NOTICE OF INTENT FOR DISCHARGE PURSUANT TO MASSACHUSETTS REMEDIATION GENERAL PERMIT MAG910000

SHATTUCK HOSPITAL RELOCATION

88 EAST NEWTON STREET

BOSTON, MASSACHUSETTS

MAY 13, 2021

Prepared For:

The S/L/A/M Collaborative
250 Summer Street – 4th Floor
Boston, MA 02110

PROJECT NO. 7029

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

May 13, 2021

The S/L/A/M Collaborative
250 Summer Street – 4th Floor
Boston, MA 02110

Attention: EPA/OEP RGP Applications Coordinator
Reference: 88 East Newton Street, Boston, Massachusetts
Notice of Intent for Temporary Construction Dewatering Discharge;
Massachusetts Remediation General Permit MAG910000

Ladies and Gentlemen:

Enclosed herein is our Notice of Intent for Temporary Construction Dewatering Discharge for the proposed 88 East Newton Street project in Boston, Massachusetts. These services were performed, and this permit application was prepared with the authorization of our client, The S/L/A/M Collaborative.

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.

Very truly yours,

McPHAIL ASSOCIATES, LLC

Shakib Ahmed, P.G.

William J. Burns, L.S.P.

N:\Working Documents\Reports\7029_ShattuckHospitalBoston_RGP_051321.docx

SA/wjb

GEOTECHNICAL AND GEOENVIRONMENTAL ENGINEERS
2269 Massachusetts Avenue
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1.0 - INTRODUCTION

1.1 - GENERAL

In accordance with the provisions of the Remediation General Permit 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 Fort Point Channel via the City of Boston municipal storm drain system. The temporary discharge of construction dewatering will occur as part of proposed redevelopment of the property located at 88 East Newton Street in Boston, Massachusetts (subject site). Refer to **Figure 1,** Project Location Plan for the general site locus.

These services were performed, and this permit application was prepared with the authorization of our client, The S/L/A/M Collaborative. These services are subject to the limitations contained in **Appendix A**.

The required Notice of Intent Form contained in the RGP permit and Boston Water & Sewer Dewatering Discharge Permit Application are included in **Appendix B**. This project is considered Activity Category III-G as defined in the RGP. Based on the activity category, and in accordance with the RGP, contamination Type A: Inorganics and Group 1/Group 2 petroleum aromatic hydrocarbons (PAHs) as defined in Table 2 of the RGP apply.

1.2 – APPLICANT/OPERATOR

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

Division of Capital Management & Maintenance
One Ashburton Place, 15th Floor
Boston, MA 02108

Attention: Mark T. Swingle, PE, SE
Tel: (617) 877-6207
Email: mark.swingle@mass.gov

1.3 – SITE OWNER

Division of Capital Management & Maintenance
One Ashburton Place, 15th Floor
Boston, MA 02108

Attention: Mark T. Swingle, PE, SE
Tel: (617) 877-6207
Email: mark.swingle@mass.gov

2.0 – SITE AND PROJECT DESCRIPTION

2.1 – EXISTING SITE CONDITIONS

The subject site occupies an approximate 118,000 square-foot plan area that fronts onto East Newton Street to the west and is located within the street block that is bound by Albany Street to the south, East Brookline Street to the east, and Harrison Avenue to the north. Within the street block, the subject site is bordered by existing medical buildings to the north, and the newly constructed Henry M. Goldman School of Dental Medicine building located in the southwest corner of the street block. The existing and proposed conditions are indicated on **Figure 2**.

The subject site contains an existing building that occupies an approximate 60,000 square-foot plan area. The existing building is generally bordered by a sallyport and paved drive aisle to the north, landscaped areas and a paved private roadway to the east, an outdoor pavilion/courtyard to the west, and landscaped and paved parking areas to the south. Generally, the existing ground surface is at approximately Elevation +19 within the outdoor pavilion/courtyard on the western side of the site and the drive aisle along the northern side of the site. The ground surface gently slopes downward to Elevation +14 along East Brookline Street, and to Elevation +16 along Albany Street.

The existing structure is comprised of two contiguous buildings, "H" and "Q". Building H, which consists of 6 stories located on the northern end of the structure, was constructed in 1971 prior to the construction of the 8-story Building Q. The majority of the existing structure is understood to contain a basement level with a slab at Elevation +6, as well as a smaller-footprint sub-basement with the lowest level slab at approximately +1.

The limits of the subject site are shown on **Figure 2** which was prepared from a 20-scale drawing entitled "Existing Conditions Plan of Land" dated January 16, 2019 by Feldman Land Surveyors.

2.2 – PROPOSED DEVELOPMENT

It is understood that the building has been recently vacated by the Boston Medical Center and medical services from Lemuel Shattuck Hospital will be relocated to the subject site. Planned services for the building will include inpatient bed and support services, as well as outpatient clinics. The proposed exterior site improvements are planned to include construction of a new fire pump enclosure, two 12,500-gallon above-grade fuel oil tanks, subsurface infiltration systems, an electrical switchgear, and renovations to the sallyport to make it enclosed.

According to the February 22, 2021 Civil Design Development set of drawing that were prepared for the proposed development, the two 785 square foot and one 800 square foot subsurface infiltration system will be installed with a base between Elevation +5.5 and Elevation +6.0. As a result, we anticipate that a 10- to 12-foot-deep excavation will be necessary to facilitate construction of the infiltration system. The 8,000-gallon 140 square

foot grease trap will be located on the eastern portion of the subject site and will require approximately 11-foot-deep excavation. Utility upgrades on various locations around the subject site will require trench excavation of 3- to 5-foot-deep excavations. A drywell to be installed at the southwestern edge of the subject property will require 12- to 14-foot-deep excavation. Drainage manholes will be installed in various locations around the subject site and will require approximately 10-foot-deep excavations.

2.3 – 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 subject site is not located within the boundaries of a Sole Source Aquifer, Potentially Productive Aquifer or within a Zone II, Interim Wellhead Protection Area as defined by the Massachusetts Department of Environmental Protection. Further, there are no public drinking water supply wells, no Areas of Critical Environmental Concern, no fish habitats, no habitats of Species of Special Concern or Threatened or Endangered Species within specified distances of the subject site. The Resource Map indicates that there are no water bodies or wetland areas at the subject site. The closest body of water is the Bass River that leads to the Fort Point Channel located approximately 3,200 feet to the northeast of the subject site. No areas designated as solid waste sites (landfills) are noted as being located within 1,000 feet of the site. A copy of the Massachusetts DEP Phase I Site Assessment Map is included in **Appendix C**.

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

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

Construction at the subject site is likely to extend below the surface of groundwater. If dewatering is necessary, treated construction dewatering effluent will be discharged into the City of Boston dedicated storm drain system that flows into the Fort Point Channel. If encountered, the dewatering of groundwater at the subject site will be temporary and intermittent. Groundwater discharged as part of the proposed project will be controlled and monitored. Treatment systems will consist of temporary structures. Therefore, based on the anticipated duration of construction dewatering and the location of its discharge into the Charles River, construction dewatering activities are not considered to affect elements of historical listings. Hence, the site meets Permit Eligibility Criterion B in accordance with Appendix III of the RGP.

2.4 – SITE AND RELEASE HISTORY

According to a Phase I prepared by GZA in December 2020, the subject site was occupied by residential row-houses from at least the late 1880s through the 1950s. Sharon Street, a road that connected Albany Street and Harrison Avenue, was present at the Site during those years. From at least 1887 through 1914, a building situated at the southeastern portion of the property was occupied by various commercial and/or industrial tenants, including a carpenter shop, a felt works, a furniture manufacturing facility, a piano manufacturing company, and an electric company; this building was vacant by the late 1930s, and was no longer present at the site by the early 1950s. The row houses were no longer present at the subject site by the late 1960s, at which time the majority of the subject site appeared to be used as a paved parking lot. "H Building" was constructed at the northern portion of the subject site in 1971. "Q Building" was constructed in 1986 and was further expanded with a two-story addition to the southern portion of the building in 1992; the building has been used as a hospital and medical office building since its construction.

3.0 – CONSTRUCTION SITE DEWATERING AND TREATMENT

3.1 – SITE DEWATERING DETAILS

Construction of the new fire pump enclosure and subsurface infiltration systems is anticipated to extend up to about 11 feet below the existing ground surface corresponding to about Elevation +5.5. Groundwater was observed at the subject site ranging from about Elevation +1.8 to Elevation +5.6, which correspond to a depth of approximately 12 feet below ground surface. As a result, it is unlikely that the excavations for the construction of the proposed structures will encounter significant quantities of groundwater.

In the event that groundwater levels are encountered during construction or during heavy precipitation events that require construction dewatering to facilitate excavation, the maximum rate of dewatering will be in the order of 50 gallons per minute (gpm). Given the extent of excavation, temporary on-site collection and recharge of groundwater is not feasible as part of the proposed construction activities. As a result, construction dewatering will require the discharge of collected groundwater into the municipal storm drain system under the requested Remediation General Permit.

A review of available subgrade utility plans provided by the Boston Water and Sewer Commission indicates that stormwater is collected within two catch basins. Catch basin 20JCB265, located on Albany Street and catch basin 20JCB407, located on East Newton Street, connects to the stormwater drain system that runs along Albany Street. The stormwater drains beneath Albany Street before shifting southeast near East Brookline Street. The stormwater drain runs south of the National Emerging Infectious Disease Laboratory Building before merging with the Roxbury Canal Conduit. The Roxbury Canal runs northeast and eventually discharges into the Bass River through the Fort Point Channel. The location of the relevant stormwater catch basin in relation to the subject site is

indicated on **Figure 2**. The flow path of the discharge is shown in plans provided by the Boston Water and Sewer Commission which is included in **Figures 3A** and **3B**.

3.2 – SUMMARY OF GROUNDWATER ANALYSIS

On March 17, 2021, McPhail Associates, LLC obtained one (1) sample of groundwater at the subject site from monitoring well B-6 (OW). The groundwater sample was submitted to a certified laboratory for analysis for the presence of compounds required to be tested for under the EPA's Remediation General Permit (RGP) application, including total suspended solids (TSS), total residual chlorine (TRC), total petroleum hydrocarbons (TPH), cyanide, semi-volatile organics (SVOCs), total Priority Pollutants (PP-13) metals, total and dissolved iron, and pH. Analytical results of the testing of the above referenced groundwater sample that was obtained in March 2020 are summarized on the enclosed **Table 1**, and laboratory data is included in **Appendix D**.

A surface water sample was obtained from the Fort Point Channel (42° 20' 35" N, -71° 3' 39" W) in March 2021 and analyzed for the presence of pH, salinity, and ammonia nitrogen. The approximate location of sample collection is indicated on the enclosed **Figure 3B**, analytical test results are included on the enclosed **Table 2**, and laboratory data is included in **Appendix D**.

Due to discharge to saltwater receiving waters, a Dilution Factor (DF) is not applicable in accordance with the procedure contained in RGP MAG910000, Appendix V.

In summary, groundwater testing performed at the subject site has detected a concentration of cyanide that exceeds the applicable Water Quality Based Effluent Limitations (WQBELs) contained in Table 2 of Section 2.1 of the RGP. Additionally, the groundwater testing detected concentrations of SVOCs including naphthalene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, dibenzo(a,h)anthracene, and indeno(1,2,3-cd)pyrene that that exceed the applicable WQBELs. It should be noted that the analyzed compounds did not exceed applicable MCP RCGW-2 reporting thresholds established in Appendix VI of the RGP. The detected concentrations of the tested constituents detected in the on-site groundwater and surface water samples are further summarized in the MA Limits book tables that are included in **Appendix C**.

In accordance with the RGP, the proposed dewatering associated with this permit application is considered Contaminated/Formerly Contaminated Site Dewatering (Category III). Given that the site contamination is considered "Known", this project is considered Activity Category III-G as defined in the RGP. Based on the activity category, and in accordance with the RGP, contamination Type A: Inorganics and Group 1/Group 2 PAHs as defined in Table 2 of the RGP apply to the discharge.

3.3 – 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 a treatment system consisting of an approximately 5,000-gallon capacity settling tank and bag filters in series is necessary to meet the effluent limitations of the RGP. Additionally, due to the detection of cyanide above the WQBEL standard, an ionization resin tank will be utilized to settle out heavy metals including cyanide. These treatment components will be used to settle out particulate matter containing inorganic compounds in the effluent to meet the applicable discharge limits established by the US EPA prior to discharge. If increased pH levels are detected in the effluent (such as during the placement of concrete for the foundation system) carbon dioxide gas for pH adjustment will be utilized, if necessary, as construction activities at the subject site continues. If the addition of concrete requires a pH conditioner to meet permit effluent limitations or applicable water quality standards, a Notice of Change (NOC) will be filed on behalf of the operator with the specific laboratory data sheets and necessary information attached.

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

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

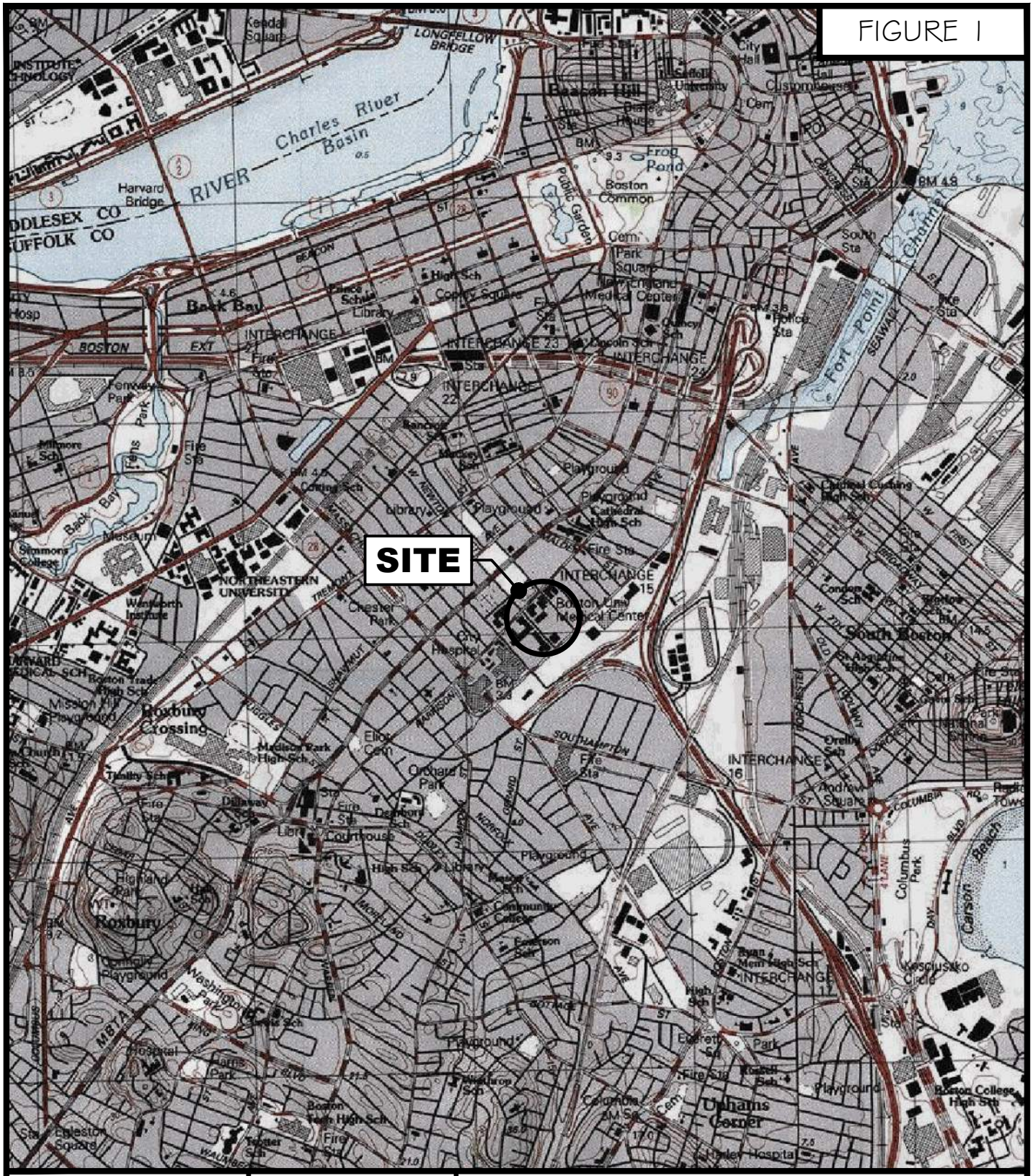
4.0 – SUMMARY AND CONCLUSIONS

The purpose of this report is to summarize site environmental conditions and groundwater data to support a Notice of Intent to discharge under the Remediation General Permit, for the off-site discharge of dewatered groundwater which may be encountered during the redevelopment of the subject site. 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 effluent will be necessary to meet the discharge limits for cyanide and PAH compounds established by the US EPA prior to off-site discharge. While not detected during the analysis of groundwater at the site, given the site history it is possible that a localized area of organics may be encountered in soil and/or groundwater during the course of construction. The proposed construction dewatering effluent treatment system will consist of a 5,000-gallon capacity settling tank, bag filters and, if required, pH adjustment tank and GAC filters in series in order to meet the discharge limits established by the RGP. 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.

FIGURES

FIGURE 1



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N

SCALE 1:25,000

PROJECT LOCATION PLAN

SHATTUCK HOSPITAL RELOCATION

BOSTON MASSACHUSETTS

EAST BROOKLINE (PUBLIC – 50' WIDE) STREET

NORTH

APPROXIMATE LIMITS OF SUBJECT SITE

APPROXIMATE LOCATION OF PROPOSED FIRE PUMP

B-1 (OW)

B-2

B-3

B-4

B-5

B-6 (OW)

B-7

B-8

B-9 (OW)

B-10

B-11

APPROXIMATE LOCATION OF PROPOSED SUBSURFACE INFILTRATION SYSTEM

APPROXIMATE LOCATION OF DISCHARGE

APPROXIMATE LOCATION OF PROPOSED ELECTRICAL SERVICE

APPROXIMATE LOCATION OF PROPOSED FUEL TANKS

APPROXIMATE LOCATION OF PROPOSED SUBSURFACE INFILTRATION SYSTEM

APPROXIMATE LOCATION OF DISCHARGE

NEWTON PAVILION
#88 EAST NEWTON STREET
8 STORY BUILDING WITH PENTHOUSE

Now or Formerly
BOSTON MEDICAL CENTER CORPORATION
PARCEL ID 0801280000
PARCEL ID 0801272001
PARCEL ID 0801274000
BOOK 7965 PAGE 103
BOOK 7977 PAGE 749
BOOK 7987 PAGE 582
BOOK 7987 PAGE 586
BOOK 7987 PAGE 588
BOOK 7987 PAGE 590
BOOK 7978 PAGE 736
BOOK 7807 PAGE 397
BOOK 9067 PAGE 565
CERT. 92706
PARCEL ID 0801290000
BOOK 8273 PAGE 649
PARCEL ID 0801299000
CERT. 125382
PARCEL ID 0801298000
CERT. 92708

TENANT
Now or Formerly
THE COMMONWEALTH OF MASSACHUSETTS
DIVISION OF CAPITAL ASSET MANAGEMENT AND MAINTENANCE
BOOK 60422 PAGE 335
LEASEHOLD AREA
116,516 SQ.FT.
2.675 ACRES

Now or Formerly
TRUSTEES OF BOSTON UNIVERSITY
CERT. 86493
PARCEL ID 0801297000

Now or
TRUST
BOSTON
CERT.
PARCEL ID
PARCEL ID

#615 ALBANY ST
5-STORY BRICK

ALBANY STREET

SHARON STREET
8273 PAGE 649

FORMERLY SHARON STREET
BOOK 8273 PAGE 649

EAST NEWTON (PUBLIC – 50' WIDE) STREET

LEGEND

— APPROXIMATE LOCATION OF BORING PERFORMED BY SEABOARD DRILLING, INC. DURING SEPTEMBER 3 THROUGH 9, 2020 FOR McPHAIL ASSOCIATES, LLC

(OW) — INDICATES OBSERVATION WELL INSTALLED WITHIN COMPLETED BOREHOLE

REFERENCE: THIS PLAN WAS PREPARED FROM A 20-SCALE DRAWING ENTITLED "EXISTING CONDITIONS PLAN OF LAND" DATED JANUARY 16, 2019 BY FELDMAN LAND SURVEYORS

GRAPHIC SCALE

20 0 20 40 80

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SHATTUCK HOSPITAL RELOCATION

BOSTON MASSACHUSETTS

SUBSURFACE EXPLORATION PLAN

FOR

THE SLAM COLLABORATIVE

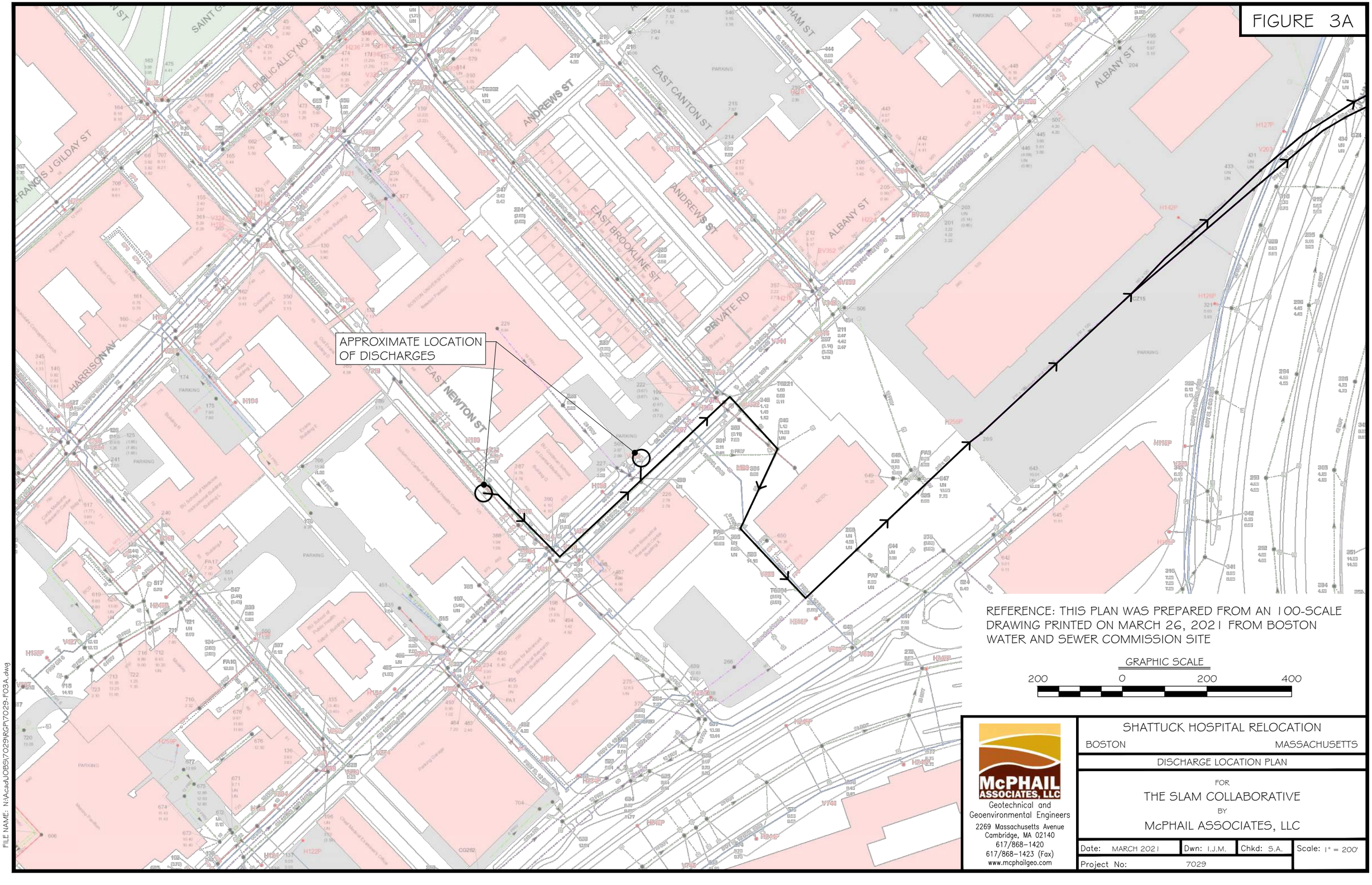
BY

McPHAIL ASSOCIATES, LLC

Date: MARCH 2021	Dwn: F.G.P.	Chkd: O.C.D.	Scale: 1" = 20'
Project No: 7029			FIGURE 2

FILE NAME: N:\Acad\JOBS\7029\RGP\7029-F02.dwg

FIGURE 3A



REFERENCE: THIS PLAN WAS PREPARED FROM AN 100-SCALE DRAWING PRINTED ON MARCH 26, 2021 FROM BOSTON WATER AND SEWER COMMISSION SITE

GRAPHIC SCALE

200 0 200 400

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SHATTUCK HOSPITAL RELOCATION

BOSTON MASSACHUSETTS

DISCHARGE LOCATION PLAN

FOR

THE SLAM COLLABORATIVE

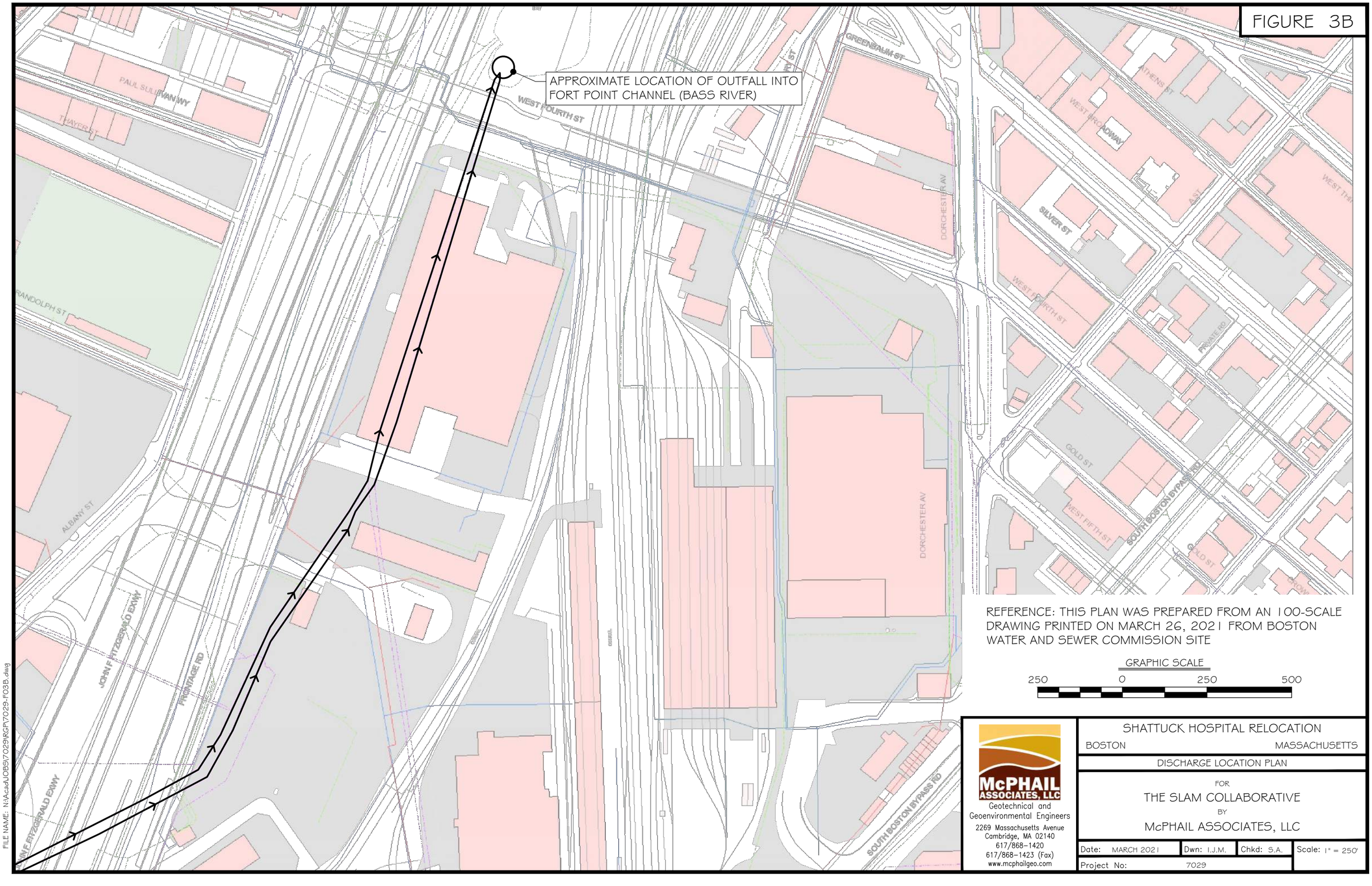
BY

McPHAIL ASSOCIATES, LLC

Date: MARCH 2021	Dwn: I.J.M.	Chkd: S.A.	Scale: 1" = 200'
Project No: 7029			

FILE NAME: N:\Acad\JOBS\7029\RGR\7029-F03A.dwg

FIGURE 3B



REFERENCE: THIS PLAN WAS PREPARED FROM AN 100-SCALE DRAWING PRINTED ON MARCH 26, 2021 FROM BOSTON WATER AND SEWER COMMISSION SITE

GRAPHIC SCALE

250 0 250 500

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SHATTUCK HOSPITAL RELOCATION

BOSTON MASSACHUSETTS

DISCHARGE LOCATION PLAN

FOR

THE SLAM COLLABORATIVE

BY

McPHAIL ASSOCIATES, LLC

Date: MARCH 2021	Dwn: I.J.M.	Chkd: S.A.	Scale: 1" = 250'
Project No: 7029			

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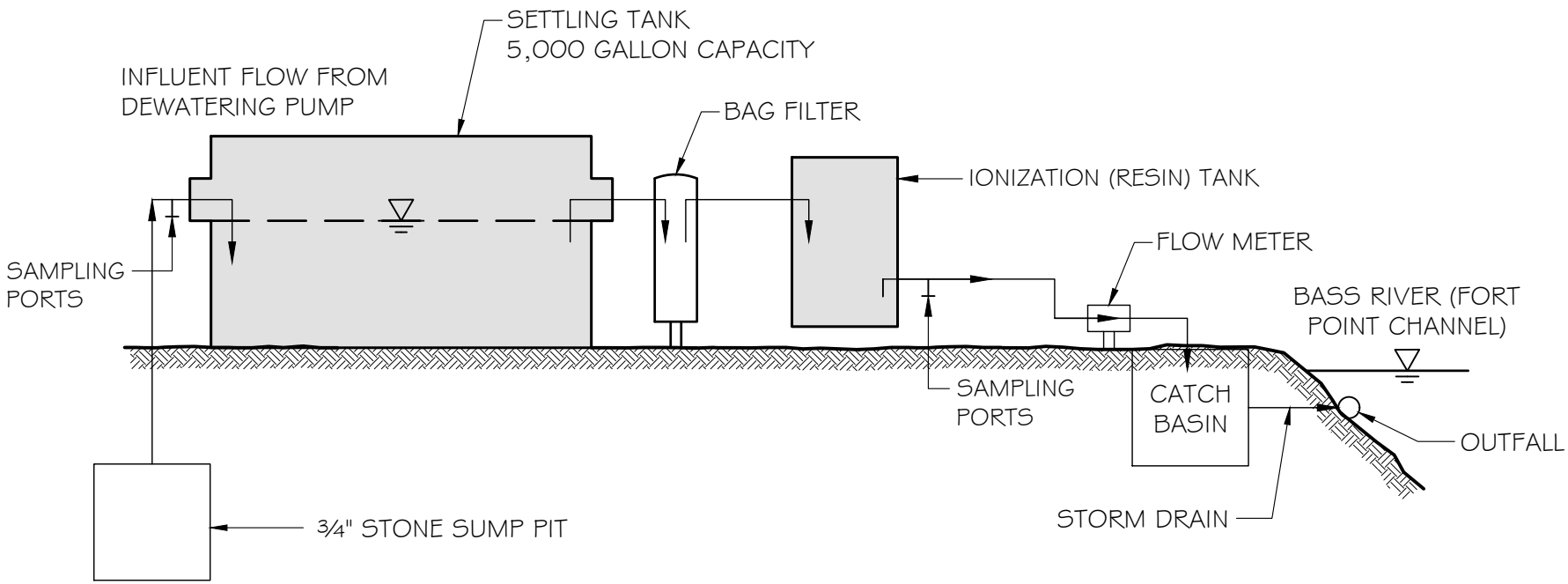
FILE NAME: N:\Acad\JOBS\7029\RGP\7029-F04.dwg

FIGURE 4



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88 EAST NEWTON STREET
BOSTON MASSACHUSETTS

SCHEMATIC OF TREATMENT SYSTEM

FOR

THE S/L/A/M COLLABORATIVE

BY

McPHAIL ASSOCIATES, LLC
CONSULTING GEOTECHNICAL ENGINEERS

Date: APRIL 2021	Dwn: I.J.M.	Chkd: S.A.	Scale: N.T.S.
Project No: 7029			

TABLES

Table 1
ANALYTICAL RESULTS - GROUNDWATER

88 East Newton Street
Boston, MA
Project No: 7029

LOCATION	MassDEP RCGW-2 Reportable Concentrations	Water Quality Based Effluent Limitations (Saltwater)	B-6 (OW)
SAMPLING DATE			3/17/2021
LAB SAMPLE ID			L2113663-01
SAMPLE TYPE			WATER
General Chemistry			
Solids, Total Suspended (ug/l)	-	*30000*	14000
Chlorine, Total Residual (ug/l)	-	*7.5*	ND(20)
pH (S.U.)	-	-	7.6
TPH, SGT-HEM (ug/l)	*5000*	-	ND(4000)
Total Metals (ug/l)			
Antimony, Total	*8000*	*640*	ND(4)
Arsenic, Total	*900*	*36*	ND(3.12)
Cadmium, Total	*4*	*8.8*	ND(0.2)
Chromium, Total	*300*	-	ND(1)
Chromium, Trivalent (ug/l)	*600*	*100*	ND(10)
Chromium, Hexavalent (ug/l)	*300*	*50*	ND(10)
Copper, Total	*100000*	*3.1*	ND(2.26)
Cyanide, Total (ug/l)	*30*	*1.0*	**10**
Iron, Total	*1000*	-	1670
Lead, Total	*10*	*8.1*	1.17
Mercury, Total	*20*	*0.94*	ND(0.2)
Nickel, Total	*200*	*8.2*	ND(2)
Selenium, Total	*100*	*71*	ND(5)
Silver, Total	*7*	*1.9*	ND(0.4)
Zinc, Total	*900*	*81*	ND(10)

ND = Not Detected
\- = Not Tested
Bold = Exceeds WQBEL Saltwater Criteria

Table 1
ANALYTICAL RESULTS - GROUNDWATER

88 East Newton Street
Boston, MA
Project No: 7029

LOCATION	MassDEP RCGW-2 Reportable Concentrations	Water Quality Based Effluent Limitations (Saltwater)	B-6 (OW)
SAMPLING DATE			3/17/2021
LAB SAMPLE ID			L2113663-01
SAMPLE TYPE			WATER
Semivolatile Organics by GC/MS (ug/l)			
Bis(2-ethylhexyl)phthalate	*50000*	-	ND(2.2)
Butyl benzyl phthalate	*10000*	-	ND(5)
Di-n-butylphthalate	*5000*	-	ND(5)
Di-n-octylphthalate	*100000*	-	ND(5)
Diethyl phthalate	*9000*	-	ND(5)
Dimethyl phthalate	*50000*	-	ND(5)
Semivolatile Organics by GC/MS-SIM (ug/l)			
Acenaphthene	*10000*	-	17.5
Fluoranthene	*200*	-	10
Naphthalene	*700*	*20*	**58.5**
Benzo(a)anthracene	*1000*	*0.0038*	**1.7**
Benzo(a)pyrene	*500*	*0.0038*	**0.955**
Benzo(b)fluoranthene	*400*	*0.0038*	**1.3**
Benzo(k)fluoranthene	*100*	*0.0038*	ND(0.5)
Chrysene	*70*	*0.0038*	**1.28**
Acenaphthylene	*40*	-	5.3
Anthracene	*30*	-	6.41
Benzo(ghi)perylene	*20*	-	0.54
Fluorene	*40*	-	19.4
Phenanthrene	*10000*	-	31.9
Dibenzo(a,h)anthracene	*40*	*0.0038*	**ND(0.5)**
Indeno(1,2,3-cd)pyrene	*100*	*0.0038*	**0.645**
Pyrene	*20*	-	7.1
Pentachlorophenol	*200*	-	ND(5)

ND = Not Detected
\- = Not Tested
Bold = Exceeds WQBEL Saltwater Criteria

Table 2
ANALYTICAL RESULTS - SURFACE WATER

88 East Newton Street
Boston, MA
Project No: 7029

LOCATION	EPA-ALSCCC	RGP EFFLUENT SW
SAMPLING DATE		3/30/2021
LAB SAMPLE ID		L2115935-01
SAMPLE TYPE		WATER

General Chemistry

SALINITY		27
Temperature (C)		6.4
pH (H)		7.7
Nitrogen, Ammonia (ug/l)		218

EPA-ALSCCC: National Recommended Water Quality Criteria - Saltwater Aquatic CCC (chronic)

APPENDIX A:

LIMITATIONS

LIMITATIONS

The purpose of this report is to present the results of testing of groundwater samples obtained from on-site monitoring wells in connection with the redevelopment of the 88 East Newton Street property in Boston, 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 at the site, and other factors.

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

This report and application have been prepared on behalf of and for the exclusive use of DCAMMM and The S/L/A/M Collaborative. 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

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

A. General site information:

<table>
<tr><td rowspan="2">1. Name of site:
Shattuck Hospital</td><td colspan="3">Site address:
Street: 88 East Newton Street</td></tr>
<tr><td>City: Boston</td><td>State: MA</td><td>Zip: 02118</td></tr>
<tr><td rowspan="4">2. Site owner
Division of Capital Management & Maintenance

Owner is (check one): ☐ Federal ■ State/Tribal ☐ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: Mark T. Swingle, PE, SE</td></tr>
<tr><td colspan="2">Telephone: (617) 877-6207</td><td>Email: mark.swingle@mass.gov</td></tr>
<tr><td colspan="3">Mailing address:
Street: One Ashburton Place, 15th Floor</td></tr>
<tr><td>City: Boston</td><td>State: MA</td><td>Zip: 02108</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
Division of Capital Management & Maintenance</td><td colspan="3">Contact Person: Mark T. Swingle, PE, SE</td></tr>
<tr><td colspan="2">Telephone: (617) 877-6207</td><td>Email: mark.swingle@state.ma.us</td></tr>
<tr><td colspan="3">Mailing address:
Street: One Ashburton Place, 15th Floor</td></tr>
<tr><td>City: Boston</td><td>State: MA</td><td>Zip: 02108</td></tr>
<tr><td>4. NPDES permit number assigned by EPA:

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

B. Receiving water information:

1. Name of receiving water(s):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
Fort Point Channel	MA70-02	SB(CSO)

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.	N/A

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

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

C. Source water information:

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

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

2. Source water contaminants: Total cyanide, naphthalene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chrysene, indeno(1,2,3-cd)pyrene	
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): Combined Sewer Outfall CSO070	Outfall location(s): (Latitude, Longitude) 42.342812, -71.060966
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ■ Indirect discharge, if so, specify: Discharge indirectly into the Fort Point Channel after entering the Roxbury Canal Conduit ☐ 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 this NOI 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): July 2021 - August 2022 Indicate if the discharge is expected to occur over a duration of: ☐ less than 12 months ■ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ■ Yes ☐ No	

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

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

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

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia	✔		1	1214500				Report mg/L	---
Chloride	✔		1	44300				Report µg/l	---
Total Residual Chlorine	✔		1	1214500	20	ND		0.2 mg/L	
Total Suspended Solids		✔	1	1212540		14000		30 mg/L	---
Antimony	✔		1	3,200.8	4	ND		206 µg/L	
Arsenic	✔		1	3,200.8	3.12	ND		104 µg/L	
Cadmium	✔		1	3,200.8	0.2	ND		10.2 µg/L	
Chromium III	✔		1	107	10	ND		323 µg/L	
Chromium VI	✔		1	107	10	ND		323 µg/L	
Copper	✔		1	3,200.8	2.26	ND		242 µg/L	
Iron		✔	1	19200.7	50	1670		5,000 µg/L	
Lead		✔	1	3,200.8	1	1.17		160 µg/L	
Mercury	✔		1	3,245.1	0.2	ND		0.739 µg/L	
Nickel	✔		1	3,200.8	2	ND		1,450 µg/L	
Selenium	✔		1	3,200.8	5	ND		235.8 µg/L	
Silver	✔		1	3,200.8	0.4	ND		35.1 µg/L	
Zinc	✔		1	3,200.8	10	ND		420 µg/L	
Cyanide		✔	1	121,4500	5	10		178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX								100 µg/L	---
Benzene								5.0 µg/L	---
1,4 Dioxane								200 µg/L	---
Acetone								7.97 mg/L	---
Phenol								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	✔							4.4 µg/L	
1,2 Dichlorobenzene	✔							600 µg/L	---
1,3 Dichlorobenzene	✔							320 µg/L	---
1,4 Dichlorobenzene	✔							5.0 µg/L	---
Total dichlorobenzene	✔							763 µg/L in NH	---
1,1 Dichloroethane	✔							70 µg/L	---
1,2 Dichloroethane	✔							5.0 µg/L	---
1,1 Dichloroethylene	✔							3.2 µg/L	---
Ethylene Dibromide	✔							0.05 µg/L	---
Methylene Chloride	✔							4.6 µg/L	---
1,1,1 Trichloroethane	✔							200 µg/L	---
1,1,2 Trichloroethane	✔							5.0 µg/L	---
Trichloroethylene	✔							5.0 µg/L	---
Tetrachloroethylene	✔							5.0 µg/L	
cis-1,2 Dichloroethylene	✔							70 µg/L	---
Vinyl Chloride	✔							2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✔							190 µg/L	
Diethylhexyl phthalate	✔							101 µg/L	
Total Group I PAHs								1.0 µg/L	---
Benzo(a)anthracene		✔	1	625.1	0.500	1.70		As Total PAHs	0.0038
Benzo(a)pyrene		✔	1	625.1	0.500	0.955			0.0038
Benzo(b)fluoranthene		✔	1	625.1	0.500	1.3			0.0038
Benzo(k)fluoranthene	✔		1	625.1	0.500	ND			0.0038
Chrysene		✔	1	625.1	0.500	1.28			0.0038
Dibenzo(a,h)anthracene	✔		1	625.1	0.500	ND			0.0038
Indeno(1,2,3-cd)pyrene		✔	1	625.1	0.500	0.645			0.0038

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	✔							100 µg/L	---
Naphthalene		✔	1	625.1	0.500	58.5		20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✔							0.000064 µg/L	---
Pentachlorophenol	✔							1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons	✔							5.0 mg/L	---
Ethanol	✔							Report mg/L	---
Methyl-tert-Butyl Ether	✔							70 µg/L	
tert-Butyl Alcohol	✔							120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✔							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			7.6			

E. Treatment system information

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

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

2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.
Settling tank, bag filters to remove suspended soil particulates, and ion resin tank prior to off-site discharge

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: settling tank Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	50
Provide the proposed maximum effluent flow in gpm.	50
Provide the average effluent flow in gpm.	25
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	

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.

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: BMPP has been implemented in accordance with good engineering practices following Part 2.5 of the RGP	
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ■ No ☐
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐ NA ☐
Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.	Check one: Yes ☐ No ■ NA ☐
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Check one: Yes ☐ No ■ NA ☐
Signature: Mark Swingle Digitally signed by Mark Swingle DN: cn=Mark Swingle, o=DCAMM, ou=ODC, email=mark.swingle@mass.gov, c=US Date: 2021.05.12 08:56:35 -04'00'	Date: 5/12/2021
Print Name and Title: Mark Swingle, Project Manager	

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

DEWATERING DISCHARGE PERMIT APPLICATION

OWNER / AUTHORIZED APPLICANT PROVIDE INFORMATION HERE:

Company Name: Division of Capital Management & Maintenance Address: One Ashburton Place, 15th Floor, Boston, MA 02108

Phone Number: (617) 877-6207 Fax number: _____

Contact person name: Mark T. Swingle Title: Project Manager

Cell number: (617) 877-6207 Email address: mark.swingle@mass.gov

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

Owner's Information (if different from above):

Owner of property being dewatered: Division of Capital Management & Maintenance

Owner's mailing address: One Ashburton Place, 15th Floor, Boston, MA 02108 Phone number: (617) 877-6207

Location of Discharge & Proposed Treatment System(s):

Street number and name: 88 East Newton Street Neighborhood Boston

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

Describe Proposed Pre-Treatment System(s): Settling tank and bag filters to remove sediment; ion exchange resin tank

BWSC Outfall No. CSO070 Receiving Waters Fort Point Channel

Temporary Discharges (Provide Anticipated Dates of Discharge): From 07/01/2021 To 08/31/2022

☐ 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: _____ Date: 05/12/2021

Mark Swingle

Digitally signed by Mark Swingle
DN: cn=Mark Swingle, o=DCAMM, ou=ODC, email=mark.swingle@mass.gov, c=US
Date: 2021.05.12 08:59:49 -04'00'

APPENDIX C:

ADDITIONAL NOI SUPPORT INFORMATION

MassDEP - Bureau of Waste Site Cleanup

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

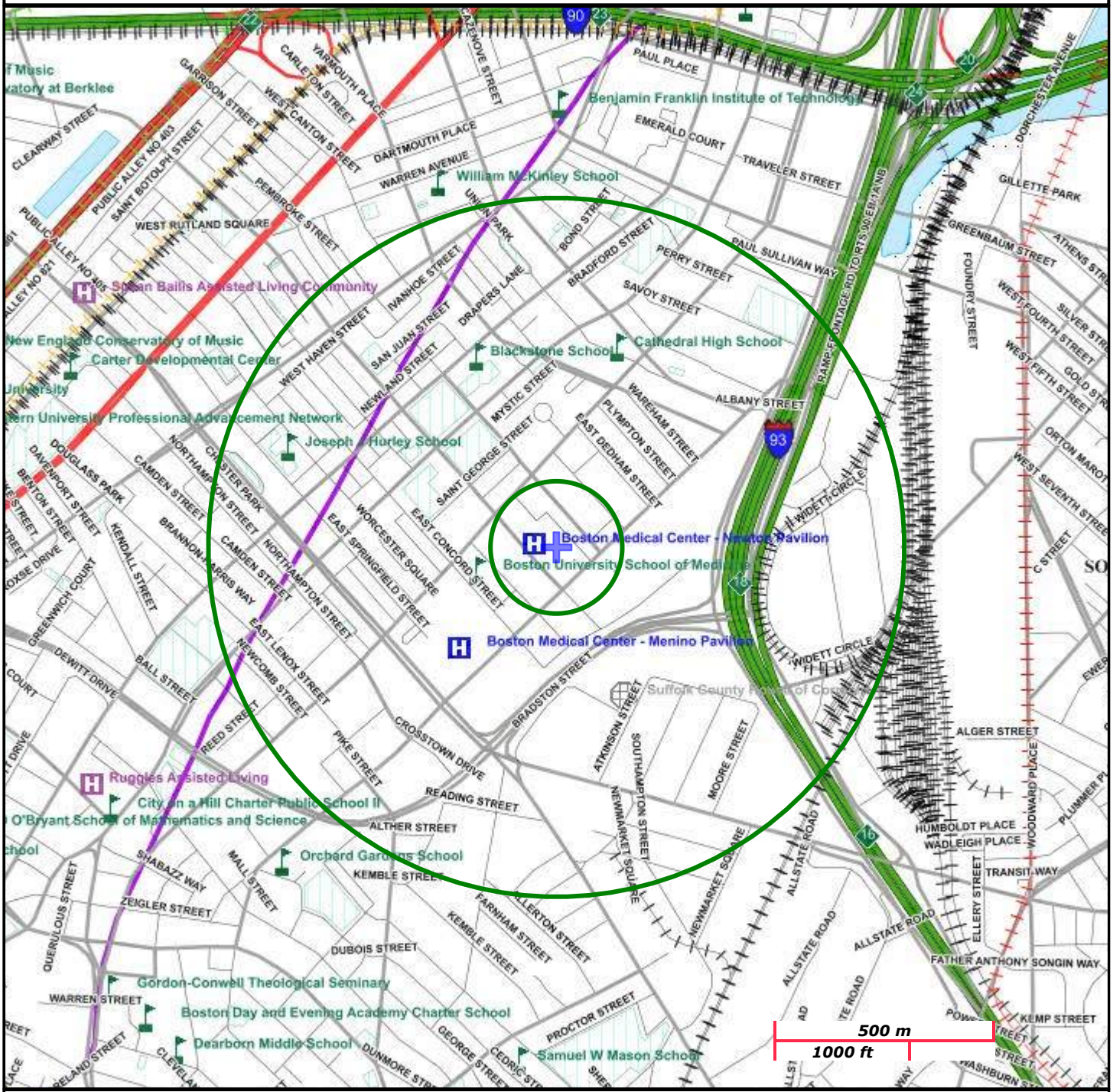
Site Information:

88 EAST NEWTON BOSTON, MA

NAD83 UTM Meters:
4689247mN , 329449mE (Zone: 19)
March 23, 2021

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

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



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

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

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

Aquifers: Medium Yield, High Yield, EPA Sole Source

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

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

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

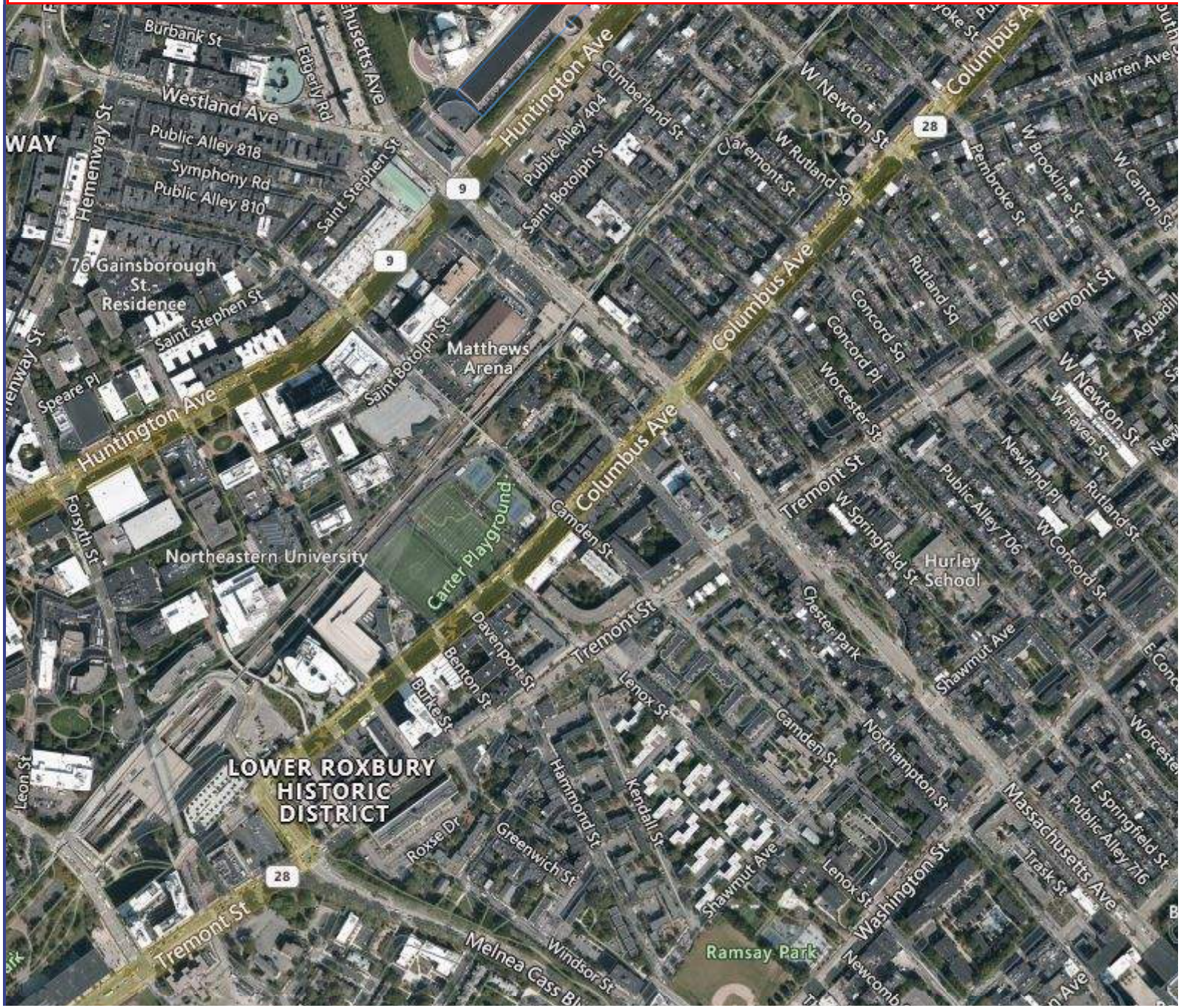
Solid Waste Landfill; PWS: Com.GW,SW, Emerg., Non-Com.

MassDEP Online Map Viewer

2014 Integrated List of Waters Map

Helpful Links:

- The Clean Water Act
- MassDEP Total Maximum Daily Loads



Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Street No: 88; Street Name: East Newton St; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

United States Department of the Interior

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

In Reply Refer To: March 23, 2021
Consultation Code: 05E1NE00-2021-SLI-1993
Event Code: 05E1NE00-2021-E-06290
Project Name: 88 East Newton Street

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 05E1NE00-2021-SLI-1993
Event Code: 05E1NE00-2021-E-06290
Project Name: 88 East Newton Street
Project Type: LAND - DRAINAGE
Project Description: Located on developed land approximately 118,000 square-foot.
Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.3367649,-71.07031667231158,14z

Counties: Suffolk County, Massachusetts

Endangered Species Act Species

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

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

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

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

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

Critical habitats

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

APPENDIX D:

LABORATORY ANALYTICAL DATA - GROUNDWATER

ANALYTICAL REPORT

Lab Number:	L2113663
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	88 E. NEWTON ST.
Project Number:	7029.9.00
Report Date:	03/24/21

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

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

Project Name: 88 E. NEWTON ST.
Project Number: 7029.9.00

Lab Number: L2113663
Report Date: 03/24/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2113663-01	B-6 (OW)	WATER	BOSTON, MA	03/17/21 12:30	03/18/21

Project Name:	88 E. NEWTON ST.	**Lab Number:**	L2113663
Project Number:	7029.9.00	**Report Date:**	03/24/21

Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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

Please contact Project Management at 800-624-9220 with any questions.

Project Name:	88 E. NEWTON ST.	**Lab Number:**	L2113663
Project Number:	7029.9.00	**Report Date:**	03/24/21

Case Narrative (continued)

Sample Receipt

The analyses performed were specified by the client.

Semivolatile Organics by SIM

L2113663-01D: The sample has elevated detection limits due to the dilution required by the elevated concentrations of target compounds in the sample.

Chlorine, Total Residual

L2113663-01 was analyzed with the method required holding time exceeded.

The WG1476231-4 MS recovery, performed on L2113663-01, is outside the acceptance criteria for chlorine, total residual (0%); however, the associated LCS recovery is within criteria. No further action was taken.

Hexavalent Chromium

L2113663-01 was analyzed with the method required holding time exceeded.

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

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 03/24/21

ORGANICS

SEMIVOLATILES

Project Name: 88 E. NEWTON ST.
Lab Number: L2113663
Project Number: 7029.9.00
Report Date: 03/24/21

SAMPLE RESULTS

Lab ID: L2113663-01
Client ID: B-6 (OW)
Sample Location: BOSTON, MA

Date Collected: 03/17/21 12:30
Date Received: 03/18/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 03/20/21 21:02
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 03/19/21 18:27

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-ethylhexyl)phthalate	ND		ug/l	2.20	--	1
Butyl benzyl phthalate	ND		ug/l	5.00	--	1
Di-n-butylphthalate	ND		ug/l	5.00	--	1
Di-n-octylphthalate	ND		ug/l	5.00	--	1
Diethyl phthalate	ND		ug/l	5.00	--	1
Dimethyl phthalate	ND		ug/l	5.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	85		42-122
2-Fluorobiphenyl	84		46-121
4-Terphenyl-d14	97		47-138

Project Name: 88 E. NEWTON ST.
Lab Number: L2113663
Project Number: 7029.9.00
Report Date: 03/24/21

SAMPLE RESULTS

Lab ID: L2113663-01 D
Client ID: B-6 (OW)
Sample Location: BOSTON, MA

Date Collected: 03/17/21 12:30
Date Received: 03/18/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 03/23/21 15:38
Analyst: DV

Extraction Method: EPA 625.1
Extraction Date: 03/19/21 16:58

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	17.5		ug/l	0.500	--	5
Fluoranthene	10.0		ug/l	0.500	--	5
Naphthalene	58.5		ug/l	0.500	--	5
Benzo(a)anthracene	1.70		ug/l	0.500	--	5
Benzo(a)pyrene	0.955		ug/l	0.500	--	5
Benzo(b)fluoranthene	1.30		ug/l	0.500	--	5
Benzo(k)fluoranthene	ND		ug/l	0.500	--	5
Chrysene	1.28		ug/l	0.500	--	5
Acenaphthylene	5.30		ug/l	0.500	--	5
Anthracene	6.41		ug/l	0.500	--	5
Benzo(ghi)perylene	0.540		ug/l	0.500	--	5
Fluorene	19.4		ug/l	0.500	--	5
Phenanthrene	31.9		ug/l	0.500	--	5
Dibenzo(a,h)anthracene	ND		ug/l	0.500	--	5
Indeno(1,2,3-cd)pyrene	0.645		ug/l	0.500	--	5
Pyrene	7.10		ug/l	0.500	--	5
Pentachlorophenol	ND		ug/l	5.00	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	63		25-87
Phenol-d6	46		16-65
Nitrobenzene-d5	89		42-122
2-Fluorobiphenyl	91		46-121
2,4,6-Tribromophenol	102		45-128
4-Terphenyl-d14	109		47-138

Project Name: 88 E. NEWTON ST.
Project Number: 7029.9.00

Lab Number: L2113663
Report Date: 03/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1
Analytical Date: 03/20/21 19:07
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 03/19/21 16:57

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1476582-1					
Bis(2-ethylhexyl)phthalate	ND		ug/l	2.20	--
Butyl benzyl phthalate	ND		ug/l	5.00	--
Di-n-butylphthalate	ND		ug/l	5.00	--
Di-n-octylphthalate	ND		ug/l	5.00	--
Diethyl phthalate	ND		ug/l	5.00	--
Dimethyl phthalate	ND		ug/l	5.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	73		42-122
2-Fluorobiphenyl	75		46-121
4-Terphenyl-d14	88		47-138

Project Name: 88 E. NEWTON ST. **Lab Number:** L2113663

Project Number: 7029.9.00 **Report Date:** 03/24/21

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1-SIM
Analytical Date: 03/20/21 20:38
Analyst: DV

Extraction Method: EPA 625.1
Extraction Date: 03/19/21 16:58

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1476583-1					
Acenaphthene	ND		ug/l	0.100	--
Fluoranthene	ND		ug/l	0.100	--
Naphthalene	ND		ug/l	0.100	--
Benzo(a)anthracene	ND		ug/l	0.100	--
Benzo(a)pyrene	ND		ug/l	0.100	--
Benzo(b)fluoranthene	ND		ug/l	0.100	--
Benzo(k)fluoranthene	ND		ug/l	0.100	--
Chrysene	ND		ug/l	0.100	--
Acenaphthylene	ND		ug/l	0.100	--
Anthracene	ND		ug/l	0.100	--
Benzo(ghi)perylene	ND		ug/l	0.100	--
Fluorene	ND		ug/l	0.100	--
Phenanthrene	ND		ug/l	0.100	--
Dibenzo(a,h)anthracene	ND		ug/l	0.100	--
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.100	--
Pyrene	ND		ug/l	0.100	--
Pentachlorophenol	ND		ug/l	1.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	45		25-87
Phenol-d6	30		16-65
Nitrobenzene-d5	77		42-122
2-Fluorobiphenyl	78		46-121
2,4,6-Tribromophenol	91		45-128
4-Terphenyl-d14	105		47-138

Lab Control Sample Analysis
Batch Quality Control

Project Name: 88 E. NEWTON ST.
Project Number: 7029.9.00

Lab Number: L2113663
Report Date: 03/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1476582-2								
Bis(2-ethylhexyl)phthalate	92		-		29-137	-		82
Butyl benzyl phthalate	94		-		1-140	-		60
Di-n-butylphthalate	85		-		8-120	-		47
Di-n-octylphthalate	97		-		19-132	-		69
Diethyl phthalate	80		-		1-120	-		100
Dimethyl phthalate	79		-		1-120	-		183

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	79				42-122
2-Fluorobiphenyl	77				46-121
4-Terphenyl-d14	84				47-138

Lab Control Sample Analysis
Batch Quality Control

Project Name: 88 E. NEWTON ST.
Project Number: 7029.9.00

Lab Number: L2113663
Report Date: 03/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1476583-2								
Acenaphthene	94		-		60-132	-		30
Fluoranthene	101		-		43-121	-		30
Naphthalene	86		-		36-120	-		30
Benzo(a)anthracene	96		-		42-133	-		30
Benzo(a)pyrene	85		-		32-148	-		30
Benzo(b)fluoranthene	95		-		42-140	-		30
Benzo(k)fluoranthene	93		-		25-146	-		30
Chrysene	90		-		44-140	-		30
Acenaphthylene	96		-		54-126	-		30
Anthracene	95		-		43-120	-		30
Benzo(ghi)perylene	97		-		1-195	-		30
Fluorene	95		-		70-120	-		30
Phenanthrene	91		-		65-120	-		30
Dibenzo(a,h)anthracene	104		-		1-200	-		30
Indeno(1,2,3-cd)pyrene	108		-		1-151	-		30
Pyrene	99		-		70-120	-		30
Pentachlorophenol	72		-		38-152	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 88 E. NEWTON ST.

Project Number: 7029.9.00

Lab Number: L2113663

Report Date: 03/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1476583-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	58				25-87
Phenol-d6	41				16-65
Nitrobenzene-d5	96				42-122
2-Fluorobiphenyl	95				46-121
2,4,6-Tribromophenol	108				45-128
4-Terphenyl-d14	116				47-138

METALS

Project Name: 88 E. NEWTON ST. **Lab Number:** L2113663

Project Number: 7029.9.00 **Report Date:** 03/24/21

SAMPLE RESULTS

Lab ID: L2113663-01 Date Collected: 03/17/21 12:30

Client ID: B-6 (OW) Date Received: 03/18/21

Sample Location: BOSTON, MA Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	03/20/21 09:24	03/22/21 09:20	EPA 3005A	3,200.8	AM
Arsenic, Total	0.00312		mg/l	0.00100	--	1	03/20/21 09:24	03/22/21 09:20	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	03/20/21 09:24	03/22/21 09:20	EPA 3005A	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	03/20/21 09:24	03/22/21 09:20	EPA 3005A	3,200.8	AM
Copper, Total	0.00226		mg/l	0.00100	--	1	03/20/21 09:24	03/22/21 09:20	EPA 3005A	3,200.8	AM
Iron, Total	1.67		mg/l	0.050	--	1	03/20/21 09:24	03/23/21 00:14	EPA 3005A	19,200.7	BV
Lead, Total	0.00117		mg/l	0.00100	--	1	03/20/21 09:24	03/22/21 09:20	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	03/20/21 10:05	03/20/21 17:04	EPA 245.1	3,245.1	NB
Nickel, Total	ND		mg/l	0.00200	--	1	03/20/21 09:24	03/22/21 09:20	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	03/20/21 09:24	03/22/21 09:20	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	03/20/21 09:24	03/22/21 09:20	EPA 3005A	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	03/20/21 09:24	03/22/21 09:20	EPA 3005A	3,200.8	AM
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		03/22/21 09:20	NA	107,-	

Project Name: 88 E. NEWTON ST. **Lab Number:** L2113663

Project Number: 7029.9.00 **Report Date:** 03/24/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1476712-1										
Iron, Total	ND		mg/l	0.050	--	1	03/20/21 09:24	03/22/21 07:59	19,200.7	GD

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1476720-1										
Antimony, Total	ND		mg/l	0.00400	--	1	03/20/21 09:24	03/22/21 08:55	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	03/20/21 09:24	03/22/21 08:55	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	03/20/21 09:24	03/22/21 08:55	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	03/20/21 09:24	03/22/21 08:55	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	03/20/21 09:24	03/22/21 08:55	3,200.8	AM
Lead, Total	ND		mg/l	0.00100	--	1	03/20/21 09:24	03/22/21 08:55	3,200.8	AM
Nickel, Total	ND		mg/l	0.00200	--	1	03/20/21 09:24	03/22/21 08:55	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	03/20/21 09:24	03/22/21 08:55	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	03/20/21 09:24	03/22/21 08:55	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	03/20/21 09:24	03/22/21 08:55	3,200.8	AM

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1476721-1										
Mercury, Total	ND		mg/l	0.00020	--	1	03/20/21 10:05	03/20/21 16:37	3,245.1	NB

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: 88 E. NEWTON ST.

Project Number: 7029.9.00

Lab Number: L2113663

Report Date: 03/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1476712-2								
Iron, Total	98		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1476720-2								
Antimony, Total	85		-		85-115	-		
Arsenic, Total	107		-		85-115	-		
Cadmium, Total	106		-		85-115	-		
Chromium, Total	100		-		85-115	-		
Copper, Total	101		-		85-115	-		
Lead, Total	102		-		85-115	-		
Nickel, Total	97		-		85-115	-		
Selenium, Total	104		-		85-115	-		
Silver, Total	102		-		85-115	-		
Zinc, Total	106		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1476721-2								
Mercury, Total	93		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 88 E. NEWTON ST.
Project Number: 7029.9.00

Lab Number: L2113663
Report Date: 03/24/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1476712-3 QC Sample: L2113750-01 Client ID: MS Sample												
Iron, Total	0.775	1	1.68	90		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1476712-7 QC Sample: L2113936-01 Client ID: MS Sample												
Iron, Total	2.00	1	2.84	84		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1476720-3 QC Sample: L2113750-01 Client ID: MS Sample												
Antimony, Total	ND	0.5	0.4856	97		-	-		70-130	-		20
Arsenic, Total	0.00269	0.12	0.1259	103		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.05432	106		-	-		70-130	-		20
Chromium, Total	0.00157	0.2	0.1954	97		-	-		70-130	-		20
Copper, Total	0.00718	0.25	0.2573	100		-	-		70-130	-		20
Lead, Total	0.00676	0.51	0.5275	102		-	-		70-130	-		20
Nickel, Total	0.00230	0.5	0.4756	95		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1222	102		-	-		70-130	-		20
Silver, Total	ND	0.05	0.05079	102		-	-		70-130	-		20
Zinc, Total	0.01733	0.5	0.5307	103		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1476721-3 QC Sample: L2113985-01 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00476	95		-	-		70-130	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: 88 E. NEWTON ST.

Project Number: 7029.9.00

Lab Number: L2113663

Report Date: 03/24/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1476712-4 QC Sample: L2113750-01 Client ID: DUP Sample						
Iron, Total	0.775	0.704	mg/l	10		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1476720-4 QC Sample: L2113750-01 Client ID: DUP Sample						
Antimony, Total	ND	ND	mg/l	NC		20
Arsenic, Total	0.00269	0.00265	mg/l	1		20
Cadmium, Total	ND	ND	mg/l	NC		20
Chromium, Total	0.00157	0.00121	mg/l	**25**	Q	20
Copper, Total	0.00718	0.00485	mg/l	**39**	Q	20
Lead, Total	0.00676	0.00741	mg/l	9		20
Nickel, Total	0.00230	0.00203	mg/l	12		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	0.01733	0.01647	mg/l	5		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1476721-4 QC Sample: L2113985-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: 88 E. NEWTON ST.
Project Number: 7029.9.00

Lab Number: L2113663
Report Date: 03/24/21

SAMPLE RESULTS

Lab ID: L2113663-01
Client ID: B-6 (OW)
Sample Location: BOSTON, MA

Date Collected: 03/17/21 12:30
Date Received: 03/18/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	14.		mg/l	5.0	NA	1	-	03/23/21 14:40	121,2540D	AC
Cyanide, Total	0.010		mg/l	0.005	--	1	03/23/21 11:30	03/24/21 10:49	121,4500CN-CE	CR
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	03/19/21 04:11	121,4500CL-D	JA
pH (H)	7.6		SU	-	NA	1	-	03/19/21 18:09	121,4500H+-B	AS
TPH, SGT-HEM	ND		mg/l	4.00	--	1	03/22/21 14:30	03/22/21 15:30	74,1664A	TL
Chromium, Hexavalent	ND		mg/l	0.010	--	1	03/19/21 09:05	03/19/21 09:36	1,7196A	KP

Project Name: 88 E. NEWTON ST.
Project Number: 7029.9.00
Lab Number: L2113663
Report Date: 03/24/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1476231-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	03/19/21 04:11	121,4500CL-D	JA
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1476381-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	03/19/21 09:05	03/19/21 09:32	1,7196A	KP
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1477112-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	03/22/21 14:30	03/22/21 15:30	74,1664A	TL
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1477627-1										
Cyanide, Total	ND		mg/l	0.005	--	1	03/23/21 11:30	03/24/21 10:33	121,4500CN-CE	CR
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1477750-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	03/23/21 14:40	121,2540D	AC

Lab Control Sample Analysis

Batch Quality Control

Project Name: 88 E. NEWTON ST.

Project Number: 7029.9.00

Lab Number: L2113663

Report Date: 03/24/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1476231-2								
Chlorine, Total Residual	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1476381-2								
Chromium, Hexavalent	102		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1476573-1								
pH	100		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1477112-2								
TPH	76		-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1477627-2								
Cyanide, Total	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1477750-2								
Solids, Total Suspended	95		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 88 E. NEWTON ST.
Project Number: 7029.9.00

Lab Number: L2113663
Report Date: 03/24/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1476231-4 QC Sample: L2113663-01 Client ID: B-6 (OW)												
Chlorine, Total Residual	ND	0.25	ND	**0**	Q	-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1476381-4 QC Sample: L2113663-01 Client ID: B-6 (OW)												
Chromium, Hexavalent	ND	0.1	0.099	99		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1477112-4 QC Sample: L2113196-01 Client ID: MS Sample												
TPH	ND	19.2	13.2	68		-	-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1477627-4 QC Sample: L2113708-02 Client ID: MS Sample												
Cyanide, Total	ND	0.2	0.205	102		-	-		90-110	-		30

Lab Duplicate Analysis
Batch Quality Control

Project Name: 88 E. NEWTON ST.
Project Number: 7029.9.00

Lab Number: L2113663
Report Date: 03/24/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1476231-3 QC Sample: L2113663-01 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: WG1476381-3 QC Sample: L2113663-01 Client ID: B-6 (OW)						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1476573-2 QC Sample: L2113469-01 Client ID: DUP Sample						
pH	4.8	5.2	SU	**8**	Q	5
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1477112-3 QC Sample: L2112957-01 Client ID: DUP Sample						
TPH	ND	ND	mg/l	NC		34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1477627-3 QC Sample: L2113708-01 Client ID: DUP Sample						
Cyanide, Total	ND	ND	mg/l	NC		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1477750-3 QC Sample: L2113729-01 Client ID: DUP Sample						
Solids, Total Suspended	86	86	mg/l	0		29

Project Name: 88 E. NEWTON ST.
Project Number: 7029.9.00

Lab Number: L2113663
Report Date: 03/24/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2113663-01A	Plastic 250ml unpreserved	A	7	7	5.1	Y	Absent		-
L2113663-01B	Plastic 250ml HNO3 preserved	A	<2	<2	5.1	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),AG-2008T(180),HG-U(28),SE-2008T(180),AS-2008T(180),PB-2008T(180),SB-2008T(180),CR-2008T(180)
L2113663-01C	Plastic 250ml NaOH preserved	A	>12	>12	5.1	Y	Absent		TCN-4500(14)
L2113663-01D	Plastic 950ml unpreserved	A	7	7	5.1	Y	Absent		HEXCR-7196(1),TRC-4500(1),PH-4500(.01)
L2113663-01E	Plastic 950ml unpreserved	A	7	7	5.1	Y	Absent		TSS-2540(7)
L2113663-01F	Amber 1000ml Na2S2O3	A	7	7	5.1	Y	Absent		625.1-RGP(7)
L2113663-01G	Amber 1000ml Na2S2O3	A	7	7	5.1	Y	Absent		625.1-RGP(7)
L2113663-01H	Amber 1000ml Na2S2O3	A	7	7	5.1	Y	Absent		625.1-SIM-RGP(7)
L2113663-01I	Amber 1000ml Na2S2O3	A	7	7	5.1	Y	Absent		625.1-SIM-RGP(7)
L2113663-01J	Amber 1000ml HCl preserved	A	NA		5.1	Y	Absent		TPH-1664(28)
L2113663-01K	Amber 1000ml HCl preserved	A	NA		5.1	Y	Absent		TPH-1664(28)
L2113663-01X	Plastic 120ml HNO3 preserved Filtrates	A	NA		5.1	Y	Absent		HOLD-METAL-DISSOLVED(180)

*Values in parentheses indicate holding time in days

Project Name:	88 E. NEWTON ST.	**Lab Number:**	L2113663
Project Number:	7029.9.00	**Report Date:**	03/24/21

GLOSSARY

Acronyms

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

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

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

EPA - Environmental Protection Agency.

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

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

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

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

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

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

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

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

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

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

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

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

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

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

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

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

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

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

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

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

Report Format: Data Usability Report

Project Name:	88 E. NEWTON ST.	**Lab Number:**	L2113663
Project Number:	7029.9.00	**Report Date:**	03/24/21

Footnotes

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

Terms

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

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

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

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

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

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

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

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

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

Data Qualifiers

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

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

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

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

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

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

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

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

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

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

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

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

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

Report Format: Data Usability Report

Project Name:	88 E. NEWTON ST.	**Lab Number:**	L2113663
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Data Qualifiers

the identification is based on a mass spectral library search.

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: Data Usability Report

Project Name:	88 E. NEWTON ST.	**Lab Number:**	L2113663
Project Number:	7029.9.00	**Report Date:**	03/24/21

REFERENCES

1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - VI, 2018.

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

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

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.

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

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

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

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

Westborough Facility:

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

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

Mansfield Facility:

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

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

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

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL

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

Date Rec'd in Lab: 3/18/21

ALPHA Job #: L2113663

Client Information

Client: McPhail Associates, LLC
Address: 2269 Massachusetts Avenue
Cambridge, MA 02140
Phone: (617) 868-1420
Email: SAhmed @McPhailgeo.com

Additional Project Information:
☑ Run TCLP (if triggered)

Project Information

Project Name: 88 E. Newton St.
Project Location: Boston, MA
Project #: 7029.9.00
Project Manager: Shakib Ahmed
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 _____

Sample "Sample ID" Nomenclature: B-100, S-1

ALPHA Lab ID (Lab Use Only)	Sample ID	Sample Depth	Sample Material	Collection Date	Collection Time	Sampler Initials	Soil Assessment Package IV (less VOC)	VOC: ☐ 8260	Total Solids	SVOC: ☐ PAH	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	TOTAL METALS: ☐ RCRA8 ☐ PP13 ☐ MCP 14	DISSOLVED METALS: ☐ RCRA8 ☐ PP13 ☐ MCP 14	METALS: Total Sb,Be,Ni,Tl,V,Zn	☐ PCBs ☐ Pesticides	RGP Section A Inorganics	NPDES RGP MA&NH			SAMPLE INFO *Filtration* ☐ Field ☐ Lab to do *Preservation* ☐ Lab to do Sample Comments	TOTAL # BOTTLES
13663-01	B-6(ow)	~13.5'	GW	3/17/21	12:30	JDM												X				11

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

Sample Material
F=Fil S=Sand
O=Organics C=Clay
N=Natural T=Till
GM=Glaciomarine
GW=Groundwater

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=Ascorbix Acid
J=NH_4Cl
K=Zn Acetate
O=Other

RGP Section A Inorganics :
Ammonia, Chloride, TRC, TSS, CrVI, CrIII, Total Cyanide, Total RGP Metals

Container Type																		1P					
Preservative																		B					

Relinquished By:	Date/Time	Received By:	Date/Time
John Miller	3/17/21 4:45	McPhail Associates secure sample storage for laboratory pick-up	3/17/21 4:45
McPhail Associates secure sample storage for laboratory pick-up		AAL	3-18-21 1150
AAL	3-18-21 1830	Melissa Gomez	3/18/21 1830

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

DOC ID: 25188 Rev 0 (11/28/2017)

APPENDIX E:

LABORATORY ANALYTICAL DATA – SURFACE WATER

ANALYTICAL REPORT

Lab Number:	L2115935
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	E. NEWTON ST.
Project Number:	7029.9.06
Report Date:	04/05/21

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

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

Project Name: E. NEWTON ST.
Project Number: 7029.9.06

Lab Number: L2115935
Report Date: 04/05/21

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2115935-01	RGP EFFLUENT SW	WATER	BOSTON, MA	03/30/21 09:00	03/30/21

Project Name:	E. NEWTON ST.	**Lab Number:**	L2115935
Project Number:	7029.9.06	**Report Date:**	04/05/21

Case Narrative

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

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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

Please contact Project Management at 800-624-9220 with any questions.

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: Caitlin Walukevich

Caitlin Walukevich

Title: Technical Director/Representative

Date: 04/05/21

INORGANICS
&
MISCELLANEOUS

Project Name: E. NEWTON ST.
Project Number: 7029.9.06

Lab Number: L2115935
Report Date: 04/05/21

SAMPLE RESULTS

Lab ID: L2115935-01
Client ID: RGP EFFLUENT SW
Sample Location: BOSTON, MA

Date Collected: 03/30/21 09:00
Date Received: 03/30/21
Field Prep: Not Specified

Sample Depth:
Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
SALINITY	27		SU	2.0	--	1	-	04/02/21 19:19	121,2520B	AS
pH (H)	7.7		SU	-	NA	1	-	03/31/21 17:54	121,4500H+-B	AS
Nitrogen, Ammonia	0.218		mg/l	0.075	--	1	04/02/21 03:22	04/02/21 19:06	121,4500NH3-BH	AT

Project Name: E. NEWTON ST.
Project Number: 7029.9.06
Lab Number: L2115935
Report Date: 04/05/21

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1481628-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	04/02/21 03:22	04/02/21 18:26	121,4500NH3-BH	AT

Lab Control Sample Analysis

Batch Quality Control

Project Name: E. NEWTON ST.

Project Number: 7029.9.06

Lab Number: L2115935

Report Date: 04/05/21

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1481065-1								
pH	100		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1481628-2								
Nitrogen, Ammonia	100		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1482021-1								
SALINITY	100		-			-		

Matrix Spike Analysis
Batch Quality Control

Project Name: E. NEWTON ST.
Project Number: 7029.9.06

Lab Number: L2115935
Report Date: 04/05/21

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1481628-4 QC Sample: L2115521-06 Client ID: MS Sample												
Nitrogen, Ammonia	0.186	4	3.61	86		-	-		80-120	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: E. NEWTON ST.

Project Number: 7029.9.06

Lab Number: L2115935

Report Date: 04/05/21

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1481065-2 QC Sample: L2115857-01 Client ID: DUP Sample						
pH	7.7	7.6	SU	1		5
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1481628-3 QC Sample: L2115521-06 Client ID: DUP Sample						
Nitrogen, Ammonia	0.186	0.108	mg/l	**53**	Q	20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1482021-2 QC Sample: L2115935-01 Client ID: RGP EFFLUENT SW						
SALINITY	27	28	SU	4		

Project Name: E. NEWTON ST.
Project Number: 7029.9.06

Lab Number: L2115935
Report Date: 04/05/21

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2115935-01A	Plastic 60ml unpreserved	A	7	7	2.1	Y	Absent		PH-4500(.01)
L2115935-01B	Amber 120ml unpreserved	A	7	7	2.1	Y	Absent		SALINITY(28)
L2115935-01C	Plastic 500ml H2SO4 preserved	A	<2	<2	2.1	Y	Absent		NH3-4500(28)

*Values in parentheses indicate holding time in days

Project Name:	E. NEWTON ST.	**Lab Number:**	L2115935
Project Number:	7029.9.06	**Report Date:**	04/05/21

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
NR	- No Results: Term is utilized when 'No Target Compounds Requested' is reported for the analysis of Volatile or Semivolatile Organic TIC only requests.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Report Format: Data Usability Report

Project Name:	E. NEWTON ST.	**Lab Number:**	L2115935
Project Number:	7029.9.06	**Report Date:**	04/05/21

Footnotes

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

Terms

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

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

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

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

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

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

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

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

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

Data Qualifiers

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

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

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

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

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

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

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

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

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

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

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

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

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

Report Format: Data Usability Report

Project Name:	E. NEWTON ST.	**Lab Number:**	L2115935
Project Number:	7029.9.06	**Report Date:**	04/05/21

Data Qualifiers

the identification is based on a mass spectral library search.

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: Data Usability Report

Project Name:	E. NEWTON ST.	**Lab Number:**	L2115935
Project Number:	7029.9.06	**Report Date:**	04/05/21

REFERENCES

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

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

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

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

Westborough Facility:

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

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

Mansfield Facility:

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

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

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

CHAIN OF CUSTODY

PAGE 1 OF 1

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

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

Date Rec'd in Lab: 3/30/21

ALPHA Job #: L2115935

Client Information

Client: MCPhail Associates
Address: 2269 Mass Ave
Cambridge MA
Phone: (617-868-1420
Email: SAhmed@mcphailgeo.com

Additional Project Information:

Project Information

Project Name: E Newton St
Project Location: Boston MA
Project #: 7029.9.06
Project Manager: Shakib Ahmed
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: 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	PH	SALINITY	NH_3	SAMPLE INFO (Filtration ☐ Field ☐ Lab to do; Preservation ☐ Lab to do) Sample Comments	TOTAL # BOTTLES
15935-01	RGP EFFLUENT SW	3/30	900	SW	MW		X	X	X		3

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

Container Type										P	A	P							
Preservative										A	A	D							

Relinquished By:	Date/Time	Received By:	Date/Time
	3/30/21 1000		3-30-21 1000
	3-30-21 1745		3/30/21 1745

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

BEST MANAGEMENT PRACTICES PLAN

A Notice of Intent for a Remediation General Permit (RGP) under the National Pollutant Discharge Elimination System (NPDES) has been submitted to the US Environmental Protection Agency (EPA) in anticipation of temporary construction dewatering that will occur during redevelopment of the 88 East Newton Street property in Boston, 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. Dewatering effluent treatment will consist of a settling tank, bag filters to remove suspended soil particulates, and ion resin media vessels prior to off-site discharge. pH adjustment will be conducted, if necessary, through the addition of carbon dioxide. The effluent will then flow through the necessary treatment systems and discharge through hoses or piping connected into the storm water drains located beneath 88 East Newton Street, and Albany Street. Based upon a review of the Boston Water and Sewer Commission stormwater drainage plan, the above referenced stormwater drain system ultimately discharges into the Fort Point Channel at the Combined Sewer Outfall CSO070.

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 for the presence of pH and inorganics as listed in the RGP including: ammonia, chloride, total residual chlorine, total suspended solids, antimony, arsenic, cadmium, chromium III, chromium VI, copper, lead, mercury, nickel, selenium, silver, zinc, and cyanide. Additional monitoring for VOCs and/or PAHs will be performed as required by the terms of the RGP authorization.

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 matters 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 are anticipated. The nearest surface water body is the Fort Point Channel which is located approximately 3,200 feet to the northeast of the subject site. Dewatering effluent will be pumped into a settling tank. Water within the settling tank will be pumped through bag filters and 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 ion filters will be replaced/disposed of, as necessary.