17

Data Qualifiers

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

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

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

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

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

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

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

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

Report Format: Data Usability Report

Project Name:	PIPEFITTERS TRAINING CENTER	**Lab Number:**	L1721071
Project Number:	6364.9.02	**Report Date:**	07/10/17

REFERENCES

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

3 Methods for the Determination of Metals in Environmental Samples, Supplement I. EPA/600/R-94/111. May 1994.

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: 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

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: 06/21/17

ALPHA Job #: L1721071

Project Information

Project Name: Pipefitters Training Center

Project Location: Boston, MA

Project #: 6364.9.02

Project Manager: Ben Downing

ALPHA Quote #:

Client Information

Client: McPhail Associates, LLC

Address: 2269 Massachusetts Avenue

Cambridge, MA 02140

Phone: 6178681420

Fax: 6178681423

Email: bdowning@mcphailgeo.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Other Project Specific Requirements/Comments/Detection Limits:

Report Information Data Deliverables

☐ FAX ☐ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
NPDES RGP	RGP

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☒ No Are MCP Analytical Methods Required?

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

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	NH3	TSS, Chloride, Residual Chlorine	RGP Metals	TCN	SVOCs (8270-D SIM)	TPH_1664	pH, Cl, TRC, Salinity, HexCr	Ethanol	VOCs (8260)				Sample Specific Comments	TOTAL # BOTTLES
21071-01	B-6(OW)	6/21/17	10:00	G.W.	MGS	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐	☐		15

Container Type	-	-	-	-	-	-	-	-	-	-	-	-
Preservative	-	-	-	-	-	-	-	-	-	-	-	-

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	6/21 10:00	[signature] AAL	6/21/17 1820
[signature]	6/21/17 1835	[signature]	6/21/17 1850

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

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

SUB UPS: **Eurofins Lancaster, PA.** DC

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL

Westborough, MA TEL: 508-898-9220 FAX: 508-898-9193

Mansfield, MA TEL: 508-822-9300 FAX: 508-822-3288

Date Rec'd in Lab:

ALPHA Job #: L1721071

Client Information

Client: Alpha Analytical Lab

Address: 8 Walkup Drive

Westborough, Ma 01581

Phone: 508-898-9220

Fax:

Email: subreports@alphalab.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name:

Project Location: MA

Project #:

Project Manager: Melissa Gulli

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Other Project Specific Requirements/Comments/Detection Limits:

Please reference Alpha Job # **L1721071** on this report.

Report Information Data Deliverables

☐ FAX ☐ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☒ No Are MCP Analytical Methods Required?

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

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Ethanol by Method 1671												Sample Specific Comments	TOTAL # BOTTLES
	B-6 (OW)	6/21/17	10:00	Water		X													3

SAMPLE HANDLING

Filtration

☐ Done

☐ Not Needed

☐ Lab to do

Preservation

☐ Lab to do

(Please specify below)

Container Type	Vial		-	-	-	-	-	-	-	-	-	-	
Preservative	HCL		-	-	-	-	-	-	-	-	-	-	

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time

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

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

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Analysis Report

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Alpha Analytical, Inc.
145 Flanders Road
Westborough MA 01581

Report Date: July 10, 2017

Project: L1721071

Submittal Date: 06/23/2017
Group Number: 1817375
PO Number: L1721071
State of Sample Origin: MA

Client Sample Description	Lancaster Labs (LL) #
B-6(OW) Water Sample	9066455

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To	Alpha Analytical, Inc.	Attn: Melissa Gulli
Electronic Copy To	Alpha Analytical, Inc.	Attn: Sublab Contact

Respectfully Submitted,

Bonnie Stadelmann

Bonnie Stadelmann
Senior Project Manager

(312) 590-3133

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Analysis Report

Sample Description: B-6(OW) Water Sample
L1721071

LL Sample # WW 9066455
LL Group # 1817375
Account # 09847

Project Name: L1721071

Collected: 06/21/2017 10:00

Submitted: 06/23/2017 09:25
Reported: 07/10/2017 08:41

Alpha Analytical, Inc.
145 Flanders Road
Westborough MA 01581

B6OW1

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC Miscellaneous	**EPA 1671 Rev A**		ug/l	ug/l	
02366	ethanol	64-17-5	N.D.	2,000	1

Sample Comments

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
02366	EPA 1671 VOCs	EPA 1671 Rev A	1	171860021A	07/05/2017 20:50	Tyler O Griffin	1

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Analysis Report

Quality Control Summary

Client Name: Alpha Analytical, Inc. Group Number: 1817375
Reported: 07/10/2017 08:41

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	LOQ
	ug/l	ug/l
Batch number: 171860021A	Sample number(s): 9066455	
ethanol	N.D.	2,000

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: 171860021A	Sample number(s): 9066455								
ethanol	4010	3785.59	4010	3767.25	94	94	70-132	0	30

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 171860021A	Sample number(s): 9066455 UNSPK: P081463									
ethanol	4796.72	4010	8495.57	4010	8562.21	92	94	70-132	1	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: EPA 1671 VOCs
Batch number: 171860021A

	Amyl Alcohol
9066455	87
Blank	89
LCS	98

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

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Analysis Report

Quality Control Summary

Client Name: Alpha Analytical, Inc. Group Number: 1817375
Reported: 07/10/2017 08:41

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: EPA 1671 VOCs
Batch number: 171860021A

	Amyl Alcohol
LCSD	99
MS	107
MSD	106
Limits:	52-144

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

SUB UPS: **Eurofins Lancaster, PA.** DC 9847/1817375/90664465

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL

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

Client Information

Client: Alpha Analytical Lab
Address: 8 Walkup Drive
Westborough, Ma 01581
Phone: 508-898-9220
Fax:
Email: subreports@alphalab.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name:
Project Location: MA
Project #:
Project Manager: Melissa Gulli
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Other Project Specific Requirements/Comments/Detection Limits:
Please reference Alpha Job # **L1721071** on this report.

Date Rec'd in Lab:

ALPHA Job #: L1721071

Report Information Data Deliverables

☐ FAX ☐ EMAIL
☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program | Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

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

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Ethanol by Method 1671	SAMPLE HANDLING	TOTAL # BOTTLES
	B-6 (OW)	6/21/17	10:00	Water		X		3

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

Sample Specific Comments

Container Type	Vial		-	-	-	-	-	-	-	-	-	-	
Preservative	HCL		-	-	-	-	-	-	-	-	-	-	

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
	6/22/17		6/22/17 09:25

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

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

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Sample Administration Receipt Documentation Log

Doc Log ID: 187195

Group Number(s): 1817375

Client: Alpha Analytical

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	06/23/2017 9:25
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	MA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace ≥ 6mm:	No
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	0
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Conrad Burkholder (12671) at 15:41 on 06/23/2017

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	3.6	DT	Wet	Y	Loose/Bag	N

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Lancaster, PA 17605-2425

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Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	none detected
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

< less than

> greater than

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

Laboratory Data Qualifiers:

C - Result confirmed by reanalysis
E - Concentration exceeds the calibration range
J (or G, I, X) - estimated value ≥ the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P - Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U - Analyte was not detected at the value indicated
V - Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference…
W - The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

APPENDIX E:

LABORATORY ANALYTICAL DATA – SURFACE WATER

ANALYTICAL REPORT

Lab Number:	L1710103
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	370-380 HARRISON AVE.
Project Number:	6150
Report Date:	04/07/17

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: 370-380 HARRISON AVE.
Project Number: 6150

Lab Number: L1710103
Report Date: 04/07/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1710103-01	BASS RIVER SURFACE WATER	WATER	BOSTON, MA	04/03/17 10:00	04/03/17
~~L1710103-02~~	~~B-98-9/MW-98-9~~	~~WATER~~	~~BOSTON, MA~~	~~04/03/17 13:32~~	~~04/03/17~~

Project Name: 370-380 HARRISON AVE. **Lab Number:** L1710103

Project Number: 6150 **Report Date:** 04/07/17

MADEP MCP Response Action Analytical Report Certification

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

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

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	NO

For any questions answered "No", please refer to the case narrative section on the following page(s).

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

Project Name: 370-380 HARRISON AVE. **Lab Number:** L1710103
Project Number: 6150 **Report Date:** 04/07/17

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: 370-380 HARRISON AVE. **Lab Number:** L1710103
Project Number: 6150 **Report Date:** 04/07/17

Case Narrative (continued)

Sample Receipt

~~L1710103-02: The sample was received above the appropriate pH for the Ammonia analysis. The laboratory added additional H2SO4 to a pH <2.~~

MCP Related Narratives

Sample Receipt

In reference to question H:

A Matrix Spike was not submitted for the analysis of Metals.

Metals

In reference to question I:

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

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

Authorized Signature: Kelly Stenstrom

Title: Technical Director/Representative Date: 04/07/17

ORGANICS

VOLATILES

METALS

Project Name: 370-380 HARRISON AVE. **Lab Number:** L1710103

Project Number: 6150 **Report Date:** 04/07/17

SAMPLE RESULTS

Lab ID: L1710103-01 Date Collected: 04/03/17 10:00

Client ID: BASS RIVER SURFACE WATER Date Received: 04/03/17

Sample Location: BOSTON, MA Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab											
Antimony, Total	0.0047		mg/l	0.0040	--	1	04/04/17 14:00	04/06/17 15:34	EPA 3005A	97,6020A	BV
Arsenic, Total	0.0049		mg/l	0.0005	--	1	04/04/17 14:00	04/06/17 15:34	EPA 3005A	97,6020A	BV
Cadmium, Total	ND		mg/l	0.0002	--	1	04/04/17 14:00	04/06/17 15:34	EPA 3005A	97,6020A	BV
Chromium, Total	0.0014		mg/l	0.0010	--	1	04/04/17 14:00	04/06/17 15:34	EPA 3005A	97,6020A	BV
Copper, Total	0.0043		mg/l	0.0010	--	1	04/04/17 14:00	04/06/17 15:34	EPA 3005A	97,6020A	BV
Iron, Total	1.8		mg/l	0.05	--	1	04/04/17 14:00	04/06/17 11:18	EPA 3005A	97,6010C	PS
Lead, Total	0.0048		mg/l	0.0005	--	1	04/04/17 14:00	04/06/17 15:34	EPA 3005A	97,6020A	BV
Mercury, Total	ND		mg/l	0.0002	--	1	04/04/17 10:42	04/04/17 21:08	EPA 7470A	97,7470A	EA
Nickel, Total	ND		mg/l	0.0020	--	1	04/04/17 14:00	04/06/17 15:34	EPA 3005A	97,6020A	BV
Selenium, Total	ND		mg/l	0.005	--	1	04/04/17 14:00	04/06/17 15:34	EPA 3005A	97,6020A	BV
Silver, Total	ND		mg/l	0.0005	--	1	04/04/17 14:00	04/06/17 15:34	EPA 3005A	97,6020A	BV
Zinc, Total	0.0721		mg/l	0.0100	--	1	04/04/17 14:00	04/06/17 15:34	EPA 3005A	97,6020A	BV

Project Name: 370-380 HARRISON AVE. **Lab Number:** L1710103

Project Number: 6150 **Report Date:** 04/07/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab for sample(s): 01 Batch: WG990838-1										
Mercury, Total	ND		mg/l	0.0002	--	1	04/04/17 10:42	04/04/17 20:50	97,7470A	EA

Prep Information

Digestion Method: EPA 7470A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab for sample(s): 01 Batch: WG990903-1										
Iron, Total	ND		mg/l	0.05	--	1	04/04/17 14:00	04/06/17 11:05	97,6010C	PS

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab for sample(s): 01 Batch: WG990904-1										
Antimony, Total	ND		mg/l	0.0040	--	1	04/04/17 14:00	04/06/17 13:52	97,6020A	BV
Arsenic, Total	ND		mg/l	0.0005	--	1	04/04/17 14:00	04/06/17 13:52	97,6020A	BV
Cadmium, Total	ND		mg/l	0.0002	--	1	04/04/17 14:00	04/06/17 13:52	97,6020A	BV
Chromium, Total	ND		mg/l	0.0010	--	1	04/04/17 14:00	04/06/17 13:52	97,6020A	BV
Copper, Total	ND		mg/l	0.0010	--	1	04/04/17 14:00	04/06/17 13:52	97,6020A	BV
Lead, Total	ND		mg/l	0.0005	--	1	04/04/17 14:00	04/06/17 13:52	97,6020A	BV
Nickel, Total	ND		mg/l	0.0020	--	1	04/04/17 14:00	04/06/17 13:52	97,6020A	BV
Selenium, Total	ND		mg/l	0.005	--	1	04/04/17 14:00	04/06/17 13:52	97,6020A	BV
Silver, Total	ND		mg/l	0.0005	--	1	04/04/17 14:00	04/06/17 13:52	97,6020A	BV
Zinc, Total	ND		mg/l	0.0100	--	1	04/04/17 14:00	04/06/17 13:52	97,6020A	BV

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 370-380 HARRISON AVE.

Project Number: 6150

Lab Number: L1710103

Report Date: 04/07/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG990838-2 WG990838-3								
Mercury, Total	104		112		80-120	7		20
MCP Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG990903-2 WG990903-3								
Iron, Total	96		96		80-120	0		20
MCP Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG990904-2 WG990904-3								
Antimony, Total	93		96		80-120	3		20
Arsenic, Total	101		104		80-120	3		20
Cadmium, Total	107		109		80-120	2		20
Chromium, Total	96		98		80-120	2		20
Copper, Total	99		100		80-120	1		20
Lead, Total	103		104		80-120	1		20
Nickel, Total	99		100		80-120	1		20
Selenium, Total	113		116		80-120	3		20
Silver, Total	96		98		80-120	2		20
Zinc, Total	101		102		80-120	1		20

Project Name: 370-380 HARRISON AVE.
Project Number: 6150

Lab Number: L1710103
Report Date: 04/07/17

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1710103-01A	Plastic 250ml HNO3 preserved	A	<2	3.2	Y	Absent	MCP-FE-6010T-10(180),MCP(0),MCP-CR-6020T-10(180),MCP-7470T-10(28),MCP-CU-6020T-10(180),MCP-ZN-6020T-10(180),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-AG-6020T-10(180),MCP-CD-6020T-10(180),MCP-SE-6020T-10(180),MCP-PB-6020T-10(180),MCP-SB-6020T-10(180)
L1710103-01B	Plastic 250ml HNO3 preserved	A	<2	3.2	Y	Absent	MCP-FE-6010T-10(180),MCP(0),MCP-CR-6020T-10(180),MCP-7470T-10(28),MCP-CU-6020T-10(180),MCP-ZN-6020T-10(180),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-AG-6020T-10(180),MCP-CD-6020T-10(180),MCP-SE-6020T-10(180),MCP-PB-6020T-10(180),MCP-SB-6020T-10(180)
~~L1710103-02A~~	~~Vial unpreserved~~	~~A~~	~~N/A~~	~~3.2~~	~~Y~~	~~Absent~~	~~A2-ALCOHOL(14)~~
~~L1710103-02B~~	~~Vial unpreserved~~	~~A~~	~~N/A~~	~~3.2~~	~~Y~~	~~Absent~~	~~A2-ALCOHOL(14)~~
~~L1710103-02C~~	~~Plastic 250ml H2SO4 preserved~~	~~A~~	~~<2~~	~~3.2~~	~~Y~~	~~Absent~~	~~NH3-4500(28)~~

*Values in parentheses indicate holding time in days

Project Name:	370-380 HARRISON AVE.	**Lab Number:**	L1710103
Project Number:	6150	**Report Date:**	04/07/17

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

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

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

Data Qualifiers

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

Report Format: Data Usability Report

Project Name:	370-380 HARRISON AVE.	**Lab Number:**	L1710103
Project Number:	6150	**Report Date:**	04/07/17

Data Qualifiers

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:	370-380 HARRISON AVE.	**Lab Number:**	L1710103
Project Number:	6150	**Report Date:**	04/07/17

REFERENCES

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

97 EPA Test Methods (SW-846) with QC Requirements & Performance Standards for the Analysis of EPA SW-846 Methods under the Massachusetts Contingency Plan, WSC-CAM-IIA, IIB, IIIA, IIIB, IIIC, IIID, VA, VB, VC, VIA, VIB, VIIIA and VIIIB, July 2010.

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.

L1710103

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 4/3/17

ALPHA Job #: L1710103 4/3/17

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

Client Information

Client: McPhail Associates LLC
Address: 2269 Mass. Ave
Cambridge MA
Phone:
Email: JWP@mcphailgeo.com

Project Information

Project Name: 370-380 Harrison Ave
Project Location: Boston MA
Project #: 6150
Project Manager: John Patch
ALPHA Quote #:

Report Information - Data Deliverables

☒ ADEx ☐ EMAIL

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

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

Turn-Around Time

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

Additional Project Information:

RGP

ANALYSIS

VOC: ☐ 8260 ☐ 624 ☐ 524.2
SVOC: ☐ ABN ☐ PAH
METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15
METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
EPH: ☐ Ranges & Targets ☐ Ranges Only
VPH: ☐ Ranges & Targets ☐ Ranges Only
☐ PCB ☐ PEST
TPH: ☐ Quant Only ☐ Fingerprint
RGP Metals
Ethanol
Ammonium

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Sample Comments	TOTAL # BOTTLES
10103.01	Bass River Surface Water	4/3	10.00	SW	KWS		2
.02	B98-9/MW 98-9	4/3	1332	GW	LDP	2 vials 1 plastic	3

Container Type			P	V	P
Preservative			A	A	D

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
JWP AAL 4/3/17	1332 4/3/17	John Sch AAL	4/3/17 16:20
JWP AAL 4/3/17	17:30		4/3/17 1730

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

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

ANALYTICAL REPORT

Lab Number:	L1711081
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	370-380 HARRISON AVE.
Project Number:	6150
Report Date:	04/14/17

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: 370-380 HARRISON AVE.
Project Number: 6150

Lab Number: L1711081
Report Date: 04/14/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1711081-01	BASS RIVER SURFACE WATER	WATER	BOSTON, MA	04/03/17 10:00	04/03/17
~~L1711081-02~~	~~B-98/9/-MW-98/9~~	~~WATER~~	~~BOSTON, MA~~	~~04/10/17 13:30~~	~~04/10/17~~

Project Name: 370-380 HARRISON AVE. **Lab Number:** L1711081
Project Number: 6150 **Report Date:** 04/14/17

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: 370-380 HARRISON AVE. **Lab Number:** L1711081
Project Number: 6150 **Report Date:** 04/14/17

Case Narrative (continued)

~~Metals~~

~~The WG993471-7 MS recovery for hardness (74%), performed on L1711081-02, does not apply because the sample concentration is greater than four times the spike amount added.~~

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: 04/14/17

METALS

Project Name: 370-380 HARRISON AVE.
Lab Number: L1711081
Project Number: 6150
Report Date: 04/14/17

SAMPLE RESULTS

Lab ID: L1711081-01
Client ID: BASS RIVER SURFACE WATER
Sample Location: BOSTON, MA
Matrix: Water
Date Collected: 04/03/17 10:00
Date Received: 04/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	1850		mg/l	0.660	NA	1	04/12/17 11:50	04/14/17 02:57	EPA 3005A	19,200.7	MC

Lab Control Sample Analysis

Batch Quality Control

Project Name: 370-380 HARRISON AVE.

Project Number: 6150

Lab Number: L1711081

Report Date: 04/14/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 Batch: WG993471-2								
Hardness	108		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 370-380 HARRISON AVE.
Project Number: 6150

Lab Number: L1711081
Report Date: 04/14/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG993471-3 QC Sample: L1710840-01 Client ID: MS Sample												
Hardness	920	331	1280	109		-	-		75-125	-		20
~~Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG993471-7 QC Sample: L1711081-02 Client ID: B-98/9/MW-98/9~~												
~~Hardness~~	~~326~~	~~66.2~~	~~375~~	~~**74**~~	~~Q~~	~~-~~	~~-~~		~~75-125~~	~~-~~		~~20~~

Lab Duplicate Analysis
Batch Quality Control

Project Name: 370-380 HARRISON AVE.
Project Number: 6150

Lab Number: L1711081
Report Date: 04/14/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG993471-8 QC Sample: L1711081-02 Client ID: B-98/9/MW-98/9						
Hardness	326	320	mg/l	2		20

Project Name: 370-380 HARRISON AVE.
Project Number: 6150

Lab Number: L1711081
Report Date: 04/14/17

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler	
A	Absent
A1	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1711081-01A	Plastic 500ml HNO3 preserved	A1	<2	3.2	Y	Absent	HARDU(180)
~~L1711081-02A~~	~~Plastic 250ml HNO3 preserved~~	~~A~~	~~<2~~	~~2.3~~	~~Y~~	~~Absent~~	~~HARDU(180)~~

*Values in parentheses indicate holding time in days

Project Name:	370-380 HARRISON AVE.	**Lab Number:**	L1711081
Project Number:	6150	**Report Date:**	04/14/17

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

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

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

Data Qualifiers

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

Report Format: Data Usability Report

Project Name:	370-380 HARRISON AVE.	**Lab Number:**	L1711081
Project Number:	6150	**Report Date:**	04/14/17

Data Qualifiers

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:	370-380 HARRISON AVE.	**Lab Number:**	L1711081
Project Number:	6150	**Report Date:**	04/14/17

REFERENCES

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.

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.

Revised AK 4/12/17

Serial_No:04141715:07 ~~L1710103~~ L1710981

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 4/3/17

ALPHA Job #: ~~L1710~~ L1710981 RS 4/3/17

ALPHA ANALYTICAL

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

Project Information

Project Name: 370-380 Harrison Ave
Project Location: Boston MA
Project #: 6150
Project Manager: John Patch
ALPHA Quote #:

Report Information - Data Deliverables

☒ ADEx ☐ EMAIL

Billing Information

☒ Same as Client info PO #:

Client Information

Client: McPhail Associates LLC
Address: 2269 Mass Ave Cambridge MA
Phone:
Email: JWP@mcphailgeo.com

Regulatory Requirements & Project Information Requirements

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

Turn-Around Time

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

Date Due:

Additional Project Information:

RGP

*Tottal Hardness

ANALYSIS: VOC: ☐ 8260 ☐ 624 ☐ 524.2 | SVOC: ☐ ABN ☐ PAH | METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15 | METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13 | EPH: ☐ Ranges & Targets ☐ Ranges Only | VPH: ☐ Ranges & Targets ☐ Ranges Only | ☐ PCB ☐ PEST | TPH: ☐ Quant Only ☐ Fingerprint | ~~RGP Metals~~ | Ethanol | Ammonium | *

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	~~RGP Metals~~	Ethanol	Ammonium	*	Sample Comments	Total # Bottles
10981-01 ~~10103~~.01	Bass River Surface Water	4/3	10:00	SW	KWS	~~X~~			X		~~2~~ 1
~~.02~~	~~398-9/MW 98-9~~	~~4/3~~	~~1332~~	~~GW~~	~~LDP~~		~~X~~	~~X~~		~~2 vials~~	~~3~~

	~~RGP Metals~~	Ethanol	Ammonium
Container Type	P	V	P
Preservative	A	A	D

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
[signature]	1332 4/3/17	John S… AAC	4/3/17 16:20
John S… AAC 4/3/17	17:30	[signature]	4/3/17 1730

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

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

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 4/10/17

ALPHA Job #: L1711081

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

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

Client Information

Client: McPhail Associates, LLC

Address: 2269 Mass Ave
Cambridge MA

Phone:

Email: JWP@mcphailgeo.com

Additional Project Information:

Project Information

Project Name: 370-380 Harrison Ave

Project Location: Boston MA

Project #: 6150

Project Manager: John Patch

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 _____

ANALYSIS

VOC: ☐ 8260 ☐ 624 ☐ 524.2

SVOC: ☐ ABN ☐ PAH

METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15

METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13

EPH: ☐ Ranges & Targets ☐ Ranges Only

VPH: ☐ Ranges & Targets ☐ Ranges Only

☐ PCB ☐ PEST

TPH: ☐ Quant Only ☐ Fingerprint

Water Hardness

SAMPLE INFO

Filtration
☐ Field
☐ Lab to do

Preservation
☐ Lab to do

Sample Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Water Hardness	TOTAL # BOTTLES
11081 ~~-01~~	B-9S/9I/MW-9S/9I	4/10	13:30	GW	EKC	X	1
-02							

	Container Type	Preservative
Water Hardness	P	C

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
[signature]	4/10 3:30	[signature] AAL	4/10/17 16:00
[signature] AAL	4/10/17 17:35	[signature]	4/10/17 1735

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

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

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 4/10/17

ALPHA Job #: L1711081

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

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

Client Information

Client: McPhail Associates, LLC

Address: 2269 Mass Ave
Cambridge MA

Phone:

Email: JWP@mcphailgeo.com

Additional Project Information:

Project Information

Project Name: 370-380 Harrison Ave

Project Location: Boston MA

Project #: 6150

Project Manager: John Patch

ALPHA Quote #:

Turn-Around Time

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

Date Due:

Report Information - Data Deliverables

☒ ADEx ☐ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	ANALYSIS: Water Hardness	SAMPLE INFO: Filtration ☐ Field ☐ Lab to do; Preservation ☐ Lab to do	Sample Comments	TOTAL # BOTTLES
11081 - 01	B-9S/9/MW 9S/9	4/10	13:30	GW	EKC	X			1

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

Container Type	P
Preservative	C

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
[signature]	4/10 3:30	[signature] AAL	4/10/17 16:00
[signature] AAL	4/10/17 17:35	[signature]	4/10/17 1735

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 40 Enterprise Street in Dorchester, Massachusetts. This Best Management Practices Plan (BMPP) has been prepared as an Appendix to the RGP 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 BWSC indicates the presence of a dedicated stormwater drain system located beneath Enterprise Street. The discharge flow, indicated by BWSC plans, goes west and south along Enterprise Street, northwest on Massachusetts Avenue, and then follows the MBTA railway line north where a conduit discharges into the Bass River of the Fort Point Channel. Dewatering effluent treatment will consist of a settling tank, bag filters to remove suspended soil particulates and, if required, granular activated carbon filters or ion resin media vessels prior to off-site discharge. pH adjustment will be conducted, if necessary, through the addition of hydrochloric acid, caustic soda and carbon dioxide.

Discharge Monitoring and Compliance

Regular sampling and testing will be conducted at the influent to the system and the treated effluent as required by the RGP. 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.

System Maintenance

A number of methods will be used to minimize the potential for violations during the term of this permit discharge. Scheduled regular maintenance 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 Dorchester Old Harbor located approximately 3,500 feet to the east of the subject site. Dewatering effluent will be pumped into a settling tank. Water within the settling tank will pumped through bag filters and, as necessary, GAC filters and or ion exchange chambers 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.