HALEY & ALDRICH, INC.
465 Medford St.
Suite 2200
Boston, MA 02129
617.886.7400

Revised 24 October 2018
19 October 2018
File No. 132533-002

US Environmental Protection Agency
Office of Ecosystem Protection
5 Post Office Square – Suite 100 (OEP06-01)
Boston, MA 02109-3912

Attention: Ms. Shauna Little; EPA/OEP RGP Applications Coordinator

Subject: Temporary Construction Dewatering
Boston University
645 Commonwealth Avenue
Boston, Massachusetts

Dear Ms. Puleo:

On behalf of our client, Boston University, Haley & Aldrich, Inc. (Haley & Aldrich) has prepared this submission to facilitate off-site discharge of temporary dewatering during well drilling and building construction activities at the proposed Boston University (BU) Data and Science Building (the "site"), located at 645 Commonwealth Avenue in Boston, Massachusetts (See Figure 1). The information presented herein has been prepared to follow requirements of the 2017 US Environmental Protection Agency (EPA) National Pollutant Discharge Elimination System (NPDES) General Remediation General Permit (RGP). A copy of the completed Notice of Intent (NOI) form is enclosed as Appendix A.

EXISTING SITE CONDITIONS

The new development site herein referred to as "BU Data and Science Building" includes a paved parking lot, with a small food concession stand on the south side. The parking lot grade is relatively level, varying from approximately El. 20 to El. 21[1]. Commonwealth Avenue to the south and Granby Street to the west have streets grades at approximately El. 19 to 20.

The alleyway on the north side slopes down from approximately El. 19 on the west end (Granby Street) to approximately El. 13.5, at the east end of the site.

PREVIOUS SITE USAGE AND REGULATORY BACKGROUND

A 1938 Ward Map of Boston does not show any structures on the subject site.

According to environmental reports prepared by others, the western portion of the site was developed in the 1940s with a gas station and a residence. Another gas station was constructed in its place in 1964

1. Elevations reported herein are in feet and reference the Boston City Base (BCB) Datum.

and was subsequently razed in 1978. The Mass DEP website indicates environmental conditions (i.e., regulated soils and groundwater) were encountered at 659 Commonwealth Avenue (western portion of site) that resulted in a reporting condition (RTN 3- 21308) in 2001. Regulatory closure was achieved in 2004 based on the Class B-1 Response Action Outcome that was filed with the DEP.

A Burger King Restaurant was reported to formerly exist on the eastern portion of the site.

PROPOSED CONSTRUCTION

Building - The proposed building site is located at the corner of Granby Street and Commonwealth Avenue. The proposed 19 story building is approximately 140 ft by 140 ft in plan and is located on the west side of the site. This high rise will have 2 basement levels below with a 40 ft deep or more excavation for basement construction. A 5-story low rise structure is planned to the east of the high-rise building and this structure will have one basement level, approximately 20 deep, below this building.

Geothermal – Approximately 40 to 60 geothermal wells up to 1500 ft deep are being proposed for the project. The wells will typically be located north of the building and within the building footprint.

CURRENT GROUNDWATER QUALITY INFORMATION

To evaluate groundwater quality at the site, a groundwater sample was collected obtained from the observation well B18-B4(OW) on 5 October 2018. The sample was submitted to Alpha Analytical, Inc. of Westborough, Massachusetts (Alpha) for analysis of VOCs, Total Petroleum Hydrocarbons (TPH), total metals analysis, dissolved metals, PCBs, SVOCs, Total Cyanide, Total Ammonia, Total Chloride, Total residual Chlorine, Total phenols, and Total Suspended Solids (TSS). Results of the analyses indicated concentrations below 2017 NPDES RGP effluent criteria and applicable RCGW-2 Reportable Concentrations.

The location of the observation well is shown on Figure 2. The results of the 2018 sampling programs are provided in Table I. Laboratory data reports are included in Appendix G.

RECEIVING WATERS SAMPLING AND DILUTION FACTOR

On 10 November 2018, one sample was collected from between CSO010 and SDO042 outfall locations into the Charles River and submitted to Alpha Analytical to be analyzed for hardness, ammonia and total metals. The laboratory data report is enclosed in Appendix G. The results of this sampling program are provided in Table II.

The pH and temperature readings collected in the field were used to calculate the site Water Quality Based Effluent Limitations (WQBELs). It is our understanding that since the receiving water is a freshwater body, salinity does not need to be analyzed on either the effluent water or receiving water.

The seven-day-ten-year flow (7Q10) of the receiving water was established using the U.S. Geological Survey (USGS) StreamStats program and confirmed by Massachusetts Department of Environmental Protection (MassDEP) on 20 April 2018. We have additionally confirmed with the MassDEP that the

dilution factor for the receiving waters is 88.36. The StreamStats Report, Dilution Factor calculations, and confirmation from MassDEP are included in Appendix B.

EFFLUENT CRITERIA DETERMINATION

Groundwater and Receiving Water data were input into the WQBEL Calculation spreadsheet and used to calculate the effluent criteria for the site. Copies of the "EnterData" and "FreshwaterResults" tabs from the excel file provided as an additional resource by EPA will be transmitted concurrently with this application. The effluent limitations calculated are included for reference in Table I.

DEWATERING SYSTEM AND OFF-SITE DISCHARGE

During drilling of the planned geothermal wells and construction of the building, it will be necessary to perform temporary dewatering to control water from drilling geothermal wells, surface water runoff from precipitation, groundwater seepage, and construction-generated water to enable construction in-the-dry. Construction and construction dewatering activities are currently anticipated to be required for a period of up to 36 months. On average, we estimate effluent discharge rates of about 50 to 100 gallons per minute (gpm) or less, with occasional peak flows of approximately 150 gpm during significant precipitation events or if artesian conditions are encountered while drilling wells. Temporary dewatering will be conducted from dewatering wells and sumps located in excavations.

Construction dewatering will include piping and discharging to storm drains located near the site that discharges into the Charles River through outfall CSO010 or SDO042. The proposed discharge routes are shown on Figure 3. Prior to discharge, collected water will be routed through a sedimentation tank and bag filters and other necessary treatment components, to remove suspended solids and undissolved chemical constituents, as shown on Figure 4. If required to meet discharge requirements, chemical treatments may be used on the project to meet discharge criteria. A Notice of Change (NOC) will be submitted to EPA if additional treatment components need to be mobilized at the site.

DOCUMENTATION OF NATIONAL HISTORIC PRESERVATION ACT ELIGIBILITY REQUIREMENTS

Based on a review of the resources provided by the U.S. National Register of Historic Places and a review of the Massachusetts Cultural Resource Information System (MACRIS), no historic properties have been established to be present at the project site, and discharges and discharge-related activities are not considered to have the potential to affect historic properties. The discharge is considered to meet Criterion A. Documentation is included in Appendix D.

DETERMINATION OF ENDANGERED SPECIES ACT ELIGIBILITY

According to the guidelines outlined in Appendix I of the 2017 NPDES RGP, a preliminary determination for the action area associated with this project was established using the U.S. Fish and Wildlife Service (FWS) Information, Planning, and Conservation (IPAC) online system; a copy of the determination is attached in Appendix E. Based on the results of the determination, the project and action area are considered to meet FWS Criterion A as no listed species or critical habitat have been established to be present within the project action area.

SUPPLEMENTAL INFORMATION

An application for a temporary construction dewatering permit has been submitted to the City of Boston; a copy of the application is provided in Appendix C. Approval will be received prior to the start of discharge. A Best Management Practices Plan (BMPP), which outlines the proposed discharge operations covered under the RGP, will be available at the site and is included in Appendix F.

Owner and Operator Information

Owner:
Boston University
120 Ashford St.,
Boston MA 02215
Attn: David Flynn

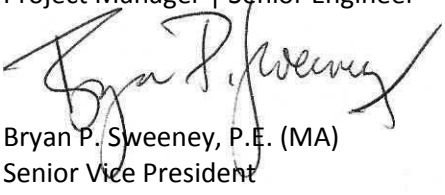
Operator:
Suffolk Construction Co., Inc.
65 Allerton Street
Boston, MA 02119
Attn: Frank Craemer

CLOSING

Thank you very much for your consideration. Please feel free to contact us should you wish to discuss the information contained herein or if you need additional information.

Sincerely yours,
HALEY & ALDRICH, INC.

'Todd R. Butler, P.E. (MA)
Project Manager | Senior Engineer



Bryan P. Sweeney, P.E. (MA)
Senior Vice President

Attachments:

Table I – Summary of Groundwater Quality Data
Table II – Summary of Receiving Water Data
Figure 1 – Project Locus
Figure 2 – Site and Subsurface Exploration Location Plan
Figure 3 – Proposed Discharge Routes
Figure 4 – Proposed Treatment System Schematic
Appendix A – Notice of Intent (NOI)
Appendix B – Dilution Factor and Effluent Limit Calculations
Appendix C – Copy of City of Boston Dewatering Permit Application
Appendix D – National Register of Historic Places Documentation

Appendix E – Endangered Species Act Documentation
Appendix F – Best Management Practices Plan (BMPP)
Appendix G – Laboratory Data Reports

TABLE I
SUMMARY OF WATER QUALITY DATA
BOSTON UNIVERSITY DATA AND SCIENCE BUILDING
BOSTON, MA
FILE NO. 132533-002

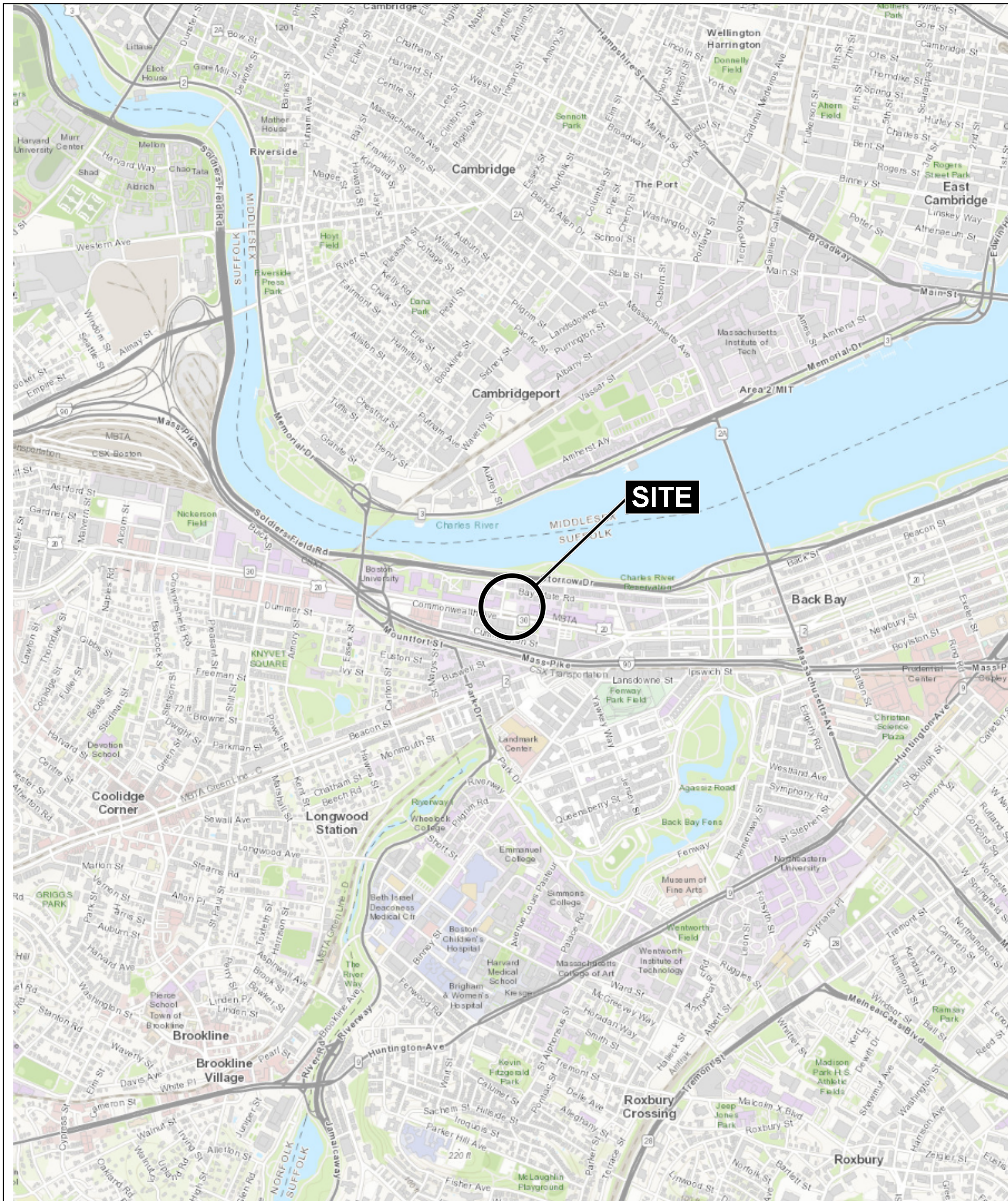
Location Name Sample Name Sample Date Lab Sample ID	MCP Reportable Concentrations RCGW-2 2014	NPDES Site Specific Discharge Limits	B18-B4(OW) 20181005-NPDES-B18-B4(OW) 10/05/2018 L1840486-01
Total Petroleum Hydrocarbons (mg/L)			
Petroleum hydrocarbons	5	5	ND (4)
Inorganic Compounds (mg/L)			
Antimony, Total	NA	0.206	ND (0.004)
Arsenic, Total	NA	0.104	0.01254
Cadmium, Total	NA	0.0102	ND (0.0002)
Chromium, Total	NA	0.323	ND (0.001)
Chromium Trivalent, Total	NA	0.323	ND (0.01)
Copper, Total	NA	0.242	ND (0.001)
Iron, Total	NA	5	0.453
Lead, Total	NA	0.16	ND (0.001)
Mercury, Total	NA	0.000739	ND (0.0002)
Nickel, Total	NA	1.45	ND (0.002)
Selenium, Total	NA	0.2358	ND (0.005)
Silver, Total	NA	0.0351	ND (0.0004)
Zinc, Total	NA	0.42	ND (0.01)
Antimony, Dissolved	8	0.206	ND (0.004)
Arsenic, Dissolved	0.9	0.104	0.0129
Cadmium, Dissolved	0.004	0.0102	ND (0.0002)
Chromium, Dissolved	0.3	0.323	ND (0.001)
Chromium VI (Hexavalent), Dissolved	0.3	0.323	ND (0.01)
Copper, Dissolved	100	0.242	ND (0.001)
Iron, Dissolved	NA	5	3.83
Lead, Dissolved	0.01	0.16	ND (0.001)
Mercury, Dissolved	0.02	0.000739	ND (0.0002)
Nickel, Dissolved	0.2	1.45	ND (0.002)
Selenium, Dissolved	0.1	0.2358	ND (0.005)
Silver, Dissolved	0.007	0.0351	ND (0.0004)
Zinc, Dissolved	0.9	0.42	ND (0.01)
Chromium, Total	0.3	0.323	ND (0.001)
Cyanide, Total	0.03	0.178	ND (0.005)
Other			
Ammonia, Total (mg/L)	NA	Report Only	3.2
Chloride, Total (mg/L)	NA	Report Only	1210
Chlorine, residual, Total (mg/L)	NA	0.2	ND (0.02)
Total phenols (mg/L)	NA	1.08	ND (0.03)
Total Suspended Solids (TSS) (mg/L)	NA	30	13
Pesticides and PCBs (ug/L)			
Total PCBs	NA	NA	ND
Semi-Volatile Organic Compounds (SIM) (ug/L)			
Total SVOCs	NA	NA	ND
Volatile Organic Compounds SIM (ug/L)			
Total VOCs	NA	NA	ND

ABBREVIATIONS AND NOTES:
mg/L: milligram per liter.
NA: Not Applicable.
ND (2.5): Not detected, number in parentheses is the laboratory detection limit.
ug/L: microgram per liter.

TABLE II
SUMMARY OF RECEIVING WATER QUALITY DATA
BOSTON UNIVERSITY DATA AND SCIENCE BUILDING
BOSTON, MA
FILE NO. 132533-002

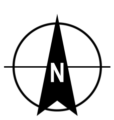
Location Name	RECEIVING WATERS
Sample Name	20181010-NPDES-RIVER
Sample Date	10/10/2018
Lab Sample ID	L1841098-01
Inorganic Compounds (mg/L)	
Antimony, Total	ND (0.004)
Arsenic, Total	ND (0.001)
Cadmium, Total	ND (0.0002)
Chromium, Total	ND (0.001)
Chromium III (Trivalent), Total (mg/L)	ND (0.01)
Chromium VI (Hexavalent), Dissolved	ND (0.01)
Copper, Total	0.00276
Iron, Total	0.663
Lead, Total	0.00281
Mercury, Total	ND (0.0002)
Nickel, Total	ND (0.002)
Selenium, Total	ND (0.005)
Silver, Total	ND (0.0004)
Zinc, Total	ND (0.01)
Other	
Ammonia, Total (mg/L)	0.077
Hardness (mg/L)	50.6
Temperature °C	18.5
pH	6.62

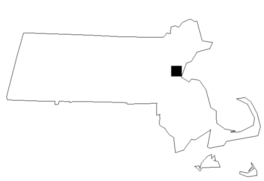
ABBREVIATIONS AND NOTES:
mg/L: milligram per liter.
NA: Not Applicable.
ND (2.5): Not detected, number in parentheses is the laboratory detect
NPDES: National Pollutant Discharge Elimination System.



MAP SOURCE: ESRI

SITE COORDINATES: 42°20'60"N, 71°6'10"W





HALEY ALDRICH

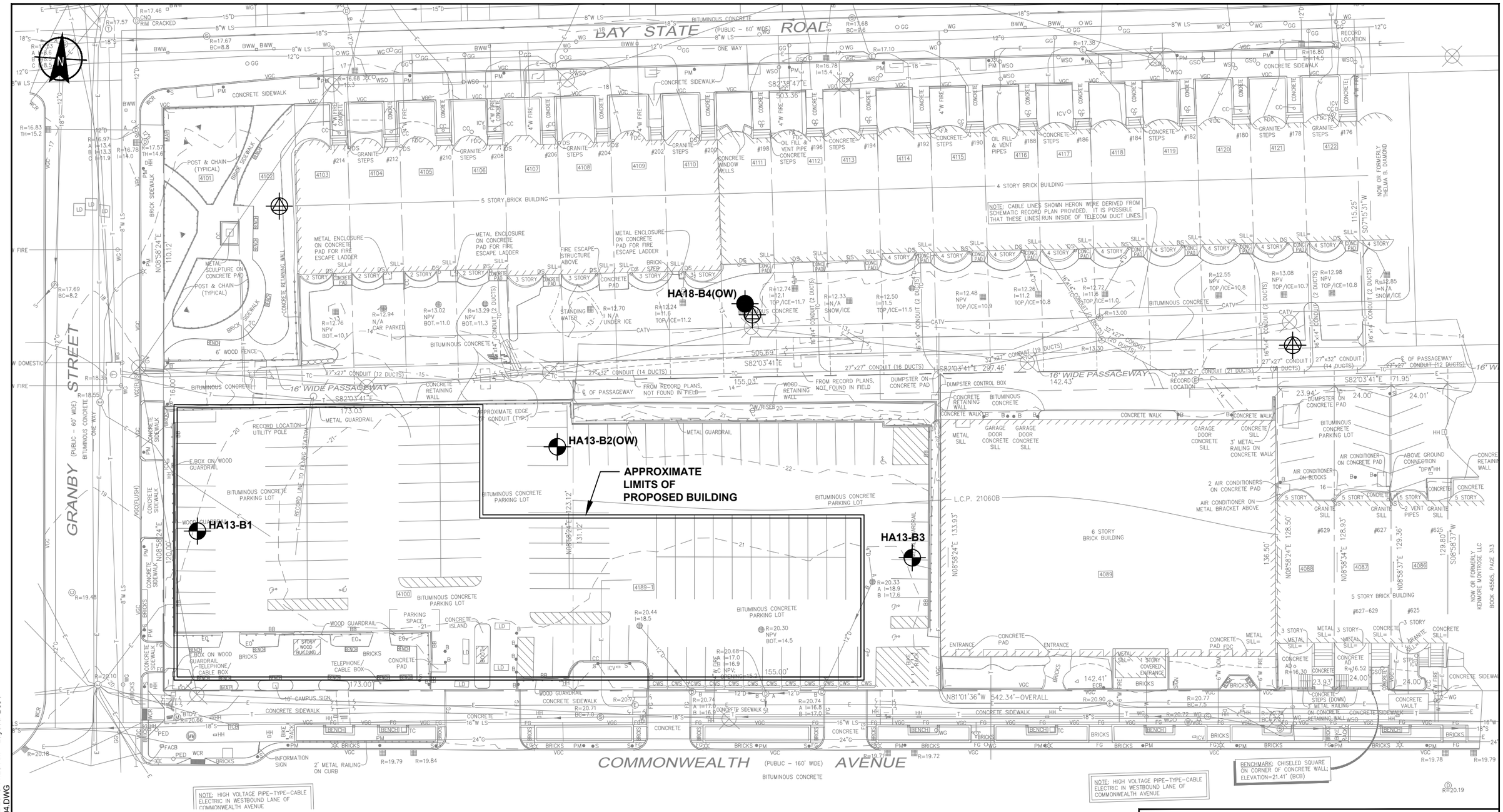
BOSTON UNIVERSITY
645 COMMONWEALTH AVENUE
BOSTON, MASSACHUSETTS

PROJECT LOCUS

APPROXIMATE SCALE: 1 IN = 2000 FT
OCTOBER 2018

FIGURE 1

132533-002_1_LOCUS.PDF



LEGEND:

⊕ APPROXIMATE LOCATION OF PROPOSED TEST WELLS

HA18-B4(OW) ● DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING COMPLETED BY GEOLOGIC-EARTH EXPLORATION INC. BETWEEN 27 AND 28 SEPTEMBER 2018 AND OBSERVED BY HALEY & ALDRICH

HA13-B1 ◕ DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING DRILLED BY NEW HAMPSHIRE BORING OF LONDONDERRY, NEW HAMPSHIRE FROM 29 TO 31 JULY 2013 AND MONITORED BY HALEY & ALDRICH PERSONNEL

(OW) INDICATES OBSERVATION WELL INSTALLED IN COMPLETED BOREHOLE

NOTE

1. BASE PLAN CREATED FROM PLAN TITLED "GEOWELL LAYOUT W/ UTILITY OVERLAY", DRAWING P-05C, DATED 11 JULY 2018, BY KPMB ARCHITECTS OF TORONTO, ONTARIO, CANADA.

0 40 80
SCALE IN FEET

HALEY ALDRICH

BOSTON UNIVERSITY
645 COMMONWEALTH AVENUE
BOSTON, MASSACHUSETTS

SITE AND SUBSURFACE EXPLORATION LOCATION PLAN

SCALE: AS SHOWN
OCTOBER 2018

FIGURE 2

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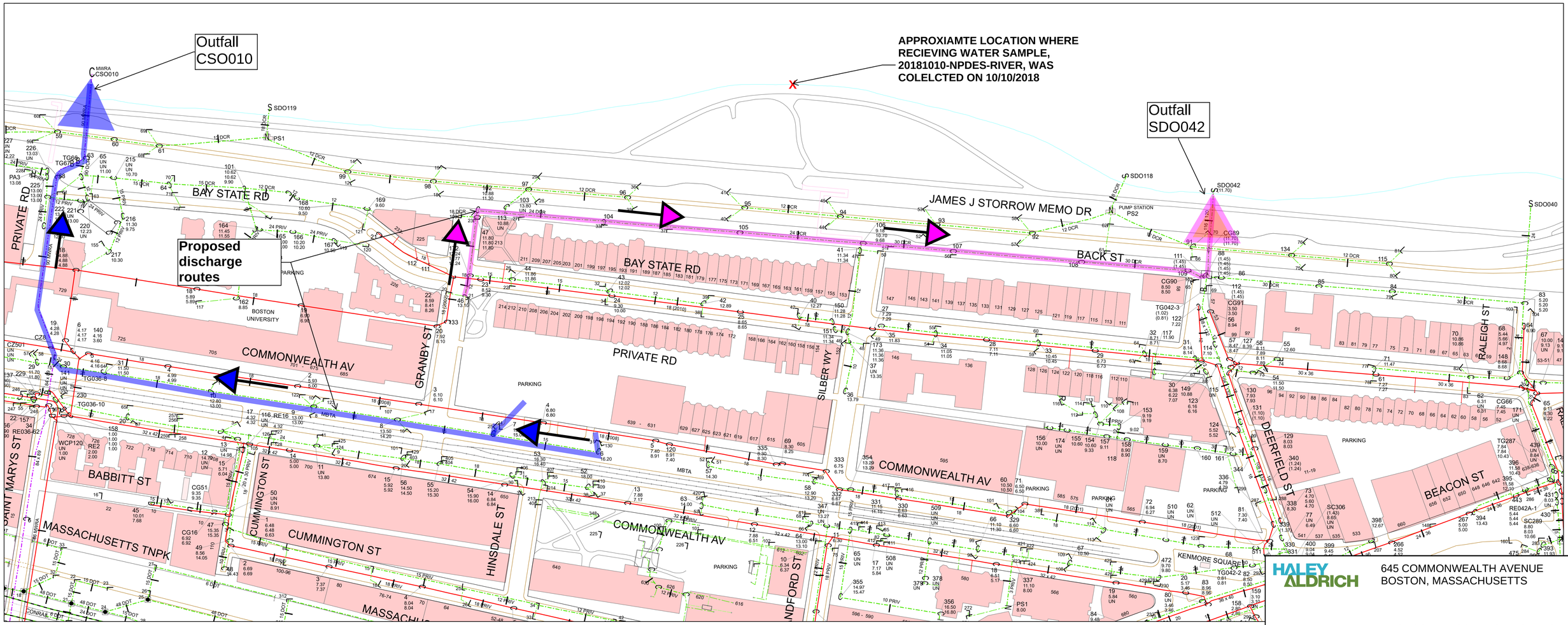

HALEY ALDRICH

645 COMMONWEALTH AVENUE
BOSTON, MASSACHUSETTS

PROPOSED DISCHARGE ROUTES

OCT 2018 FIGURE 3

BOSTON WATER AND SEWER COMMISSION
GRANBY ST FROM COMM AVE O BAY STATE RD

480 240 0 480 Feet

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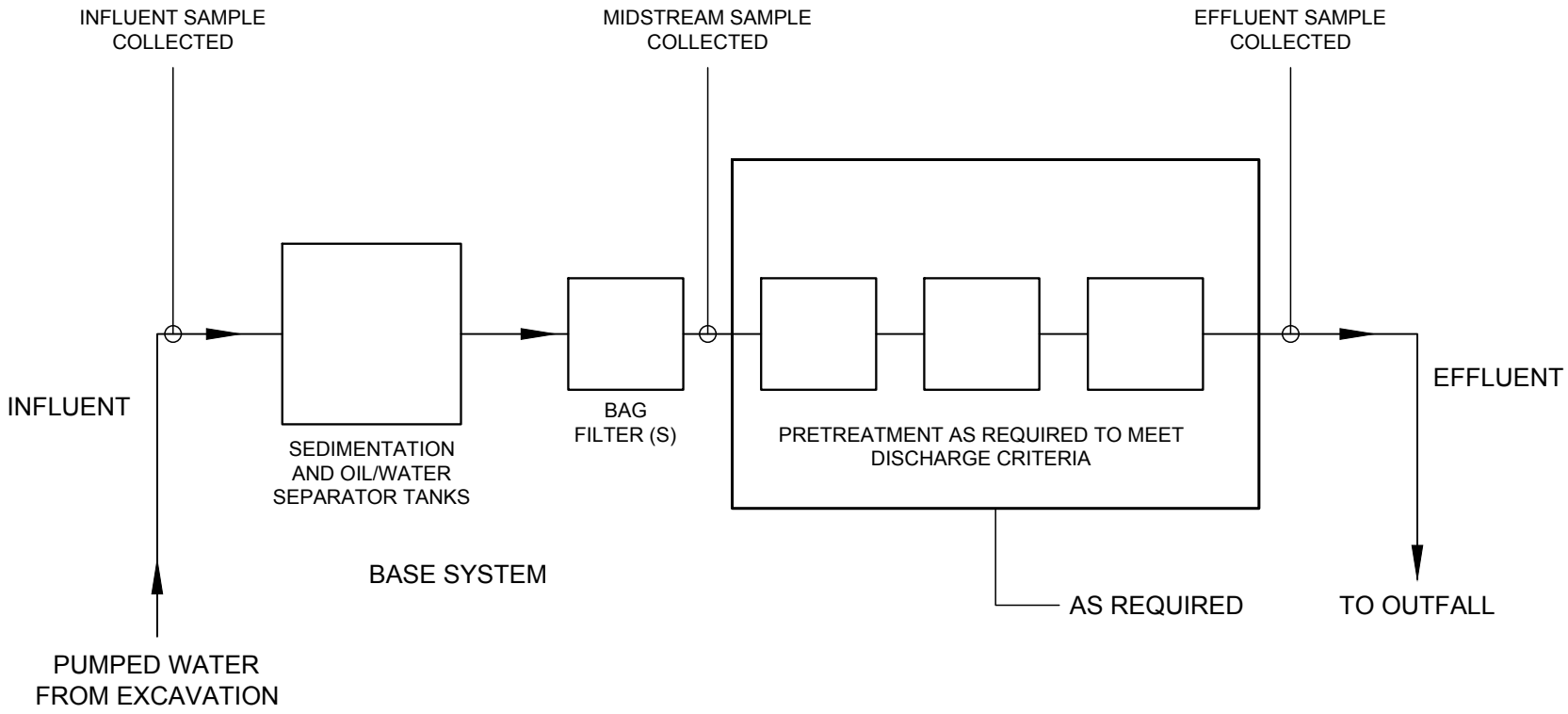


LEGEND:

→ DIRECTION OF FLOW

NOTE:

1. DETAILS OF TREATMENT SYSTEM MAY VARY FROM SYSTEM INDICATED ABOVE. SPECIFIC MEANS AND METHODS OF TREATMENT TO BE SELECTED BY CONTRACTOR. WATER WILL BE TREATED TO MEET REQUIRED EFFLUENT STANDARDS.

HALEY ALDRICH

BOSTON UNIVERSITY
645 COMMONWEALTH AVENUE
BOSTON, MASSACHUSETTS

PROPOSED TREATMENT SYSTEM SCHEMATIC

SCALE: AS SHOWN
OCTOBER 2018

FIGURE 4

APPENDIX A

Notice of Intent (NOI)

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

A. General site information:

<table>
<tr><td rowspan="4">1. Name of site:
Boston University Data and Science Building</td><td colspan="3">Site address: 645 Commonwealth Avenue
Street:</td></tr>
<tr><td>City: Boston</td><td>State: MA</td><td>Zip: 02215</td></tr>
<tr><td colspan="3">Contact Person: David D. Flynn</td></tr>
<tr><td colspan="3">Telephone: 617.353.2112 Email: ddflynn@bu.edu</td></tr>
<tr><td rowspan="4">2. Site owner
Boston University

Owner is (check one): ☐ Federal ☐ State/Tribal ■ Private
☐ Other; if so, specify:</td><td colspan="3">Mailing address: 120 Ashford St.
Street:</td></tr>
<tr><td>City: Boston</td><td>State: MA</td><td>Zip: 02215</td></tr>
<tr><td colspan="3">Contact Person: Frank Craemer</td></tr>
<tr><td colspan="3">Telephone: Email: FCraemer@suffolk.com</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
Consigli Construction Co, Inc.</td><td colspan="3">Mailing address:
Street: 65 Allerton Street</td></tr>
<tr><td>City: Boston</td><td>State: MA</td><td>Zip: 02119</td></tr>
<tr><td colspan="4">4. NPDES permit number assigned by EPA:
Not applicable

NPDES permit is (check all that apply: ■ RGP ☐ DGP ☐ CGP
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td></tr>
<tr><td colspan="4">5. Other regulatory program(s) that apply to the site (check all that apply):
■ MA Chapter 21e; list RTN(s): 3-321308
☐ NH Groundwater Management Permit or Groundwater Release Detection Permit:
☐ CERCLA
☐ UIC Program
☐ POTW Pretreatment
☐ CWA Section 404</td></tr>
</table>

B. Receiving water information:

1. Name of receiving water(s):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
Charles River	MA72-38	Class B

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

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

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

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

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.	15.96 MGD
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.	74.9

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: 4/20/2018

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

C. Source water information:

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

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

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

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ☐ Existing discharge ■ New discharge ☐ New source	
Outfall(s): CSO-010 SDO-042	Outfall location(s): (Latitude, Longitude) 42.3516, -71.1063 42.3511, -71.0977
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ☐ Indirect discharge, if so, specify: ☐ A private storm sewer system ■ A municipal storm sewer system If the discharge enters the receiving water via a private or municipal storm sewer system: Has notification been provided to the owner of this system? (check one): ■ Yes ☐ No Has the operator has received permission from the owner to use such system for discharges? (check one): ☐ Yes ■ No, if so, explain, with an estimated timeframe for obtaining permission: City of Boston permit being submitted concurrently. Approval will be received prior to start of discharge. 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): November 2018 - December 2021 Indicate if the discharge is expected to occur over a duration of: ■ less than 12 months ■ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ■ Yes ☐ No	

<table>
<tr><td>2. Activity Category: (check all that apply)</td><td colspan="2">3. Contamination Type Category: (check all that apply)</td></tr>
<tr><td rowspan="5">☐ I – Petroleum-Related Site Remediation
☐ II – Non-Petroleum-Related Site Remediation
■ III – Contaminated Site Dewatering
☐ IV – Dewatering of Pipelines and Tanks
☐ V – Aquifer Pump Testing
☐ VI – Well Development/Rehabilitation
☐ VII – Collection Structure Dewatering/Remediation
☐ VIII – Dredge-Related Dewatering</td><td colspan="2">a. If Activity Category I or II: (check all that apply)

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

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

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✔	1	4500NH3-	75	3200	3200	Report mg/L	---
Chloride		✔	1	300.0	25000	30000	30000	Report µg/l	---
Total Residual Chlorine	✔		1	4500CL-D	20	ND	ND	0.2 mg/L	824
Total Suspended Solids		✔	1	2540D	5000	13000	13000	30 mg/L	---
Antimony	✔		1	200.8	4	ND	ND	206 µg/L	47929
Arsenic		✔	1	200.8	1	ND	ND	104 µg/L	749
Cadmium	✔		1	200.8	0.2	ND	ND	10.2 µg/L	12.3
Chromium III	✔		1	107	1	ND	ND	323 µg/L	3718
Chromium VI	✔		1	7196A	10	ND	ND	323 µg/L	856
Copper	✔		1	200.8	1	ND	ND	242 µg/L	392
Iron		✔	1	200.7	50	4990	4990	5,000 µg/L	74840
Lead		✔	1	200.8	1	ND	ND	160 µg/L	100.9
Mercury	✔		1	245.1	0.2	ND	ND	0.739 µg/L	67.8
Nickel	✔		1	200.8	2	ND	ND	1,450 µg/L	2210
Selenium	✔		1	200.8	5	ND	ND	235.8 µg/L	374
Silver	✔		1	200.8	0.4	ND	ND	35.1 µg/L	89
Zinc	✔		1	200.8	10	ND	ND	420 µg/L	5072
Cyanide	✔		1	4500CN-C	5	ND	ND	178 mg/L	389
B. Non-Halogenated VOCs									
Total BTEX		✔	1	8260C	NA	ND	ND	100 µg/L	---
Benzene		✔	1	8260C	0.1	ND	ND	5.0 µg/L	---
1,4 Dioxane	✔		1	8260C,	50	ND	ND	200 µg/L	---
Acetone	✔		1	8260C	0.1	ND	ND	7.97 mg/L	---
Phenol	✔		1	8270	30	ND	ND	1,080 µg/L	22467

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✔		1	8260C	1	ND	ND	4.4 µg/L	119.8
1,2 Dichlorobenzene	✔		1	8260C	1	ND	ND	600 µg/L	---
1,3 Dichlorobenzene	✔		1	8260C	1	ND	ND	320 µg/L	---
1,4 Dichlorobenzene	✔		1	8260C	1	ND	ND	5.0 µg/L	---
Total dichlorobenzene	✔		1	8260C	1	ND	ND	763 µg/L in NH	---
1,1 Dichloroethane	✔		1	8260C	1	ND	ND	70 µg/L	---
1,2 Dichloroethane	✔		1	8260C	1	ND	ND	5.0 µg/L	---
1,1 Dichloroethylene	✔		1	8260C	1	ND	ND	3.2 µg/L	---
Ethylene Dibromide	✔		1	8260C	2	ND	ND	0.05 µg/L	---
Methylene Chloride	✔		1	8260C	2	ND	ND	4.6 µg/L	---
1,1,1 Trichloroethane	✔		1	8260C	1	ND	ND	200 µg/L	---
1,1,2 Trichloroethane	✔		1	8260C	1	ND	ND	5.0 µg/L	---
Trichloroethylene	✔		1	8260C	1	ND	ND	5.0 µg/L	---
Tetrachloroethylene	✔		1	8260C	1	ND	ND	5.0 µg/L	247
cis-1,2 Dichloroethylene	✔		1	8260C	1	ND	ND	70 µg/L	---
Vinyl Chloride	✔		1	8260C	1	ND	ND	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✔		1	8270D	5	ND	ND	190 µg/L	---
Diethylhexyl phthalate	✔		1	8270D	3	ND	ND	101 µg/L	164.8
Total Group I PAHs		✔	1	8270DSIM	0.1	ND	ND	1.0 µg/L	---
Benzo(a)anthracene		✔	1	8270DSIM	0.1	ND	ND	As Total PAHs	0.2846
Benzo(a)pyrene		✔	1	8270DSIM	0.1	ND	ND		0.2846
Benzo(b)fluoranthene		✔	1	8270DSIM	0.1	ND	ND		0.2846
Benzo(k)fluoranthene		✔	1	8270DSIM	0.1	ND	ND		0.2846
Chrysene		✔	1	8270DSIM	0.1	ND	ND		0.2846
Dibenzo(a,h)anthracene		✔	1	8270DSIM	0.1	ND	ND		0.2846
Indeno(1,2,3-cd)pyrene		✔	1	8270DSIM	0.1	ND	ND		0.2846

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs		✔	1	8270DSIM	0.1	ND	ND	100 µg/L	---
Naphthalene		✔	1	8270DSIM	0.1	ND	ND	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✔		1	608	0.25	ND	ND	0.000064 µg/L	---
Pentachlorophenol	✔		1	8270D-SI	0.8	ND	ND	1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons		✔	1	1664A	4	ND	ND	5.0 mg/L	---
Ethanol	✔		1	1671A	2000	ND	ND	Report mg/L	---
Methyl-tert-Butyl Ether	✔		1	8260C	2	ND	ND	70 µg/L	1498
tert-Butyl Alcohol	✔		1	8260C	10	ND	ND	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✔		1	8260C	2	ND	ND	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:									

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:
Applied as necessary to meet necessary effluent limits.

2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.
See attached Figure 4.

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: Bag filters Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	150
Provide the proposed maximum effluent flow in gpm.	150
Provide the average effluent flow in gpm.	50
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:

Not Applicable

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

Refer to Appendix E of "Temporary Construction Dewatering, 50 Rogers Street, Cambridge, Massachusetts" by Haley & Aldrich, Inc.

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

Refer to Appendix E of "Temporary Construction Dewatering, Boston University, 645 Commonwealth Avenue, Boston, Massachusetts" by Haley & Aldrich, Inc.

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.

See attached letter.

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

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

J. Certification requirement

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

BMPP certification statement: A BMPP meeting the requirements of this general permit will be implemented upon initiation of discharge	
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ☐ No ☐ NA
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:	Date: October 19, 2018
Print Name and Title: Suffolk Construction Company	Frank Craemer, Project Executive

J. Certification requirement

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

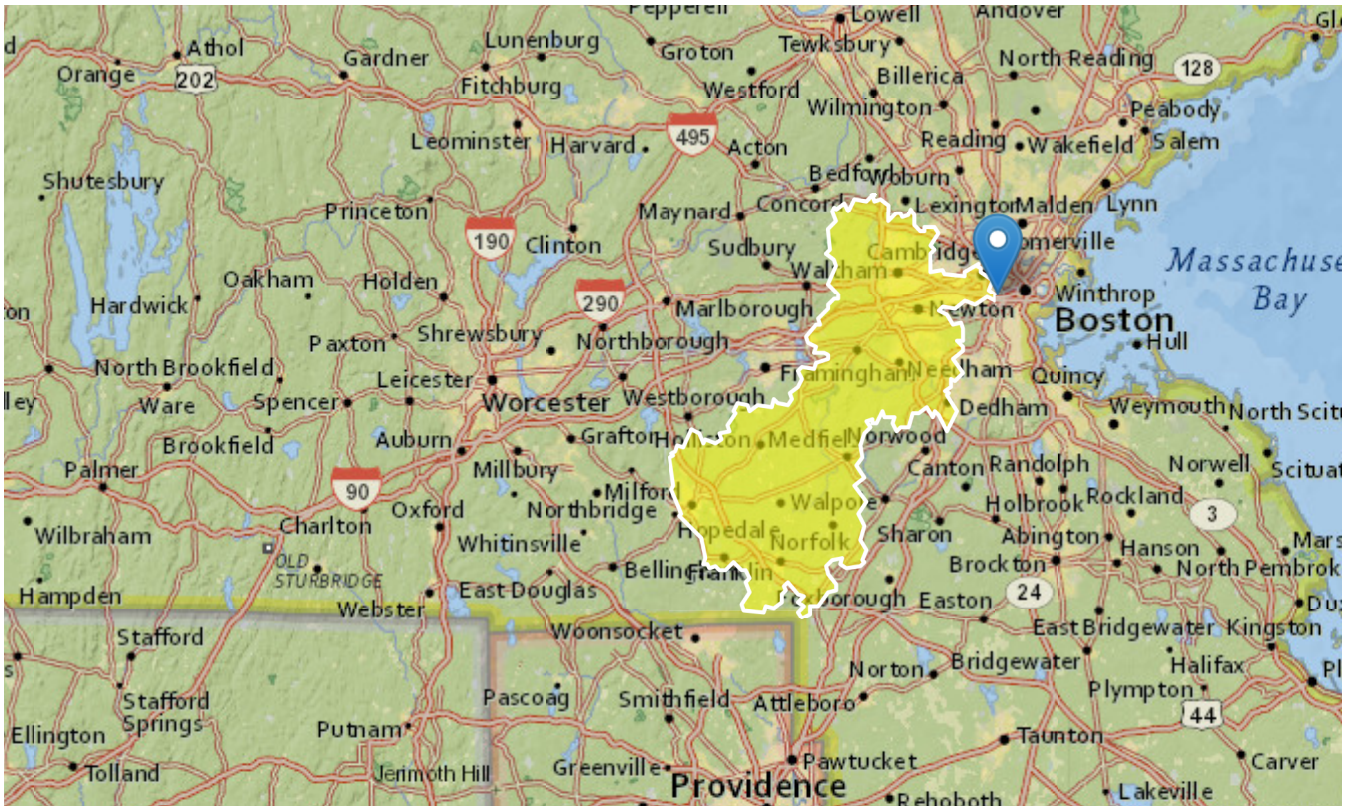
BMPP certification statement: A BMPP meeting the requirements of this general permit will be implemented upon initiation of discharge	
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ☐ No ☐ NA
Notification provided to the municipality in which 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:	Date: 18Oct18
Print Name and Title: Boston University	

APPENDIX B

Dilution Factor and Effluent Limit Calculations

StreamStats Report BU Data ans Science Building

Region ID: MA
Workspace ID: MA20181018155522756000
Clicked Point (Latitude, Longitude): 42.35274, -71.10098
Time: 2018-10-18 11:55:37 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	283	square miles
BSLDEM250	Mean basin slope computed from 1:250K DEM	2.328	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	0.23	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	283	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	2.328	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.23	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

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

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

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

Statistic	Value	Unit
7 Day 2 Year Low Flow	49.6	ft^3/s
7 Day 10 Year Low Flow	24.7	ft^3/s

Low-Flow Statistics Citations

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

Furthermore, the software is released on condition that neither the USGS nor the U.S. Government shall be held liable for any damages resulting from its authorized or unauthorized use.

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

Application Version: 4.2.1

HALEY & ALDRICH, INC.		**CALCULATIONS**	FILE NO.	132533-002
			SHEET	1 of 1
CLIENT	Boston University		DATE	16-Oct-18
PROJECT	645 Commonwealth Avenue Boston, Massachusetts		COMPUTED BY	TRB
SUBJECT	DILUTION FACTOR CALCULATIONS			

PURPOSE: Calculate Dilution Factor (DF) for project based on 7 Day 10 Year (7Q10) Low Flow values.

APPROACH: Calculate DF based on EPA formula $(Q_S + Q_D)/Q_D$, where Q_S is 7Q10 in million gallons per day (MGD) and Q_D is discharge flow in MGD.

ASSUMPTIONS:
1. 7Q10 is 24.7 cfs (from StreamStats 4.0)
2. A conversion of 7.48 is used to convert cubic feet to gallons
3. A discharge flowrate of 150 gpm is assumed

CALCULATIONS:

7Q10 Low Flow Value (Q_S)

$$Q_S = \frac{24.7\ ft^3}{sec} \times \frac{7.48\ gallons}{ft^3} \times \frac{86{,}400\ sec}{day} \times \frac{1\ MG}{1{,}000{,}000\ gallons}$$

Q_S = 15.96 MGD

Discharge Flowrate (Q_D)

$$Q_D = \frac{150\ gallons}{min} \times \frac{1{,}440\ min}{day} \times \frac{1\ MG}{1{,}000{,}000\ gallons}$$

Q_D = 0.216 MGD

Dilution Factor (DF)

$$DF = \frac{Q_S + Q_D}{QD} = \frac{15.96\ MGD + 0.216\ MGD}{0.216\ MGD} = 74.9$$

CONCLUSION The dilution factor for this project is calculated to be 74.9 based on the provided 7Q10 low flow value and discharge flowrate.

APPENDIX C

Copy of City of Boston Dewatering Permit Application

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

DEWATERING DISCHARGE PERMIT APPLICATION

OWNER / AUTHORIZED APPLICANT PROVIDE INFORMATION HERE:

Company Name: Boston University Address: 120 Ashford St.

Phone Number: 617.353.2112 Fax number: _____

Contact person name: David D. Flynn Title: Assistant Vice President, Construction Services

Cell number: 617-293-4415 Email address: ddflynn@bu.edu

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

Owner's Information (if different from above):

Owner of property being dewatered: Boston University

Owner's mailing address: ddflynn@bu.edu Phone number: 617.353.2112

Location of Discharge & Proposed Treatment System(s):

Street number and name: 645 Commonwealth Avenue Neighborhood Fenway

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

Describe Proposed Pre-Treatment System(s): Sedimentation Tank, Bag Filters, additional chemical treatment as needed to meet NPDES discharge criteria, if required.

BWSC Outfall No. CSO-010, DO-042 Receiving Waters Charles River

---

Temporary Discharges (Provide Anticipated Dates of Discharge): From 11/2018 To 12/2021

☐ 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: 19Oct18

APPENDIX D

National Register of Historic Places Documentation

Massachusetts Historical Commission

William Francis Galvin, Secretary of the Commonwealth

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Massachusetts Cultural Resource Information System

MACRIS

Scanned forms and photos now available for selected towns!

The Massachusetts Cultural Resource Information System (MACRIS) allows you to search the Massachusetts Historical Commission database for information on historic properties and areas in the Commonwealth.

Users of the database should keep in mind that it does not include information on all historic properties and areas in Massachusetts, nor does it reflect all the information on file on historic properties and areas at the Massachusetts Historical Commission.

Click here to begin your search of the MACRIS database.




Home | Search | Index | Feedback | Contact

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Place: Fenway;

Inv. No.	Property Name	Street	Town	Year
BOS.JD	Back Bay Fens, Sections of		Boston	
BOS.JE	Emerald Necklace Parks		Boston	
BOS.JF	Fenway - Boylston Street Historic District		Boston	
BOS.JG	Massachusetts Mental Health Center		Boston	
BOS.JH	Massachusetts State Hospitals and State Schools		Boston	
BOS.TC	Emmanuel College Campus		Boston	
BOS.VI	Saint Cecilia Roman Catholic Church Complex		Boston	
BOS.XB	Audubon Circle		Boston	
BOS.XC	Kenmore Square Area		Boston	
BOS.YE	Northeastern University - Krentzman Quadrangle		Boston	
BOS.ZR	Christian Science Center Complex		Boston	
BOS.ZT	Fenway Park		Boston	
BOS.AAZ	Gainsborough Street, 69-115		Boston	
BOS.ABA	Keswick Street, 5-17 and Park Drive, 456-468		Boston	
BOS.ABB	Saint Germain Street, 8-65		Boston	
BOS.ABC	Saint Stephen Street, 23-86		Boston	
BOS.ABD	Symphony Road, 3-42		Boston	
BOS.ACA	Francis Street - Fenwood Road District		Boston	
BOS.AEE	Beth Israel Hospital		Boston	
BOS.AEF	Evans Way - Gordon College Area		Boston	
BOS.AEG	Harvard Medical School and School of Public Health		Boston	
BOS.AEH	Huntington Avenue - Longwood Avenue Area		Boston	
BOS.AEI	Louis Prang Street - Vancouver Street Residential Area		Boston	
BOS.AEJ	New England Deaconess Hospital		Boston	
BOS.AEK	Normal and Girls' Latin School Group -		Boston	

Inv. No.	Property Name	Street	Town	Year
	Massachusetts College of Art and Design			
BOS.AEL	Brigham, Peter Bent Hospital - Brigham and Women's Hospital		Boston	
BOS.AEM	Simmons College Residence Campus		Boston	
BOS.AEN	Wheelock College Area		Boston	
BOS.7282	White, George Robert Two-Family House	8 Aberdeen St	Boston	1914
BOS.7283	White, George Robert Two-Family House	10 Aberdeen St	Boston	1914
BOS.7284	White, George Robert Two-Family House	12 Aberdeen St	Boston	1914
BOS.7285	White, George Robert Two-Family House	14 Aberdeen St	Boston	1914
BOS.15387	Lewis, Mark Row House	25 Aberdeen St	Boston	1900
BOS.15388	Lewis, Mark Row House	27 Aberdeen St	Boston	1900
BOS.7710	Agassiz Road Gate House	Agassiz Rd	Boston	
BOS.9279	Agassiz Road Bridge	Agassiz Rd	Boston	1888
BOS.17827	Riverway Hall	21 Autumn St	Boston	1928
BOS.17843	Emmanuel College - Alumnae Hall	45 Ave Louis Pasteur	Boston	1948
BOS.17849	Harvard Medical School - Harvard Institutes of Medicine	77 Ave Louis Pasteur	Boston	1971
BOS.7517	Boston Public Latin School	78 Ave Louis Pasteur	Boston	1921
BOS.7516	Harvard Medical School - Vanderbilt Hall	107 Ave Louis Pasteur	Boston	1926
BOS.9282	Rapid Transit Illuminated Time Sign	Beacon St	Boston	1939
BOS.7298	Peerless Motor Car Company Building	642-648 Beacon St	Boston	1910
BOS.7312	Hotel Buckminster	645 Beacon St	Boston	1896
BOS.7299	Peerless Motor Car Company Building	650-656 Beacon St	Boston	1910
BOS.7300	Peerless Motor Car Company Building	660 Beacon St	Boston	1910
BOS.9270	CITGO Sign	660 Beacon St	Boston	1965
BOS.15386	Shell Eastern Petroleum Products Office Building	677 Beacon St	Boston	1916
BOS.7313	Edison Electric Illuminating Transformer Station	693 Beacon St	Boston	1916
BOS.15430	Wedgemere Chambers Apartments	806-820 Beacon St	Boston	1904
BOS.7290	Vinal, W. D. - Wheatland, George Jr. Row House	822 Beacon St	Boston	1890
BOS.7291	Vinal, W. D. - Wheatland, George Jr. Row House	824 Beacon St	Boston	1890
BOS.7292	Vinal, W. D. - Wheatland, George Jr. Row House	826 Beacon St	Boston	1890
BOS.7293	Vinal, W. D. - Wheatland, George Jr. Row House	828 Beacon St	Boston	1890
BOS.7294	Vinal, W. D. - Wheatland, George Jr. Row House	830 Beacon St	Boston	1890
BOS.7295	Vinal, W. D. - Wheatland, George Jr. Row House	832 Beacon St	Boston	1890
BOS.7296	Vinal, W. D. - Wheatland, George Jr. Row House	834 Beacon St	Boston	1890
BOS.7297	Vinal, W. D. - Wheatland, George Jr. Row House	836 Beacon St	Boston	1890
BOS.15431	Audubon Restaurant	838 Beacon St	Boston	r 1915
BOS.15432		840-842 Beacon St	Boston	c 1910
BOS.15433	Arundel, The Apartments	844 Beacon St	Boston	1911

Inv. No.	Property Name	Street	Town	Year
BOS.7314	Coon, Howard Row House	845 Beacon St	Boston	1895
BOS.7315	Coon, Howard Row House	847 Beacon St	Boston	1895
BOS.7301	Vinal, W. D. Row House	848 Beacon St	Boston	1894
BOS.7316	Coon, Howard Row House	849 Beacon St	Boston	1894
BOS.7302	Vinal, W. D. Row House	850 Beacon St	Boston	1894
BOS.7317	Feldman, Joseph Row House	851 Beacon St	Boston	1894
BOS.15434	Vinal, W. D. Row House	852 Beacon St	Boston	1894
BOS.7318	Feldman, Joseph Row House	853 Beacon St	Boston	1894
BOS.15435		854 Beacon St	Boston	c 1900
BOS.7319	Feldman, Joseph Row House	855 Beacon St	Boston	1894
BOS.15436	Wheatland and Vinal Rowhouse	856 Beacon St	Boston	1893
BOS.7320	Inverness Apartments	857 Beacon St	Boston	1895
BOS.15437		858 Beacon St	Boston	c 1900
BOS.15438	Wheatland and Vinal Rowhouse	860 Beacon St	Boston	1893
BOS.15439	Wheatland and Vinal Rowhouse	862 Beacon St	Boston	1892
BOS.15440	Wheatland and Vinal Rowhouse	864 Beacon St	Boston	c 1900
BOS.15441	Wheatland and Vinal Rowhouse	866 Beacon St	Boston	1892
BOS.7321	Arnold, A. F. Row House	867 Beacon St	Boston	1893
BOS.15442		868 Beacon St	Boston	c 1900
BOS.7322	Arnold, A. F. Row House	869 Beacon St	Boston	1893
BOS.15443	Vinal, W. D. Rowhouse	870 Beacon St	Boston	1892
BOS.7323	Arnold, A. F. Row House	871 Beacon St	Boston	1893
BOS.15444	Vinal, W. D. Rowhouse	872 Beacon St	Boston	1892
BOS.7324	Arnold, A. F. Row House	873 Beacon St	Boston	1893
BOS.7303	Second Church in Boston	874-880 Beacon St	Boston	1914
BOS.7326	Coon, Howard - Morse, Jacob Row House	875 Beacon St	Boston	1895
BOS.7325	Coon, Howard Town House	877 Beacon St	Boston	1895
BOS.7304	Dewey, Judge Henry S. Apartment House	896 Beacon St	Boston	c 1905
BOS.7327	Wentworth, Marshall Row House	899 Beacon St	Boston	1901
BOS.7305	National Shawmut Bank Branch	900 Beacon St	Boston	1942
BOS.7328	Wentworth, Marshall Row House	901 Beacon St	Boston	1901
BOS.7329	Wentworth, Marshall Row House	903 Beacon St	Boston	1901
BOS.7330	Wentworth, Marshall Row House	905 Beacon St	Boston	1901
BOS.15445	Shapleigh, S. M. Row House	906 Beacon St	Boston	1891
BOS.7331	Wentworth, Marshall Row House	907 Beacon St	Boston	1901
BOS.15446	Shapleigh, S. M. Rowhouse	908 Beacon St	Boston	1891
BOS.7332	Wentworth, Marshall Row House	909 Beacon St	Boston	1901
BOS.7306	Shapleigh, J. W. - Wheatland, G. W. Jr. Row	914 Beacon St	Boston	1893

Inv. No.	Property Name	Street	Town	Year
	House			
BOS.7339	Merrill, Luci F. Row House	915 Beacon St	Boston	c 1900
BOS.7307	Shapleigh, J. W. - Wheatland, G. W. Jr. Row House	916 Beacon St	Boston	1893
BOS.7340	Bing, Constant O. Row House	917 Beacon St	Boston	c 1900
BOS.7308	Shapleigh, J. W. - Wheatland, G. W. Jr. Row House	918 Beacon St	Boston	1889
BOS.7341	Gleason, Elizabeth J. Row House	919 Beacon St	Boston	c 1900
BOS.7309	Shapleigh, J. W. - Wheatland, G. W. Jr. Row House	920 Beacon St	Boston	1889
BOS.7342	Lombard, Mary C. Row House	921 Beacon St	Boston	c 1900
BOS.7310	Shapleigh, J. W. - Wheatland, G. W. Jr. Row House	922 Beacon St	Boston	1889
BOS.7343	Clapp, Susan P. S. Row House	923 Beacon St	Boston	c 1900
BOS.7311	Shapleigh, J. W. - Wheatland, G. W. Jr. Row House	924 Beacon St	Boston	1889
BOS.9736	Christian Science Center - Triangle Park	Belvidere St	Boston	
BOS.7350	Saint Cecilia Roman Catholic Church	14-18 Belvidere St	Boston	c 1888
BOS.15233	Saint Cecilia's Roman Catholic Church Rectory	20 Belvidere St	Boston	1914
BOS.15903	Christian Science Church Colonnade Building	101 Belvidere St	Boston	1972
BOS.17828	Jimmy Fund Building and Auditorium	43 Binney St	Boston	1949
BOS.9273	Boylston Street Bridge	Boylston St	Boston	1880
BOS.9274	O'Reily, John Boyle Memorial	Boylston St	Boston	1896
BOS.9285	Mother's Rest Children's Playground	Boylston St	Boston	
BOS.9644	Boylston Street Subway Tunnel	Boylston St	Boston	1914
BOS.7353	Church of the Redemption (Universalist)	1103 Boylston St	Boston	1923
BOS.7354	Fenmore Apartments	1109 Boylston St	Boston	1914
BOS.7355	Fenmore Apartments	1111 Boylston St	Boston	1914
BOS.7351	Fritz-Carlton Hotel - Bostonian Hotel	1136-1150 Boylston St	Boston	1901
BOS.7352	Massachusetts Historical Society Building	1154 Boylston St	Boston	1899
BOS.9293	Riverway - Brookline Avenue Bridge	Brookline Ave	Boston	1894
BOS.15908	Smith, John B. Building	64-78 Brookline Ave	Boston	1914
BOS.7563	Sears Roebuck and Company Mail Order Store	201 Brookline Ave	Boston	1928
BOS.17882	Simmons College Residence Campus - Morse Hall	259-275 Brookline Ave	Boston	1952
BOS.17883	Simmons College Residence Campus - Simmons Hall	259-275 Brookline Ave	Boston	1956
BOS.7413	Boston Academy of Notre Dame	264-274 Brookline Ave	Boston	1913
BOS.13247	Emmanuel College - Saint Ann Hall	264-274 Brookline Ave	Boston	1961
BOS.13249	Emmanuel College - Loretto Hall	264-274 Brookline Ave	Boston	1963

Inv. No.	Property Name	Street	Town	Year
BOS.13250	Emmanuel College - Marian Hall	264-274 Brookline Ave	Boston	1954
BOS.13251	Emmanuel College - Saint Joseph Hall	264-274 Brookline Ave	Boston	1966
BOS.17844	Emmanuel College - Cardinal Cushing Library	264-274 Brookline Ave	Boston	1966
BOS.17884	Simmons College Residence Campus - Mesick Hall	291 Brookline Ave	Boston	1960
BOS.17885	Simmons College Residence Campus - Evans Hall	305 Brookline Ave	Boston	1938
BOS.17835	Beth Israel Hospital - Outpatient Department Building	320-350 Brookline Ave	Boston	1925
BOS.17836	Beth Israel Hospital - Main Hospital Building	320-350 Brookline Ave	Boston	1926
BOS.17837	Beth Israel Hospital - Service and Operating Building	320-350 Brookline Ave	Boston	1926
BOS.17838	Beth Israel Hospital - Nurses' Home	320-350 Brookline Ave	Boston	1925
BOS.17839	Beth Israel Hospital - Yamins, Nathan Research Laboratory	320-350 Brookline Ave	Boston	1948
BOS.17840	Beth Israel Hospital - Service Building	320-350 Brookline Ave	Boston	1948
BOS.17841	Beth Israel Hospital - Stoneman Building	320-350 Brookline Ave	Boston	1948
BOS.17842	Beth Israel Hospital - Rabb Building	320-350 Brookline Ave	Boston	1966
BOS.7358	Simmons College Residence Campus - South Hall	321 Brookline Ave	Boston	1905
BOS.7580	Simmons College Residence Campus - North Hall	321 Brookline Ave	Boston	1906
BOS.7581	Simmons College Residence Campus - Refectory	321 Brookline Ave	Boston	1905
BOS.17886	Simmons College Residence Campus - Bartol Dining Hall	321 Brookline Ave	Boston	1952
BOS.17887	Simmons College Residence Campus - Health Center	321 Brookline Ave	Boston	1966
BOS.7357	Massachusetts School of Art	364 Brookline Ave	Boston	1929
BOS.7359	Boston Fire Engine House #3	411 Brookline Ave	Boston	1873
BOS.17829	Joslin Diabetes Center	415-435 Brooklne Ave	Boston	1955
BOS.15525	Bawford, A. J. Store	58 Burbank St	Boston	1915
BOS.15481	Vinal, Warren Row House	Buswell St	Boston	c 1910
BOS.15447	Longford Apartments, The	1 Buswell St	Boston	1907
BOS.15448	Melbourne Apartments, The	1A Buswell St	Boston	1907
BOS.15449	Nathan Apartments, The	2 Buswell St	Boston	1908
BOS.15450	Vinal, W. D. Row House	3 Buswell St	Boston	1894
BOS.15451		5 Buswell St	Boston	c 1900
BOS.15452	Harris, Joseph Apartment Building	6 Buswell St	Boston	1914
BOS.15453	Vinal, W. D. Apartment Building	7 Buswell St	Boston	1907
BOS.15454		9 Buswell St	Boston	c 1900

Inv. No.	Property Name	Street	Town	Year
BOS.15456	Vinal, W. D. Rowhouse	11 Buswell St	Boston	1894
BOS.15457		13 Buswell St	Boston	c 1900
BOS.15455	Ambassador, The Apartments	14 Buswell St	Boston	1924
BOS.15458		15 Buswell St	Boston	c 1900
BOS.15459		17 Buswell St	Boston	c 1900
BOS.15460		21 Buswell St	Boston	
BOS.15462	Clemetis Apartments	22 Buswell St	Boston	1914
BOS.15463	Carminea Apartments	24 Buswell St	Boston	1914
BOS.15461		27 Buswell St	Boston	
BOS.15464	Vinal, Warren Row House	29 Buswell St	Boston	1896
BOS.15465	Vinal, Warren Row House	31 Buswell St	Boston	1896
BOS.15466	Vinal, Warren Row House	33 Buswell St	Boston	1896
BOS.15468	Vinal, Warren Row House	33 Buswell St	Boston	1896
BOS.15467	Jasmine Chambers	34 Buswell St	Boston	1912
BOS.15469	Vinal, Warren Row House	37 Buswell St	Boston	1896
BOS.15470	Cypress Chambers	38 Buswell St	Boston	1911
BOS.15471	Vinal, Warren Row House	39 Buswell St	Boston	1896
BOS.15472	Tower Court	40 Buswell St	Boston	1911
BOS.15476	Vinal, Warren Row House	41 Buswell St	Boston	1896
BOS.15473	Myrtle Court	42 Buswell St	Boston	1911
BOS.15477	Vinal, Warren Row House	43 Buswell St	Boston	1896
BOS.15474	Laurel Chambers	44 Buswell St	Boston	1911
BOS.15478	Vinal, Warren Row House	45 Buswell St	Boston	1896
BOS.15479	Vinal, Warren Row House	47 Buswell St	Boston	1896
BOS.15475	Holly Court	48 Buswell St	Boston	1910
BOS.15480	Ivy Court	50-52 Buswell St	Boston	1909
BOS.7356	Fenmore Apartments	64 Charlesgate East	Boston	1914
BOS.9280	Collins, Patrick Andrew Statue	Commonwealth Ave	Boston	1908
BOS.9283	Kenmore Subway Station	Commonwealth Ave	Boston	1932
BOS.15493	Overland Store Company	533 Commonwealth Ave	Boston	1916
BOS.15494	New England School of Photography	535-539 Commonwealth Ave	Boston	c 1958
BOS.7368	Charlesview, The	536 Commonwealth Ave	Boston	c 1910
BOS.15495	Westgate Apartments	541 Commonwealth Ave	Boston	1894
BOS.7369	Commonwealth Improvement Company Building	542-548 Commonwealth Ave	Boston	r 1922
BOS.15412	General Tire and Rubber Company Building	565 Commonwealth Ave	Boston	c 1952
BOS.9553	Commonwealth Avenue Plaza	590 Commonwealth Ave	Boston	c 1985
BOS.7370	Temple Adath Israel	602 Commonwealth Ave	Boston	1906
BOS.15411	Lahey Clinic	605 Commonwealth Ave	Boston	1925

Inv. No.	Property Name	Street	Town	Year
BOS.15409	Covel Row House - Commonwealth Avenue Hospital	617 Commonwealth Ave	Boston	1901
BOS.15410	Shapleigh Row House - Commonwealth Avenue Hospital	619 Commonwealth Ave	Boston	1903
BOS.15408	Hurlburt Row House - Commonwealth Avenue Hospital	621 Commonwealth Ave	Boston	c 1903
BOS.15407	Holden, Mary E. - Hallian, Anna C. Row House	625 Commonwealth Ave	Boston	1901
BOS.15406	Cummings, E. Louise - Wolf, Alice L. Row House	627 Commonwealth Ave	Boston	1906
BOS.15405	Chadwick, N. Henry Row House	629 Commonwealth Ave	Boston	c 1906
BOS.9552	Boston University - Communication Park	630-640 Commonwealth Ave	Boston	1979
BOS.15404	Remington Rand Building	635 Commonwealth Ave	Boston	1955
BOS.15403	Nash New England Auto Company Showroom and Garage	640 Commonwealth Ave	Boston	1912
BOS.15399	Alden Hall Apartments	704 Commonwealth Ave	Boston	1911
BOS.15400	Neal, James P. Row House	708 Commonwealth Ave	Boston	1875
BOS.15401	Braman, Grenville T. W. Row House	710 Commonwealth Ave	Boston	c 1873
BOS.15402	Braman, Grenville T. W. Row House	714 Commonwealth Ave	Boston	c 1873
BOS.15398	Commonwealth Hall - Capron Apartments	718 Commonwealth Ave	Boston	1912
BOS.15397	Pretoria, The	722-726 Commonwealth Ave	Boston	1911
BOS.15396	Belview Apartments	728 Commonwealth Ave	Boston	1911
BOS.15395		2 Cummington St	Boston	1915
BOS.15394	Nash New England Auto Company Building	30-38 Cummington St	Boston	1917
BOS.15393	Flaherty, William H. Auto Repair	48-60 Cummington St	Boston	c 1917
BOS.15392	Hathaway, C. C. - Dodge, Charles A. Building	64-86 Cummington St	Boston	1917
BOS.15391	Hayes, William Allen Automobile Garage	96-100 Cummington St	Boston	1909
BOS.15390	Turner, Henry Stable and Blacksmith Shop	110-112 Cummington St	Boston	c 1900
BOS.15389	Back Bay Realty Association Garage	111 Cummington St	Boston	1909
BOS.7371	Webber, John P. Row House	12 Edgerly Rd	Boston	1893
BOS.7372	Webber, John P. Row House	14 Edgerly Rd	Boston	1893
BOS.7373	Webber, John P. Row House	16 Edgerly Rd	Boston	1893
BOS.7374	Webber, John P. Row House	18 Edgerly Rd	Boston	1893
BOS.7375	Webber, John P. Row House	20 Edgerly Rd	Boston	1893
BOS.7376	Webber, John P. Row House	22 Edgerly Rd	Boston	1893
BOS.7377	Webber, John P. Row House	24 Edgerly Rd	Boston	1893
BOS.7378	Webber, John P. Row House	26 Edgerly Rd	Boston	1893
BOS.7379	Webber, John P. Row House	28 Edgerly Rd	Boston	1893
BOS.7380	Webber, John P. Row House	30 Edgerly Rd	Boston	1893
BOS.17845		22 Evans Way	Boston	1916
BOS.17846		26 Evans Way	Boston	1916

Inv. No.	Property Name	Street	Town	Year
BOS.17847	Gordon College - Frost Hall	30 Evans Way	Boston	1916
BOS.17848	Gordon College - Frost Hall Addition	40-48 Evans Way	Boston	1930
BOS.7286	Boston Fire Alarm Headquarters Building	59 Fenway St	Boston	1925
BOS.7414	Lyons, John B. Three-Family House	7 Fenwood Rd	Boston	1910
BOS.7410	Farragut Primary School	10 Fenwood Rd	Boston	1903
BOS.7415	Spillane, Jeremiah C. Two-Family House	11 Fenwood Rd	Boston	1903
BOS.7416	Spillane, Jeremiah C. Two-Family House	15 Fenwood Rd	Boston	1903
BOS.16666	Sheean, Benjamin Two-Family House	17 Fenwood Rd	Boston	c 1899
BOS.16667	Dunn, F. and J. L. Two-Family House	19 Fenwood Rd	Boston	c 1899
BOS.16668	Whelan, M. J. and A. J. Two-Family House	21 Fenwood Rd	Boston	c 1899
BOS.16669	Mahan, E. J. Two-Family House	24 Fenwood Rd	Boston	c 1899
BOS.16670	Barry, Anna M. Two-Family House	30 Fenwood Rd	Boston	1909
BOS.16671	Stroud, F. W. Two-Family House	31 Fenwood Rd	Boston	c 1899
BOS.16672	Lowney, J. F. Two-Family House	32 Fenwood Rd	Boston	c 1899
BOS.16673	Kilduff, M. Two-Family House	33 Fenwood Rd	Boston	c 1899
BOS.16674	Holland, J. F. Two-Family House	35 Fenwood Rd	Boston	1901
BOS.7411	Olsson, H. C. Two-Family House	36 Fenwood Rd	Boston	c 1900
BOS.16675	Bailey, N. Two-Family House	39 Fenwood Rd	Boston	1899
BOS.7412	Mead, C. E. Two-Family House	40 Fenwood Rd	Boston	1900
BOS.7417	Freiman, Max Two-Family House	43 Fenwood Rd	Boston	c 1899
BOS.16676	Hosmer, Ida A. Two-Family House	44 Fenwood Rd	Boston	c 1899
BOS.16677	Ewing, E. F. Two-Family House	47 Fenwood Rd	Boston	c 1899
BOS.7418	Spillane, Jeremiah C. Two-Family House	49 Fenwood Rd	Boston	c 1899
BOS.16678	Callahan, J. M. Two-Family House	50 Fenwood Rd	Boston	c 1899
BOS.7422	Dooley, Rose H. Three Decker	51 Fenwood Rd	Boston	c 1899
BOS.16679	Sampson, W. W. Two-Family House	52 Fenwood Rd	Boston	1899
BOS.16680	Leather, Annie Three-Decker	53 Fenwood Rd	Boston	1900
BOS.16681	Connor, Genevieve Three-Decker	54 Fenwood Rd	Boston	1904
BOS.16682	Spillane, J. C. Two-Family House	55 Fenwood Rd	Boston	c 1899
BOS.16683	Gregory, Gustina M. Two-Family House	56 Fenwood Rd	Boston	1905
BOS.16684	Moon, Patrick W. Two-Family House	57 Fenwood Rd	Boston	1902
BOS.16685	Connelly, C. J. Two-Family House	58 Fenwood Rd	Boston	c 1899
BOS.7711	Massachusetts Mental Health Center Main Building	74 Fenwood Rd	Boston	1912
BOS.7712	Massachusetts Mental Health Center Power House	74 Fenwood Rd	Boston	1912
BOS.7713	Massachusetts Mental Health Center Research Bldg.	74 Fenwood Rd	Boston	1954
BOS.7714	Massachusetts Mental Health Center	74 Fenwood Rd	Boston	1957

Inv. No.	Property Name	Street	Town	Year
	Therapeutic Blg			
BOS.9295	Massachusetts Mental Health Center Fence	74 Fenwood Rd	Boston	1912
BOS.15521	Roosevelt, The Apartments	23 Forsyth St	Boston	1925
BOS.15520	Forsyth Street Public Garage	70 Forsyth St	Boston	1926
BOS.15519	O'Connell, J. P. Company Masons' Supplies Building	104 Forsyth St	Boston	1922
BOS.9272	Endecott, John Monument	Forsythe Way	Boston	1937
BOS.16686	Santander Bank	2-6 Francis St	Boston	c 1999
BOS.7497	Brigham, Peter Bent Hospital - Administration Building	5-75 Francis St	Boston	1911
BOS.17874	Brigham, Peter Bent Hospital - Ward A	5-75 Francis St	Boston	1911
BOS.17875	Brigham, Peter Bent Hospital - Ward B	5-75 Francis St	Boston	1915
BOS.17876	Brigham, Peter Bent Hospital - Surgical Building	5-75 Francis St	Boston	c 1915
BOS.17877	Brigham, Peter Bent Hospital - Coolidge House	5-75 Francis St	Boston	1962
BOS.17878	Brigham, Peter Bent Hospital - Radiology Building	5-75 Francis St	Boston	1963
BOS.16687	Donlan, D. Three-Decker	12 Francis St	Boston	1900
BOS.16688	Lindauer, Louisa Three-Decker	16 Francis St	Boston	1899
BOS.16689	Lindauer, Louisa Three-Decker	18 Francis St	Boston	c 1899
BOS.16690	Breen, Jane Three-Decker	20 Francis St	Boston	1899
BOS.16691	Cannon, P. and J. Three-Decker	22 Francis St	Boston	1900
BOS.7419	Crowley, Daniel Apartment Building	30 Francis St	Boston	c 1900
BOS.16692	Donovan, C. J. Three-Decker	32 Francis St	Boston	1898
BOS.16693	Donovan, C. J. Three-Decker	34 Francis St	Boston	1898
BOS.16694	Hourihan, J. Three-Decker	36 Francis St	Boston	1898
BOS.16695	Cole, William S. Three-Decker	38 Francis St	Boston	1900
BOS.16696	McGovern, O. Three-Decker	40 Francis St	Boston	1901
BOS.9773	Francis Street Garden	42 Francis St	Boston	r 2000
BOS.16698	Hannan, R. and M. Three-Decker	44 Francis St	Boston	1898
BOS.16699	O'Neil, M. Three-Decker	46 Francis St	Boston	1901
BOS.16700	Cole, Mary A. Three-Decker	48 Francis St	Boston	1899
BOS.7421	Ilse, Fredericka Three-Decker	50 Francis St	Boston	1900
BOS.16701	Sullivan, Mary Three-Decker	52 Francis St	Boston	1900
BOS.7423	Donovan, Jereh Three Decker	58 Francis St	Boston	1901
BOS.17866	New England Deaconess Hospital - Lowry Parking Garage	110 Francis St	Boston	1963
BOS.17867	New England Deaconess Hospital - Lowry Medical Office Building	110 Francis St	Boston	1962
BOS.7443	Thomas - Pierce Apartment Building	69 Gainsborough St	Boston	1900
BOS.7444	Thomas - Pierce Apartment Building	71 Gainsborough St	Boston	1900

Inv. No.	Property Name	Street	Town	Year
BOS.7445	Thomas - Pierce Apartment Building	73 Gainsborough St	Boston	1900
BOS.7446	Thomas - Pierce Apartment Building	75 Gainsborough St	Boston	1900
BOS.7424	Thomas, Washington B. Apartment Building	76 Gainsborough St	Boston	1902
BOS.7447	Thomas - Pierce Apartment Building	77 Gainsborough St	Boston	1900
BOS.7425	Thomas, Washington B. Apartment Building	78 Gainsborough St	Boston	1902
BOS.7448	Thomas - Pierce Apartment Building	79 Gainsborough St	Boston	1900
BOS.7426	Thomas, Washington B. Apartment Building	80 Gainsborough St	Boston	1902
BOS.7449	Thomas - Pierce Apartment Building	81 Gainsborough St	Boston	1900
BOS.7427	Thomas, Washington B. Apartment Building	82 Gainsborough St	Boston	1902
BOS.7450	Thomas - Pierce Apartment Building	83 Gainsborough St	Boston	1900
BOS.7428	Thomas, Washington B. Apartment Building	84 Gainsborough St	Boston	1902
BOS.7451	Thomas - Pierce Apartment Building	85 Gainsborough St	Boston	1900
BOS.7429	Thomas, Washington B. Apartment Building	86 Gainsborough St	Boston	1902
BOS.7452	Thomas - Pierce Apartment Building	87 Gainsborough St	Boston	1900
BOS.7430	Thomas, Washington B. Apartment Building	88 Gainsborough St	Boston	1902
BOS.7453	Thomas - Pierce Apartment Building	89 Gainsborough St	Boston	1900
BOS.7431	Thomas, Washington B. Apartment Building	90 Gainsborough St	Boston	1902
BOS.7454	Thomas - Pierce Apartment Building	91 Gainsborough St	Boston	1900
BOS.7432	Thomas, Washington B. Apartment Building	92 Gainsborough St	Boston	1902
BOS.7455	Thomas - Pierce Apartment Building	93 Gainsborough St	Boston	1900
BOS.7433	Thomas, Washington B. Apartment Building	94 Gainsborough St	Boston	1902
BOS.7456	Thomas - Pierce Apartment Building	95 Gainsborough St	Boston	1900
BOS.7434	Thomas, Washington B. Apartment Building	96 Gainsborough St	Boston	1902
BOS.7457	Thomas - Pierce Apartment Building	97 Gainsborough St	Boston	1900
BOS.7435	Thomas, Washington B. Apartment Building	98 Gainsborough St	Boston	1902
BOS.7458	Thomas - Pierce Apartment Building	99 Gainsborough St	Boston	1900
BOS.7436	Thomas, Washington B. Apartment Building	100 Gainsborough St	Boston	1902
BOS.7459	Thomas - Pierce Apartment Building	101 Gainsborough St	Boston	1900
BOS.7437	Thomas, Washington B. Apartment Building	102 Gainsborough St	Boston	1902
BOS.7460	Thomas - Pierce Apartment Building	103 Gainsborough St	Boston	1900
BOS.7438	Thomas, Washington B. Apartment Building	104 Gainsborough St	Boston	1902
BOS.7461	Thomas - Pierce Apartment Building	105 Gainsborough St	Boston	1900
BOS.7439	Thomas, Washington B. Apartment Building	106 Gainsborough St	Boston	1902
BOS.7462	Thomas - Pierce Apartment Building	107 Gainsborough St	Boston	1900
BOS.7440	Thomas, Washington B. Apartment Building	108 Gainsborough St	Boston	1902
BOS.7463	Thomas - Pierce Apartment Building	109 Gainsborough St	Boston	1900
BOS.7441	Thomas, Washington B. Apartment Building	110 Gainsborough St	Boston	1902
BOS.7464	Thomas - Pierce Apartment Building	111 Gainsborough St	Boston	1900

Inv. No.	Property Name	Street	Town	Year
BOS.7465	Thomas - Pierce Apartment Building	113 Gainsborough St	Boston	1900
BOS.7471	Thomas, Washington B. Apartment Building	115 Gainsborough St	Boston	1900
BOS.9271	Johnson Memorial Gates	Hemenway St	Boston	1901
BOS.7466	New Riding Club, The	52 Hemenway St	Boston	1891
BOS.7477	Thomas, David W. Row House	57 Hemenway St	Boston	1895
BOS.7478	Thomas, David W. Row House	59 Hemenway St	Boston	1895
BOS.7479	Thomas, David W. Row House	61 Hemenway St	Boston	1895
BOS.7480	Williams, Henry B. Apartment Building	67 Hemenway St	Boston	1904
BOS.7481	Gilligan, James T. Town House	109 Hemenway St	Boston	1898
BOS.7467	Thomas, Washington B. Apartment Building	114 Hemenway St	Boston	1900
BOS.15514	Belgrade, The Apartments	115 Hemenway St	Boston	1911
BOS.7468	Thomas, Washington B. Apartment Building	116 Hemenway St	Boston	1900
BOS.7469	Thomas, Washington B. Apartment Building	118 Hemenway St	Boston	1900
BOS.15515	Euclid, The Apartments	119 Hemenway St	Boston	1912
BOS.7470	Thomas, Washington B. Apartment Building	120 Hemenway St	Boston	1900
BOS.15516	New England Conservatory of Music Dormitory	125-131 Hemenway St	Boston	1902
BOS.7442	Thomas, Washington B. Apartment Building	128 Hemenway St	Boston	1902
BOS.15517	Bowes, John W. Apartment House	142-148 Hemenway St	Boston	1896
BOS.15518	Bryant, The Apartments	153 Hemenway St	Boston	1910
BOS.7482	Coleman - Gilbert Apartment House - Lincoln Hall	157 Hemenway St	Boston	1909
BOS.7483	Coleman, Harry - Gilbert, Bernard Apartment House	163 Hemenway St	Boston	1909
BOS.7484	Coleman, Harry - Gilbert, Bernard Apartment House	165 Hemenway St	Boston	1907
BOS.7485	Coleman, Harry - Gilbert, Bernard Apartment House	171 Hemenway St	Boston	1907
BOS.7486	Coleman, Harry Apartment House	175 Hemenway St	Boston	1909
BOS.7473		220 Hemenway St	Boston	c 1871
BOS.7474		222 Hemenway St	Boston	c 1871
BOS.7475		224 Hemenway St	Boston	c 1871
BOS.7476		226 Hemenway St	Boston	c 1871
BOS.9284	Massachusetts Avenue - Symphony Subway Station	Huntington Ave	Boston	1941
BOS.9732	Christian Science Church Center Plaza	Huntington Ave	Boston	
BOS.9733	Christian Science Center Plaza Reflecting Pool	Huntington Ave	Boston	
BOS.9734	Christian Science Center Plaza Children's Fountain	Huntington Ave	Boston	
BOS.15904	Christian Science Church Administration Building	177 Huntington Ave	Boston	1972
BOS.15902	Christian Science Sunday School Building	235 Huntington Ave	Boston	1971

Inv. No.	Property Name	Street	Town	Year
BOS.7487	Boston University Theatre Production Centre	256-258 Huntington Ave	Boston	c 1915
BOS.7488	Jewett Repertory Theatre	264 Huntington Ave	Boston	1924
BOS.7489	Riviera, The	270 Huntington Ave	Boston	1923
BOS.15513	YMCA Vocational Building - Botolph Building	288 Huntington Ave	Boston	1911
BOS.7490	New England Conservatory of Music - Jordan Hall	290 Huntington Ave	Boston	1903
BOS.7492	Free Surgical Hospital for Women	291-301 Huntington Ave	Boston	1886
BOS.7491	Boston Young Men's Christian Association Building	312-320 Huntington Ave	Boston	1911
BOS.15512	Hampton Hall Apartments	319 Huntington Ave	Boston	c 1915
BOS.15511	Northeastern University - Dodge, Robert G. Library	324 Huntington Ave	Boston	1950
BOS.15510	Northeastern University - Science Hall	330 Huntington Ave	Boston	1941
BOS.15509	Coleman, Harry - Gilbert, Bernard Apartment House	337 Huntington Ave	Boston	1923
BOS.15508	Northeastern University - Student Center	346 Huntington Ave	Boston	1947
BOS.15507	Northeastern University - West Hall	360 Huntington Ave	Boston	1937
BOS.15505	Northeastern University - Hayden Hall	370 Huntington Ave	Boston	1955
BOS.15504	Northeastern University - Graduate Center	380 Huntington Ave	Boston	1958
BOS.15503	Northeastern Univeristy - Cabot Center	400 Huntington Ave	Boston	1954
BOS.15502	University Hall Apartments	407 Huntington Ave	Boston	1913
BOS.15501	Museum Villa Apartments	456-460 Huntington Ave	Boston	1922
BOS.15506	Beaufort, The Apartments	464 Huntington Ave	Boston	1912
BOS.7493	Boston Museum of Fine Arts	465 Huntington Ave	Boston	1907
BOS.7494	Bangs, Edward A. - Bangs, Outram Double House	553-555 Huntington Ave	Boston	c 1900
BOS.7495	Stanley, Martha Apartment Building	641 Huntington Ave	Boston	1888
BOS.7496	Holmes, William Apartment Building	643-645 Huntington Ave	Boston	1888
BOS.17853	Harvard Medical School - Education Facilties Building	677 Huntington Ave	Boston	1969
BOS.17850	Harvard School of Public Health - Health Sciences Laboratory Building #1	689-695 Huntington Ave	Boston	1960
BOS.17851	Harvard School of Public Health - Health Sciences Laboratory Building #2	689-695 Huntington Ave	Boston	1960
BOS.9772	Hanlon Square	725 Huntington Ave	Boston	r 2000
BOS.7498	Harmon, James Apartment House and Commercial Block	733-739 Huntington Ave	Boston	1899
BOS.7499	Lyons, L. J. Apartment House	741-747 Huntington Ave	Boston	1899
BOS.16702	Avondale Chambers - Avondale Apartments	777-779 Huntington Ave	Boston	1916
BOS.9296	Milestone, 1767	841 Huntington Ave	Boston	1729
BOS.9269	Ipswich Street Bridge over Muddy River	Ipswich St	Boston	1898

Inv. No.	Property Name	Street	Town	Year
BOS.7500	Fenway Studios Building	30 Ipswich St	Boston	1906
BOS.7501	Park Riding School	145-151 Ipswich St	Boston	1900
BOS.15482		80-81 Ivy St	Boston	c 1920
BOS.7640	Davidson, William A. Apartment Building	83 Ivy St	Boston	1912
BOS.7502	Wyzanski, M. E. and C. E. Building	5-15 Jersey St	Boston	1916
BOS.7544	Wentworth, Marshall Town House	5 Keswick St	Boston	1900
BOS.7333	Wentworth, Marshall Row House	6 Keswick St	Boston	1901
BOS.7545	Wentworth, Marshall Town House	7 Keswick St	Boston	1900
BOS.7334	Wentworth, Marshall Row House	8 Keswick St	Boston	1901
BOS.7546	Wentworth, Marshall Town House	9 Keswick St	Boston	1900
BOS.7335	Wentworth, Marshall Row House	10 Keswick St	Boston	1901
BOS.7547	Wentworth, Marshall Town House	11 Keswick St	Boston	1900
BOS.7336	Wentworth, Marshall Row House	12 Keswick St	Boston	1901
BOS.7548	Wentworth, Marshall Town House	13 Keswick St	Boston	1900
BOS.7337	Wentworth, Marshall Row House	14 Keswick St	Boston	1901
BOS.7549	Wentworth, Marshall Town House	15 Keswick St	Boston	1900
BOS.7550	Wentworth, Marshall Town House	17 Keswick St	Boston	1900
BOS.7503	Booth, R. H. Sales Company	45 Landsdowne St	Boston	1924
BOS.9291	Longwood Avenue Bridge	Longwood Ave	Boston	c 1897
BOS.17855	Longwood Spa - Sparr's Drug Store	158 Longwood Ave	Boston	1911
BOS.7504	Carlton Building	160 Longwood Ave	Boston	1892
BOS.7505	Westcourt Apartment Building	164 Longwood Ave	Boston	1900
BOS.7514	Massachusetts College of Pharmacy - White, George Robert Building	179 Longwood Ave	Boston	1917
BOS.7506	Angell Memorial Animal Hospital	180-184 Longwood Ave	Boston	1915
BOS.7507	Harvard University Dental School	188 Longwood Ave	Boston	1908
BOS.7511	Harvard Medical School - Building D - Bacteriology and Pathology Building	210 Longwood Ave	Boston	1906
BOS.7509	Harvard Medical School - Building B - Anatomy and Histology Building	220 Longwood Ave	Boston	1906
BOS.7515	Boston Lying-in Hospital	221 Longwood Ave	Boston	1922
BOS.7510	Harvard Medical School - Building C - Physiological Chemistry and Physiology Building	240 Longwood Ave	Boston	1906
BOS.7512	Harvard Medical School - Building E - Pharmacology and Hygiene Building	260 Longwood Ave	Boston	1906
BOS.7513	Children's Hospital	300 Longwood Ave	Boston	1912
BOS.17830	Longwood Medical Building	319 Longwood Ave	Boston	1929
BOS.17831	Temple Israel	477 Longwood Ave	Boston	1928
BOS.17856		60 Louis Prang St	Boston	1899

Inv. No.	Property Name	Street	Town	Year
BOS.17857		62 Louis Prang St	Boston	1899
BOS.17858		64 Louis Prang St	Boston	1899
BOS.17859		66 Louis Prang St	Boston	1899
BOS.17860		68 Louis Prang St	Boston	1906
BOS.7518	State Street Trust Company Building	130-132 Massachusetts Ave	Boston	1902
BOS.7519	Fenway Theatre	136 Massachusetts Ave	Boston	1915
BOS.7522	Smith, William H. Row House	179 Massachusetts Ave	Boston	1866
BOS.7523	Smith, William H. Row House	181 Massachusetts Ave	Boston	1866
BOS.7532	Christian Science Publishing House Building	200-210 Massachusetts Ave	Boston	1934
BOS.9735	Christian Science Center - Eddy Library Courtyard	200 Massachusetts Ave	Boston	2002
BOS.7520	First Church of Christ Scientist Mother Church	250 Massachusetts Ave	Boston	1894
BOS.15900	Christian Science Mother Church Extension	250 Massachusetts Ave	Boston	1906
BOS.7521	Horticultural Hall	300 Massachusetts Ave	Boston	1901
BOS.7524	Symphony Hall	301 Massachusetts Ave	Boston	1900
BOS.9297	Street Clock	333 Massachusetts Ave	Boston	
BOS.7525	Beal, Abraham B. - Weiner, John Apartment Building	12-14 Medfield St	Boston	1915
BOS.7526	Beal, Abraham B. - Weiner, John Apartment Building	16-18 Medfield St	Boston	1915
BOS.7527	Beal, Abraham B. - Weiner, John Apartment Building	20-22 Medfield St	Boston	1915
BOS.7528	Beal, Abraham B. - Weiner, John Apartment Building	24-26 Medfield St	Boston	1915
BOS.7529	Beal, Abraham B. - Weiner, John Apartment Building	28-30 Medfield St	Boston	1915
BOS.7530	Beal, Abraham B. - Weiner, John Apartment Building	32-34 Medfield St	Boston	1915
BOS.7531	Hutchinson, Catherine E. Town House	7 Miner St	Boston	c 1890
BOS.15483	Mountfort Chambers	46 Mountfort St	Boston	1908
BOS.15484	Mayfield Chambers	96 Mountfort St	Boston	1909
BOS.15485	Fairbanks Chambers	98 Mountfort St	Boston	1909
BOS.15486	Auburndale Chambers	100 Mountfort St	Boston	1909
BOS.9292	Netherlands Road Bridge	Netherlands Rd	Boston	1894
BOS.15385	Standard Rim and Wheel Company Building	601 Newbury St	Boston	1915
BOS.17833	Garden Hall - Worthington Hall Apartments	14 Palace Rd	Boston	1914
BOS.7533	Normal and Girls' Latin Group - Girls Latin School	115 Palace Rd	Boston	1906
BOS.7534	Normal and Girls' Latin Group - Collins, Patrick A. School	115 Palace Rd	Boston	1906
BOS.7535	Boston Normal School - Boston State College	115 Palace Rd	Boston	1906

Inv. No.	Property Name	Street	Town	Year
BOS.17872	Boston Normal School and Girls' Latin School Common Building	115 Palace Rd	Boston	1905
BOS.17873	State College at Boston - Kennedy, William H. J. Building	115 Palace Rd	Boston	1964
BOS.7289	Fenway Field House and Stadium	Park Dr	Boston	1928
BOS.9275	Back Bay Fens World War II Memorial	Park Dr	Boston	1948
BOS.9276	Back Bay Fens Victory Garden	Park Dr	Boston	c 1940
BOS.9278	Back Bay Fens Rose Garden	Park Dr	Boston	1924
BOS.9286	Clemente, Roberto Field	Park Dr	Boston	
BOS.9288	Riverway Shelter and Toolhouse	Park Dr	Boston	1893
BOS.9289	Riverway - Chapel Street Bridge	Park Dr	Boston	1890
BOS.9290	Riverway - Bridle Path Bridge	Park Dr	Boston	1892
BOS.9617	Riverway Pathway	Park Dr	Boston	
BOS.7552	Fen Drive Apartment Building	61 Park Dr	Boston	1920
BOS.7553	Nashdome Apartment Building	65 Park Dr	Boston	1920
BOS.7554	Park Drive Apartment Building	69 Park Dr	Boston	1920
BOS.7556		111 Park Dr	Boston	1922
BOS.7557	Rotenberg and Rudnik Apartment Building	125 Park Dr	Boston	1922
BOS.7558	Rotenberg and Rudnik Apartment Building	131 Park Dr	Boston	1922
BOS.7559	Rotenberg and Rudnik Apartment Building	137 Park Dr	Boston	1922
BOS.7560	Rotenberg and Rudnik Apartment Building	143 Park Dr	Boston	1922
BOS.7561	Rotenberg and Rudnik Apartment Building	149 Park Dr	Boston	1922
BOS.7562	Rotenberg and Rudnik Apartment Building	151 Park Dr	Boston	1922
BOS.7536	Riverway Administration Building	440 Park Dr	Boston	1898
BOS.7564		455-457 Park Dr	Boston	1900
BOS.7537	Wentworth, Marshall Town House	456 Park Dr	Boston	1900
BOS.7538	Wentworth, Marshall Town House	458 Park Dr	Boston	1900
BOS.7565		459-461 Park Dr	Boston	1900
BOS.7539	Wentworth, Marshall Town House	460 Park Dr	Boston	1900
BOS.7540	Wentworth, Marshall Town House	462 Park Dr	Boston	1900
BOS.7566	Rudnik, Samuel Apartment Building	463 Park Dr	Boston	1911
BOS.7541	Wentworth, Marshall Town House	464 Park Dr	Boston	1900
BOS.7567	Lucerne Apartment Building	465 Park Dr	Boston	1896
BOS.7542	Wentworth, Marshall Town House	466 Park Dr	Boston	1900
BOS.7543	Wentworth, Marshall Town House	468 Park Dr	Boston	1900
BOS.15487	Park Drive Apartment House	496 Park Dr	Boston	c 1910
BOS.7568	Strathcona Terrace Apartment House	499-503 Park Dr	Boston	1903
BOS.7569	Audubon Terrace Apartments	500-504 Park Dr	Boston	1910

Inv. No.	Property Name	Street	Town	Year
BOS.15488		506 Park Dr	Boston	r 1920
BOS.15490	Plymouth, The Apartments	509 Park Dr	Boston	1912
BOS.15489		512 Park Dr	Boston	r 1920
BOS.7551	Audubon Court	514-522 Park Dr	Boston	1915
BOS.15491	Royal, The Apartments	515 Park Dr	Boston	1908
BOS.15492	Amsterdam, The Apartments	519 Park Dr	Boston	c 1910
BOS.7555	Clark, Theodore M. Town House	107 Park St	Boston	1902
BOS.7578	Church of the Disciples	Peterborough St	Boston	1904
BOS.7570	Birburie, H. C. Town House	22 Peterborough St	Boston	1903
BOS.7571	Birburie, H. C. Town House	24 Peterborough St	Boston	1903
BOS.7572	Birburie, H. C. Town House	26 Peterborough St	Boston	1903
BOS.7338	Birburie, H. C. Town House	28 Peterborough St	Boston	1903
BOS.7573	Birburie, H. C. Town House	30 Peterborough St	Boston	1903
BOS.7574	Birburie, H. C. Town House	32 Peterborough St	Boston	1903
BOS.7575	Sumner Apartment Building	35-45 Peterborough St	Boston	1915
BOS.7576	Stuart Apartment Building	36-46 Peterborough St	Boston	1915
BOS.7577	Millmore, Martin Public School	85 Peterborough St	Boston	1929
BOS.7579	Peterborough Chambers Apartment Building	131 Peterborough St	Boston	1911
BOS.17892	Wheelock College - Wheelock, Lucy Memorial Auditorium	Pilgrim Rd	Boston	1963
BOS.17891	Wheelock College - Classroom Building	31 Pilgrim Rd	Boston	1941
BOS.17888	Simmons College Residence Campus - Dix Hall	38 Pilgrim Rd	Boston	1952
BOS.17889	Simmons College Residence Campus - Smith Hall	46 Pilgrim Rd	Boston	1963
BOS.17890	Simmons College Residence Campus - Arnold Hall	62 Pilgrim Rd	Boston	1951
BOS.7582	The Winsor School	103-117 Pilgrim Rd	Boston	1909
BOS.7585	Paine, Robert Treat Jr. Town House	1 Queensberry St	Boston	1901
BOS.7586	Pantry, The Grocery Store	37 Queensberry St	Boston	1919
BOS.17894	Wheelock College - Wheelock, Lucy School	100-110 Riverway	Boston	1914
BOS.17895	Wheelock College - Pilgrim Court Apartments	114-122 Riverway	Boston	1923
BOS.17893	Wheelock College - Riverway Studio Building	132 Riverway	Boston	1915
BOS.17896	Wheelock College - Pilgrim House	154-164 Riverway	Boston	1911
BOS.17897	Wheelock College- Dining Hall	154-164 Riverway	Boston	1949
BOS.17898	Wheelock College - Longwood House	154-164 Riverway	Boston	1914
BOS.17899	Wheelock College - Riverway House	154-164 Riverway	Boston	1915
BOS.17900	Riverway Manor	210-214 Riverway	Boston	1923
BOS.7583	New England Deaconess Hospital	334 Riverway	Boston	1903
BOS.7584	New England Deaconess Hospital - Palmer	334 Riverway	Boston	1926

Inv. No.	Property Name	Street	Town	Year
	Memorial Hospital			
BOS.17868	New England Deaconess Hospital - Baker, George F. Clinic	334 Riverway	Boston	1933
BOS.17869	New England Deaconess Hospital - Central Building	334 Riverway	Boston	1952
BOS.17870	New England Deaconess Hospital - Dooley, Arthur T. Chapel	334 Riverway	Boston	1955
BOS.17871	New England Deaconess Hospital - Maintenance Building	334 Riverway	Boston	1959
BOS.9294	Route 9 Overpass and Retaining Wall	Rt 9	Boston	1936
BOS.7420	Crowley, Daniel Apartment Building	5 Saint Albans Rd	Boston	1900
BOS.16703	Kelley, Frank C. Two-Family House	24 Saint Albans Rd	Boston	1926
BOS.16697	McInerney, Elizabeth C. Two-Family House	26-28 Saint Albans Rd	Boston	c 1906
BOS.15498	Boston Arena - Boston University Gymnasium	238-262 Saint Botolph St	Boston	r 1910
BOS.7587	Industrial School for Crippled & Deformed Children	241 Saint Botolph St	Boston	1903
BOS.7588	White, Thomas R. Row House	8 Saint Germain St	Boston	1892
BOS.7589	White, Thomas R. Row House	10 Saint Germain St	Boston	1892
BOS.7590	White, Thomas R. Row House	12 Saint Germain St	Boston	1892
BOS.7591	White, Thomas R. Row House	14 Saint Germain St	Boston	1892
BOS.7613	White, Thomas R. Row House	15 Saint Germain St	Boston	1893
BOS.7592	White, Thomas R. Row House	16 Saint Germain St	Boston	1892
BOS.7614	White, Thomas R. Row House	17 Saint Germain St	Boston	1893
BOS.7593	White, Thomas R. Row House	18 Saint Germain St	Boston	1892
BOS.7615	White, Thomas R. Row House	19 Saint Germain St	Boston	1893
BOS.7594	White, Thomas R. Row House	20 Saint Germain St	Boston	1892
BOS.7616	White, Thomas R. Row House	21 Saint Germain St	Boston	1893
BOS.7595	White, Thomas R. Row House	22 Saint Germain St	Boston	1892
BOS.7617	White, Thomas R. Row House	23 Saint Germain St	Boston	1893
BOS.7596	White, Thomas R. Row House	24 Saint Germain St	Boston	1892
BOS.7618	White, Thomas R. Row House	25 Saint Germain St	Boston	1893
BOS.7597	White, Thomas R. Row House	26 Saint Germain St	Boston	1892
BOS.7619	Green, Joseph Three-Family House	27 Saint Germain St	Boston	1897
BOS.7598	White, Thomas R. Row House	28 Saint Germain St	Boston	1892
BOS.7620	Green, Joseph Three-Family House	29 Saint Germain St	Boston	1897
BOS.7599	White, Thomas R. Row House	30 Saint Germain St	Boston	1892
BOS.7621	Green, Joseph Three-Family House	31 Saint Germain St	Boston	1897
BOS.7600	White, Thomas R. Row House	32 Saint Germain St	Boston	1892
BOS.7622	Green, Joseph Three-Family House	33 Saint Germain St	Boston	1897
BOS.7601	White, Thomas R. Row House	34 Saint Germain St	Boston	1892

Inv. No.	Property Name	Street	Town	Year
BOS.7623	Green, Joseph Three-Family House	35 Saint Germain St	Boston	1897
BOS.7602	White, Thomas R. Row House	36 Saint Germain St	Boston	1892
BOS.7624	Green, Joseph Three-Family House	37 Saint Germain St	Boston	1897
BOS.7603	White, Thomas R. Three-Family House	38 Saint Germain St	Boston	1894
BOS.7625	Green, Joseph Three-Family House	39 Saint Germain St	Boston	1897
BOS.7604	White, Thomas R. Three-Family House	40 Saint Germain St	Boston	1894
BOS.7626	Green, Joseph Three-Family House	41 Saint Germain St	Boston	1897
BOS.7605	White, Thomas R. Three-Family House	42 Saint Germain St	Boston	1894
BOS.7627	Green, Joseph Three-Family House	43 Saint Germain St	Boston	1897
BOS.7606	White, Thomas R. Three-Family House	44 Saint Germain St	Boston	1894
BOS.7628	Green, Joseph Three-Family House	45 Saint Germain St	Boston	1897
BOS.7607	White, Thomas R. Three-Family House	46 Saint Germain St	Boston	1894
BOS.7629	Green, Joseph Three-Family House	47 Saint Germain St	Boston	1897
BOS.7608	White, Thomas R. Three-Family House	48 Saint Germain St	Boston	1894
BOS.7630	Green, Joseph Three-Family House	49 Saint Germain St	Boston	1897
BOS.7609	Green, Joseph Three-Family House	50 Saint Germain St	Boston	1896
BOS.7631	Green, Joseph Three-Family House	51 Saint Germain St	Boston	1897
BOS.7610	Bangs, Edward A. Three-Family House	52 Saint Germain St	Boston	1897
BOS.7632	Green, Joseph Three-Family House	53 Saint Germain St	Boston	1897
BOS.7611	Bangs, Edward A. Three-Family House	54 Saint Germain St	Boston	1897
BOS.7633	Galvin, James J. Three-Family House	55 Saint Germain St	Boston	1897
BOS.7612	Bangs, Edward A. Three-Family House	56 Saint Germain St	Boston	1897
BOS.7634	Galvin, James J. Three-Family House	57 Saint Germain St	Boston	1897
BOS.7635	Galvin, James J. Three-Family House	59 Saint Germain St	Boston	1897
BOS.7636	Galvin, James J. Three-Family House	61 Saint Germain St	Boston	1897
BOS.7637	Galvin, James J. Three-Family House	63 Saint Germain St	Boston	1897
BOS.7638	Galvin, James J. Three-Family House	65 Saint Germain St	Boston	1897
BOS.7639	Lawrence, The Apartments	90 Saint Mary's St	Boston	1905
BOS.7344		124 Saint Mary's St	Boston	c 1900
BOS.7345		126 Saint Mary's St	Boston	c 1900
BOS.7346		128 Saint Mary's St	Boston	c 1900
BOS.7347		130 Saint Mary's St	Boston	c 1900
BOS.7348		132 Saint Mary's St	Boston	c 1900
BOS.7349		134 Saint Mary's St	Boston	c 1900
BOS.7665	Thomas, David W. Apartment Building	23 Saint Stephen St	Boston	1886
BOS.7666	Thomas, David W. Apartment Building	25 Saint Stephen St	Boston	1886
BOS.7667	Thomas, David W. Apartment Building	27 Saint Stephen St	Boston	1886
BOS.7641	Whitney, Henry M. Row House	28 Saint Stephen St	Boston	1884

Inv. No.	Property Name	Street	Town	Year
BOS.7642	Whitney, Henry M. Row House	30 Saint Stephen St	Boston	1884
BOS.7643	Whitney, Henry M. Row House	32 Saint Stephen St	Boston	1884
BOS.7644	Whitney, Henry M. Row House	34 Saint Stephen St	Boston	1884
BOS.7645	Whitney, Henry M. Row House	36 Saint Stephen St	Boston	1884
BOS.7669	Whitney, Henry M. Row House	37 Saint Stephen St	Boston	1884
BOS.7646	Whitney, Henry M. Row House	38 Saint Stephen St	Boston	1885
BOS.7670	Whitney, Henry M. Row House	39 Saint Stephen St	Boston	1884
BOS.7647	Whitney, Henry M. Row House	40 Saint Stephen St	Boston	1885
BOS.7671	Whitney, Henry M. Row House	41 Saint Stephen St	Boston	1884
BOS.7648	Whitney, Henry M. Row House	42 Saint Stephen St	Boston	1885
BOS.7672	Whitney, Henry M. Row House	43 Saint Stephen St	Boston	1884
BOS.7649	Whitney, Henry M. Row House	44 Saint Stephen St	Boston	1885
BOS.7673	Whitney, Henry M. Row House	45 Saint Stephen St	Boston	1884
BOS.7650	Whitney, Henry M. Row House	46 Saint Stephen St	Boston	1885
BOS.7674	Whitney, Henry M. Row House	47 Saint Stephen St	Boston	1884
BOS.7651	Whitney, Henry M. Row House	48 Saint Stephen St	Boston	1885
BOS.7675	Whitney, Henry M. Row House	49 Saint Stephen St	Boston	1884
BOS.7676	Whitney, Henry M. Row House	51 Saint Stephen St	Boston	1884
BOS.7677	Whitney, Henry M. Row House	53 Saint Stephen St	Boston	1884
BOS.7652	Whitney, Henry M. Row House	54 Saint Stephen St	Boston	1885
BOS.7678	Whitney, Henry M. Row House	55 Saint Stephen St	Boston	1884
BOS.7653	Whitney, Henry M. Row House	56 Saint Stephen St	Boston	1885
BOS.7679	Whitney, Henry M. Row House	57 Saint Stephen St	Boston	1884
BOS.7654	Whitney, Henry M. - MacCorry, Charles E. Row House	68 Saint Stephen St	Boston	1888
BOS.7655	Whitney, Henry M. Row House	70 Saint Stephen St	Boston	1888
BOS.7656	Whitney, Henry M. Row House	72 Saint Stephen St	Boston	1888
BOS.7657	Whitney, Henry M. Row House	74 Saint Stephen St	Boston	1888
BOS.7658	Whitney, Henry M. Row House	76 Saint Stephen St	Boston	1888
BOS.7681	Church of Messiah Protestant Episcopal Church	77 Saint Stephen St	Boston	1890
BOS.7659	Whitney, Henry M. Row House	78 Saint Stephen St	Boston	1888
BOS.7660	Whitney, Henry M. Row House	80 Saint Stephen St	Boston	c 1893
BOS.15497	Whitney, Henry M. House - Boston Students Union	81-83 Saint Stephen St	Boston	1892
BOS.7661	Whitney, Henry M. Row House	82 Saint Stephen St	Boston	c 1893
BOS.7662	Whitney, Henry M. Row House	84 Saint Stephen St	Boston	c 1893
BOS.7663	Whitney, Henry M. Row House	86 Saint Stephen St	Boston	c 1893
BOS.7664	Wood, B. F. Wood Music Company Building	88 Saint Stephen St	Boston	1920

Inv. No.	Property Name	Street	Town	Year
BOS.7682	Berenson, Maisha Apartment Building	97 Saint Stephen St	Boston	1912
BOS.15496	Opera, The Apartments	106-122 Saint Stephen St	Boston	1923
BOS.17854	Harvard Medical School - Countway, Francis A. Library of Medicine	10 Shattuck St	Boston	1963
BOS.17879	Brigham, Peter Bent Hospital - Out-Door Department	20 Shattuck St	Boston	1913
BOS.17880	Brigham, Peter Bent Hospital - Clinical Building	20 Shattuck St	Boston	1913
BOS.17881	Brigham, Peter Bent Hospital - Pearl Memorial Geriatric Unit	20 Shattuck St	Boston	1956
BOS.7508	Harvard Medical School - Building A - Administrative Building	25 Shattuck St	Boston	1906
BOS.17852	Harvard Medical School - Laboratory of Human Reproduction and Reproductive Biology	45 Shattuck St	Boston	1969
BOS.7683	Rotch, Thomas M. Jr. Memorial Hospital for Infants	55 Shattuck St	Boston	1910
BOS.7684	Hastings, Mary C. Hews House	2 Short St	Boston	c 1875
BOS.7685	Pope - Hastings, Bulkley A. House	4 Short St	Boston	c 1855
BOS.7668	Thomas, David W. Apartment Building	1-1A Symphony Rd	Boston	1886
BOS.7680	Whitney, Henry M. Row House	2-2A Symphony Rd	Boston	1884
BOS.7699	Thomas, David W. Row House	3 Symphony Rd	Boston	1886
BOS.7686	Smith, William H. Row House	4 Symphony Rd	Boston	1885
BOS.7700	Thomas, David W. Row House	5 Symphony Rd	Boston	1886
BOS.7687	Smith, William H. Row House	6 Symphony Rd	Boston	1885
BOS.7701	Thomas, David W. Row House	7 Symphony Rd	Boston	1886
BOS.7688	Smith, William H. Row House	8 Symphony Rd	Boston	1885
BOS.7702	Thomas, David W. Row House	9 Symphony Rd	Boston	1886
BOS.7689	Tirrell, Jesse Row House	10 Symphony Rd	Boston	1885
BOS.7703	Thomas, David W. Row House	11 Symphony Rd	Boston	1886
BOS.7690	Emery, M. E. Row House	12 Symphony Rd	Boston	1885
BOS.7704	Thomas, David W. Row House	13 Symphony Rd	Boston	1886
BOS.7691	Curtis, I. Row House	14 Symphony Rd	Boston	1885
BOS.7705	Thomas, David W. Row House	15 Symphony Rd	Boston	1886
BOS.7692	Tirrell, Jesse Row House	16 Symphony Rd	Boston	1885
BOS.7693	Tirrell, Jesse Row House	18 Symphony Rd	Boston	1885
BOS.7694	Tirrell, Jesse Row House	20 Symphony Rd	Boston	1885
BOS.7695	Tirrell, Jesse Row House	22 Symphony Rd	Boston	1885
BOS.7696	Haynes, A. S. Apartment Building	32-34 Symphony Rd	Boston	1897
BOS.7697	Haynes, A. S. Apartment Building	36-38 Symphony Rd	Boston	1897
BOS.7698	Haynes, A. S. Apartment Building	40-42 Symphony Rd	Boston	1897
BOS.7472	Thomas, Washington B. Apartment Building	74 Symphony Rd	Boston	1900

Inv. No.	Property Name	Street	Town	Year
BOS.17832	Tetlow Hall	11 Tetlow St	Boston	1914
BOS.7287	Stony Brook Gate House #1	The Fenway	Boston	c 1880
BOS.7288	Stony Brook Gate House #2	The Fenway	Boston	1905
BOS.9277	Manpukuji Temple Bell	The Fenway	Boston	1675
BOS.9287	Fen Bridge	The Fenway	Boston	1892
BOS.7381	Boston Medical Library	8 The Fenway	Boston	1899
BOS.7382	Peabody, Robert Swain Town House	22 The Fenway	Boston	1900
BOS.7383	Storey, Moorfield Town House	24 The Fenway	Boston	1900
BOS.7384	Foster, Fannie Town House	26 The Fenway	Boston	1902
BOS.7385	Thayer, Stephen Van Rensselaer Town House	28 The Fenway	Boston	1898
BOS.7386	Thayer, Alice R. Town House	30 The Fenway	Boston	1895
BOS.7387	Everett, Helen C. Town House	32 The Fenway	Boston	1899
BOS.7388	Austin, Charles L. Town House	34 The Fenway	Boston	1910
BOS.7389	Rosenbaum, Louis Row House	36 The Fenway	Boston	1894
BOS.7390	Rosenbaum, Henry Row House	38 The Fenway	Boston	1894
BOS.7391	Peabody, S. Endicott Row House	40 The Fenway	Boston	1892
BOS.7392	Coleman, Emma L. Row House	42 The Fenway	Boston	1892
BOS.7393	Sturgis, Dr. Russell Jr. Row House	44 The Fenway	Boston	1892
BOS.7394	Mandell, William D. Row House	46 The Fenway	Boston	1892
BOS.7395	Foster, Reginald S. Row House	48 The Fenway	Boston	1892
BOS.7396	Wetherald, James T. Row House	50 The Fenway	Boston	1892
BOS.7397	Ford, Daniel Sharp Row House	52 The Fenway	Boston	1895
BOS.7398	Ford, Daniel Sharp Row House	54 The Fenway	Boston	1895
BOS.7399	Yarchin, David - Gluck, Isaac Apartment Building	66 The Fenway	Boston	1924
BOS.7400	Yarchin, David - Gluck, Isaac Apartment Building	70 The Fenway	Boston	1924
BOS.7401	Yarchin, David - Gluck, Isaac Apartment Building	74 The Fenway	Boston	1924
BOS.7402	Coleman, Harry - Gilbert, Bernard Apartment House	80 The Fenway	Boston	1914
BOS.7403	Coleman, Harry - Gilbert, Bernard Apartment House	84 The Fenway	Boston	1914
BOS.15524	Snider, Ellis S. Apartment Building	90 The Fenway	Boston	1913
BOS.7404	Students House	96 The Fenway	Boston	1913
BOS.15523	Stuart Club	102 The Fenway	Boston	1910
BOS.15522	Cushing, Cardinal Guidance Center for Boys	110 The Fenway	Boston	1957
BOS.7405	Snider, Abraham - Rudnick, Michael Apartment House	114 The Fenway	Boston	1912
BOS.7406	Forsyth Dental Infirmary for Children	140 The Fenway	Boston	1914
BOS.7407	School of the Museum of Fine Arts	230 The Fenway	Boston	1926
BOS.7408	Gardner, Isabella Stewart Museum	280 The Fenway	Boston	1900

Inv. No.	Property Name	Street	Town	Year
BOS.7409	Simmons College - Main Building	300 The Fenway	Boston	1903
BOS.17834	Simmons College - Park Science Center	300 The Fenway	Boston	1970
BOS.13248	Emmanuel College - Campus Shop	400 The Fenway	Boston	1962
BOS.7706	Green, Joseph House	7 Vancouver St	Boston	1900
BOS.17861		9 Vancouver St	Boston	1898
BOS.17862		11 Vancouver St	Boston	1898
BOS.17863		15 Vancouver St	Boston	1898
BOS.17864		17 Vancouver St	Boston	1898
BOS.17865		19 Vancouver St	Boston	1898
BOS.7707	Page, Charles J. Town House	90 Westland Ave	Boston	1887
BOS.7708	Hemenway Chambers - Hotel Hemenway	91 Westland Ave	Boston	1900
BOS.7709	Fenway Park	24 Yawkey Way	Boston	1912
BOS.9748	Fenway Park Rooftop Structures	24 Yawkey Way	Boston	1947

APPENDIX E

Endangered Species Act Documentation

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: October 16, 2018
Consultation Code: 05E1NE00-2019-SLI-0113
Event Code: 05E1NE00-2019-E-00253
Project Name: Boston University Data and Science Building

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 05E1NE00-2019-SLI-0113

Event Code: 05E1NE00-2019-E-00253

Project Name: Boston University Data and Science Building

Project Type: DEVELOPMENT

Project Description: Construction of new 8-16 Story institutional building. Planned construction spans from 2019 to 2022.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.350150577869115N71.10312300154398W

Counties: Suffolk, MA

Endangered Species Act Species

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

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

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 F

Best Management Practices Plan (BMPP)

APPENDIX F – BEST MANAGEMENT PRACTICES PLAN
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
REMEDIATION GENERAL PERMIT
BOSTON UNIVERSITY DATA AND SCIENCE BUILDING
645 COMMONWEALTH AVENUE
BOSTON, MASSACHUSETTS

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 planned to occur during the construction of the proposed development located at 645 Commonwealth Avenue 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 that temporary construction dewatering is occurring at the site.

Water Treatment and Management

Construction dewatering will be conducted using a combination of dewatering wells surrounding the site and drainage ditches and sumps located inside the excavation. The treatment system will be designed by the Contractor (Refer to Appendix C for anticipated treatment). Prior to discharge, collected water will be routed through a sedimentation tank and bag filters, as required, to remove suspended solids and undissolved chemical constituents. The Proposed Treatment System Schematic is shown on Figure 4. Construction dewatering under this RGP NOI will include piping and discharging to storm drains located in Commonwealth Avenue and Granby Street, adjacent to the site. The storm drains in Granby Street travel short distance north and east before discharging to the Charles River through outfall SDO042 as shown on Figure 2. The storm drains in Commonwealth Avenue travel short distance west and north before discharging to the Charles River through outfall CSO010 as shown on Figure 3.

Discharge Monitoring and Compliance

Regular sampling and testing will be conducted by the Contractor of the treated effluent as required by the RGP. This includes chemical testing required within the first month of discharging and the monthly testing to be conducted through the end of the scheduled discharge.

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

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

Monthly monitoring reports will be compiled and maintained at the site.

System Maintenance

A number of methods will be used to minimize the potential for violations for the term of this permit. Scheduled regular maintenance of the treatment system will be conducted to verify proper operation. Regular maintenance will include checking the condition of the treatment system equipment such as the sedimentation tanks, filters, hoses, pumps, and flow meters. Equipment will be monitored daily for potential issues or unscheduled maintenance requirements.

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

Miscellaneous Items

It is anticipated that the excavation support system, erosion control measures, and the nature of the site and surrounding infrastructure 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 covered within the overall site security plan.

No adverse affects of designated water use of surrounding surface water bodies is anticipated. The Charles River is the nearest surface water body to the site located approximately 600 ft. north of the site. Dewatering effluent will be pumped to a sedimentation tank, bag filters, and any other treatment components (as required), prior to discharge to the storm drains.

Management of Treatment System Materials

Groundwater analytical data for the site is below the applicable MCP RCGW-2 criteria. Dewatering effluent will be pumped directly to the treatment system from the geothermal wells and excavation with use of hoses and sumps to minimize handling. The Contractor will establish staging areas on the site for any equipment or materials storage which may be possible sources of pollution away from any dewatering activities.

Sediment from the sedimentation tank used in the treatment system will be characterized and disposed of as soil at an appropriate receiving facility in accordance with applicable laws and regulations.

APPENDIX G

Laboratory Data Reports

HALEY ALDRICH

ANALYTICAL REPORT

Lab Number:	L1840486
Client:	Haley & Aldrich, Inc. 465 Medford Street, Suite 2200 Charlestown, MA 02129-1400
ATTN:	Todd Butler
Phone:	(617) 886-7424
Project Name:	BU DATA AND SCIENCE BUILDING
Project Number:	132533-002
Report Date:	10/17/18

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: BU DATA AND SCIENCE BUILDING
Project Number: 132533-002

Lab Number: L1840486
Report Date: 10/17/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1840486-01	20181005-NPDES-B18-B4(OW)	WATER	645 COMM. AVE., BOSTON, MA	10/05/18 14:35	10/05/18

Project Name:	BU DATA AND SCIENCE BUILDING	**Lab Number:**	L1840486
Project Number:	132533-002	**Report Date:**	10/17/18

Case Narrative

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

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

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

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

HOLD POLICY

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

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

Project Name:	BU DATA AND SCIENCE BUILDING	**Lab Number:**	L1840486
Project Number:	132533-002	**Report Date:**	10/17/18

Case Narrative (continued)

Report Revision

October 17, 2018: The Total Metals analyte list has been amended on L1840486-01.

Report Submission

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

Sample Receipt

The sample collection date and time were obtained from the container labels.

Dissolved Metals

L1840486-01 (20181005-NPDES-B18-B4(OW)): The dissolved result is greater than the total result for iron. The sample containers were verified as being labeled correctly by the laboratory, and aliquots were analyzed from each bottle, confirming the original results.

Cyanide, Total

WG1165236: A Matrix Spike and Laboratory Duplicate were prepared with the sample batch, however, the native sample need re-preparation; therefore, the Matrix Spike and Laboratory Duplicate results could not be reported.

Phenolics, Total

The WG1165933-4 MS recovery (0%), performed on L1840486-01 (20181005-NPDES-B18-B4(OW)), is outside the acceptance criteria; however, the associated LCS recovery is within criteria. No further action was taken.

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

Authorized Signature:  Amita Naik

Title: Technical Director/Representative Date: 10/17/18

ORGANICS

VOLATILES

Project Name: BU DATA AND SCIENCE BUILDING **Lab Number:** L1840486

Project Number: 132533-002 **Report Date:** 10/17/18

SAMPLE RESULTS

Lab ID: L1840486-01
Client ID: 20181005-NPDES-B18-B4(OW)
Sample Location: 645 COMM. AVE., BOSTON, MA

Date Collected: 10/05/18 14:35
Date Received: 10/05/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 10/09/18 18:05
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	1.0	--	1
1,1-Dichloroethane	ND		ug/l	1.5	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.5	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethane	ND		ug/l	1.5	--	1
1,1,1-Trichloroethane	ND		ug/l	2.0	--	1
Benzene	ND		ug/l	1.0	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	5.0	--	1
1,3-Dichlorobenzene	ND		ug/l	5.0	--	1
1,4-Dichlorobenzene	ND		ug/l	5.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
Acetone	ND		ug/l	10	--	1
Methyl tert butyl ether	ND		ug/l	10	--	1
Tert-Butyl Alcohol	ND		ug/l	100	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--	1

Project Name: BU DATA AND SCIENCE BUILDING **Lab Number:** L1840486

Project Number: 132533-002 **Report Date:** 10/17/18

SAMPLE RESULTS

Lab ID: L1840486-01 Date Collected: 10/05/18 14:35

Client ID: 20181005-NPDES-B18-B4(OW) Date Received: 10/05/18

Sample Location: 645 COMM. AVE., BOSTON, MA Field Prep: Refer to COC

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	101		60-140
Fluorobenzene	97		60-140
4-Bromofluorobenzene	110		60-140

Project Name: BU DATA AND SCIENCE BUILDING **Lab Number:** L1840486

Project Number: 132533-002 **Report Date:** 10/17/18

SAMPLE RESULTS

Lab ID: L1840486-01
Client ID: 20181005-NPDES-B18-B4(OW)
Sample Location: 645 COMM. AVE., BOSTON, MA

Date Collected: 10/05/18 14:35
Date Received: 10/05/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1-SIM
Analytical Date: 10/09/18 18:05
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	50	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	106		60-140
4-Bromofluorobenzene	101		60-140

Project Name: BU DATA AND SCIENCE BUILDING
Lab Number: L1840486
Project Number: 132533-002
Report Date: 10/17/18

SAMPLE RESULTS

Lab ID: L1840486-01
Client ID: 20181005-NPDES-B18-B4(OW)
Sample Location: 645 COMM. AVE., BOSTON, MA

Date Collected: 10/05/18 14:35
Date Received: 10/05/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 10/09/18 14:06
Analyst: AWS

Extraction Method: EPA 504.1
Extraction Date: 10/09/18 09:57

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	--	1	A
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	--	1	A

Project Name: BU DATA AND SCIENCE BUILDING **Lab Number:** L1840486

Project Number: 132533-002 **Report Date:** 10/17/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 10/09/18 17:29
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1165482-8					
Methylene chloride	ND		ug/l	1.0	--
1,1-Dichloroethane	ND		ug/l	1.5	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.5	--
Tetrachloroethene	ND		ug/l	1.0	--
1,2-Dichloroethane	ND		ug/l	1.5	--
1,1,1-Trichloroethane	ND		ug/l	2.0	--
Benzene	ND		ug/l	1.0	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Vinyl chloride	ND		ug/l	1.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--
1,2-Dichlorobenzene	ND		ug/l	5.0	--
1,3-Dichlorobenzene	ND		ug/l	5.0	--
1,4-Dichlorobenzene	ND		ug/l	5.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-xylene	ND		ug/l	1.0	--
Xylenes, Total	ND		ug/l	1.0	--
Acetone	ND		ug/l	10	--
Methyl tert butyl ether	ND		ug/l	10	--
Tert-Butyl Alcohol	ND		ug/l	100	--
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--

Project Name: BU DATA AND SCIENCE BUILDING **Lab Number:** L1840486

Project Number: 132533-002 **Report Date:** 10/17/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 10/09/18 17:29
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1165482-8					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	102		60-140
Fluorobenzene	98		60-140
4-Bromofluorobenzene	103		60-140

Project Name: BU DATA AND SCIENCE BUILDING
Project Number: 132533-002
Lab Number: L1840486
Report Date: 10/17/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 10/09/18 11:04
Analyst: AWS

Extraction Method: EPA 504.1
Extraction Date: 10/09/18 09:57

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westborough Lab for sample(s): 01 Batch: WG1165784-1						
1,2-Dibromoethane	ND		ug/l	0.010	--	A
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	--	A

Project Name: BU DATA AND SCIENCE BUILDING **Lab Number:** L1840486

Project Number: 132533-002 **Report Date:** 10/17/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1-SIM
Analytical Date: 10/09/18 17:29
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1166422-4					
1,4-Dioxane	ND		ug/l	50	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	104		60-140
4-Bromofluorobenzene	98		60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING

Project Number: 132533-002

Lab Number: L1840486

Report Date: 10/17/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1165482-7								
Methylene chloride	105		-		60-140	-		28
1,1-Dichloroethane	100		-		50-150	-		49
Carbon tetrachloride	105		-		70-130	-		41
1,1,2-Trichloroethane	95		-		70-130	-		45
Tetrachloroethene	115		-		70-130	-		39
1,2-Dichloroethane	100		-		70-130	-		49
1,1,1-Trichloroethane	105		-		70-130	-		36
Benzene	100		-		65-135	-		61
Toluene	110		-		70-130	-		41
Ethylbenzene	120		-		60-140	-		63
Vinyl chloride	105		-		5-195	-		66
1,1-Dichloroethene	105		-		50-150	-		32
cis-1,2-Dichloroethene	90		-		60-140	-		30
Trichloroethene	90		-		65-135	-		48
1,2-Dichlorobenzene	100		-		65-135	-		57
1,3-Dichlorobenzene	95		-		70-130	-		43
1,4-Dichlorobenzene	100		-		65-135	-		57
p/m-Xylene	125		-		60-140	-		30
o-xylene	110		-		60-140	-		30
Acetone	98		-		40-160	-		30
Methyl tert butyl ether	90		-		60-140	-		30
Tert-Butyl Alcohol	85		-		60-140	-		30
Tertiary-Amyl Methyl Ether	85		-		60-140	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING

Project Number: 132533-002

Lab Number: L1840486

Report Date: 10/17/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1165482-7								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	100				60-140
Fluorobenzene	97				60-140
4-Bromofluorobenzene	101				60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING

Project Number: 132533-002

Lab Number: L1840486

Report Date: 10/17/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab	Associated sample(s): 01		Batch: WG1165784-2						
1,2-Dibromoethane	111		-		80-120	-			A
1,2-Dibromo-3-chloropropane	113		-		80-120	-			A

Lab Control Sample Analysis

Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING

Project Number: 132533-002

Lab Number: L1840486

Report Date: 10/17/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1166422-3								
1,4-Dioxane	97		-		60-140	-		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Fluorobenzene	104				60-140
4-Bromofluorobenzene	89				60-140

Matrix Spike Analysis

Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING

Project Number: 132533-002

Lab Number: L1840486

Report Date: 10/17/18

Parameter	*Native Sample*	*MS Added*	*MS Found*	*MS %Recovery*	*Qual*	*MSD Found*	*MSD %Recovery*	*Qual*	*Recovery Limits*	*RPD*	*Qual*	*RPD Limits*	*Column*
Microextractables by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1165784-4 QC Sample: L1840252-01 Client ID: MS Sample													
1,2-Dibromoethane	ND	0.247	0.277	112		-	-		80-120	-		20	A
1,2-Dibromo-3-chloropropane	ND	0.247	0.288	117		-	-		80-120	-		20	A

SEMIVOLATILES

Project Name: BU DATA AND SCIENCE BUILDING
Lab Number: L1840486
Project Number: 132533-002
Report Date: 10/17/18

SAMPLE RESULTS

Lab ID: L1840486-01
Client ID: 20181005-NPDES-B18-B4(OW)
Sample Location: 645 COMM. AVE., BOSTON, MA

Date Collected: 10/05/18 14:35
Date Received: 10/05/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 10/11/18 13:21
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 10/10/18 02:18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Bis(2-ethylhexyl)phthalate	ND		ug/l	2.2	--	1
Butyl benzyl phthalate	ND		ug/l	5.0	--	1
Di-n-butylphthalate	ND		ug/l	5.0	--	1
Di-n-octylphthalate	ND		ug/l	5.0	--	1
Diethyl phthalate	ND		ug/l	5.0	--	1
Dimethyl phthalate	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	94		42-122
2-Fluorobiphenyl	83		46-121
4-Terphenyl-d14	85		47-138

Project Name: BU DATA AND SCIENCE BUILDING **Lab Number:** L1840486

Project Number: 132533-002 **Report Date:** 10/17/18

SAMPLE RESULTS

Lab ID: L1840486-01
Client ID: 20181005-NPDES-B18-B4(OW)
Sample Location: 645 COMM. AVE., BOSTON, MA

Date Collected: 10/05/18 14:35
Date Received: 10/05/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 10/12/18 09:34
Analyst: DV

Extraction Method: EPA 625.1
Extraction Date: 10/11/18 13:02

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	--	1
Fluoranthene	ND		ug/l	0.10	--	1
Naphthalene	ND		ug/l	0.10	--	1
Benzo(a)anthracene	ND		ug/l	0.10	--	1
Benzo(a)pyrene	ND		ug/l	0.10	--	1
Benzo(b)fluoranthene	ND		ug/l	0.10	--	1
Benzo(k)fluoranthene	ND		ug/l	0.10	--	1
Chrysene	ND		ug/l	0.10	--	1
Acenaphthylene	ND		ug/l	0.10	--	1
Anthracene	ND		ug/l	0.10	--	1
Benzo(ghi)perylene	ND		ug/l	0.10	--	1
Fluorene	ND		ug/l	0.10	--	1
Phenanthrene	ND		ug/l	0.10	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	--	1
Pyrene	ND		ug/l	0.10	--	1
Pentachlorophenol	ND		ug/l	1.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	29		25-87
Phenol-d6	19		16-65
Nitrobenzene-d5	48		42-122
2-Fluorobiphenyl	57		46-121
2,4,6-Tribromophenol	90		45-128
4-Terphenyl-d14	87		47-138

Project Name: BU DATA AND SCIENCE BUILDING
Project Number: 132533-002
Lab Number: L1840486
Report Date: 10/17/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1
Analytical Date: 10/11/18 09:41
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 10/10/18 02:18

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1166184-1					
Bis(2-ethylhexyl)phthalate	ND		ug/l	2.2	--
Butyl benzyl phthalate	ND		ug/l	5.0	--
Di-n-butylphthalate	ND		ug/l	5.0	--
Di-n-octylphthalate	ND		ug/l	5.0	--
Diethyl phthalate	ND		ug/l	5.0	--
Dimethyl phthalate	ND		ug/l	5.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	92		42-122
2-Fluorobiphenyl	83		46-121
4-Terphenyl-d14	85		47-138

Project Name: BU DATA AND SCIENCE BUILDING
Project Number: 132533-002
Lab Number: L1840486
Report Date: 10/17/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1-SIM
Analytical Date: 10/12/18 08:16
Analyst: DV

Extraction Method: EPA 625.1
Extraction Date: 10/11/18 13:02

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1167055-1					
Acenaphthene	ND		ug/l	0.10	--
Fluoranthene	ND		ug/l	0.10	--
Naphthalene	ND		ug/l	0.10	--
Benzo(a)anthracene	ND		ug/l	0.10	--
Benzo(a)pyrene	ND		ug/l	0.10	--
Benzo(b)fluoranthene	ND		ug/l	0.10	--
Benzo(k)fluoranthene	ND		ug/l	0.10	--
Chrysene	ND		ug/l	0.10	--
Acenaphthylene	ND		ug/l	0.10	--
Anthracene	ND		ug/l	0.10	--
Benzo(ghi)perylene	ND		ug/l	0.10	--
Fluorene	ND		ug/l	0.10	--
Phenanthrene	ND		ug/l	0.10	--
Dibenzo(a,h)anthracene	ND		ug/l	0.10	--
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	--
Pyrene	ND		ug/l	0.10	--
Pentachlorophenol	ND		ug/l	1.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	38		25-87
Phenol-d6	23		16-65
Nitrobenzene-d5	60		42-122
2-Fluorobiphenyl	61		46-121
2,4,6-Tribromophenol	76		45-128
4-Terphenyl-d14	68		47-138

Lab Control Sample Analysis

Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING

Project Number: 132533-002

Lab Number: L1840486

Report Date: 10/17/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1166184-2								
Bis(2-ethylhexyl)phthalate	85		-		29-137	-		30
Butyl benzyl phthalate	83		-		1-140	-		30
Di-n-butylphthalate	84		-		8-120	-		30
Di-n-octylphthalate	93		-		19-132	-		30
Diethyl phthalate	70		-		1-120	-		30
Dimethyl phthalate	80		-		1-120	-		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	75				42-122
2-Fluorobiphenyl	73				46-121
4-Terphenyl-d14	68				47-138

Lab Control Sample Analysis

Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING

Project Number: 132533-002

Lab Number: L1840486

Report Date: 10/17/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1167055-2								
Acenaphthene	71		-		60-132	-		30
Fluoranthene	72		-		43-121	-		30
Naphthalene	56		-		36-120	-		30
Benzo(a)anthracene	60		-		42-133	-		30
Benzo(a)pyrene	68		-		32-148	-		30
Benzo(b)fluoranthene	61		-		42-140	-		30
Benzo(k)fluoranthene	78		-		25-146	-		30
Chrysene	73		-		44-140	-		30
Acenaphthylene	66		-		54-126	-		30
Anthracene	73		-		43-120	-		30
Benzo(ghi)perylene	83		-		1-195	-		30
Fluorene	73		-		70-120	-		30
Phenanthrene	66		-		65-120	-		30
Dibenzo(a,h)anthracene	70		-		1-200	-		30
Indeno(1,2,3-cd)pyrene	83		-		1-151	-		30
Pyrene	70		-		70-120	-		30
Pentachlorophenol	67		-		38-152	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING

Project Number: 132533-002

Lab Number: L1840486

Report Date: 10/17/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1167055-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	38				25-87
Phenol-d6	27				16-65
Nitrobenzene-d5	70				42-122
2-Fluorobiphenyl	66				46-121
2,4,6-Tribromophenol	84				45-128
4-Terphenyl-d14	73				47-138

PCBS

Project Name: BU DATA AND SCIENCE BUILDING **Lab Number:** L1840486

Project Number: 132533-002 **Report Date:** 10/17/18

SAMPLE RESULTS

Lab ID: L1840486-01
Client ID: 20181005-NPDES-B18-B4(OW)
Sample Location: 645 COMM. AVE., BOSTON, MA

Date Collected: 10/05/18 14:35
Date Received: 10/05/18
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 10/11/18 13:52
Analyst: AWS

Extraction Method: EPA 608.3
Extraction Date: 10/11/18 02:42
Cleanup Method: EPA 3665A
Cleanup Date: 10/11/18
Cleanup Method: EPA 3660B
Cleanup Date: 10/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.250	--	1	A
Aroclor 1221	ND		ug/l	0.250	--	1	A
Aroclor 1232	ND		ug/l	0.250	--	1	A
Aroclor 1242	ND		ug/l	0.250	--	1	A
Aroclor 1248	ND		ug/l	0.250	--	1	A
Aroclor 1254	ND		ug/l	0.250	--	1	A
Aroclor 1260	ND		ug/l	0.200	--	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	93		37-123	B
Decachlorobiphenyl	71		38-114	B
2,4,5,6-Tetrachloro-m-xylene	94		37-123	A
Decachlorobiphenyl	59		38-114	A

Project Name: BU DATA AND SCIENCE BUILDING
Project Number: 132533-002
Lab Number: L1840486
Report Date: 10/17/18

Method Blank Analysis
Batch Quality Control

Analytical Method: 127,608.3
Analytical Date: 10/11/18 13:27
Analyst: AWS

Extraction Method: EPA 608.3
Extraction Date: 10/11/18 02:42
Cleanup Method: EPA 3665A
Cleanup Date: 10/11/18
Cleanup Method: EPA 3660B
Cleanup Date: 10/11/18

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG1166724-1						
Aroclor 1016	ND		ug/l	0.250	--	A
Aroclor 1221	ND		ug/l	0.250	--	A
Aroclor 1232	ND		ug/l	0.250	--	A
Aroclor 1242	ND		ug/l	0.250	--	A
Aroclor 1248	ND		ug/l	0.250	--	A
Aroclor 1254	ND		ug/l	0.250	--	A
Aroclor 1260	ND		ug/l	0.200	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	61		37-123	B
Decachlorobiphenyl	85		38-114	B
2,4,5,6-Tetrachloro-m-xylene	64		37-123	A
Decachlorobiphenyl	75		38-114	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING

Project Number: 132533-002

Lab Number: L1840486

Report Date: 10/17/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG1166724-2									
Aroclor 1016	86		-		50-140	-		36	A
Aroclor 1260	81		-		8-140	-		38	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71				37-123	B
Decachlorobiphenyl	93				38-114	B
2,4,5,6-Tetrachloro-m-xylene	73				37-123	A
Decachlorobiphenyl	76				38-114	A

METALS

Project Name: BU DATA AND SCIENCE BUILDING **Lab Number:** L1840486

Project Number: 132533-002 **Report Date:** 10/17/18

SAMPLE RESULTS

Lab ID: L1840486-01 Date Collected: 10/05/18 14:35

Client ID: 20181005-NPDES-B18-B4(OW) Date Received: 10/05/18

Sample Location: 645 COMM. AVE., BOSTON, MA Field Prep: Refer to COC

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	10/10/18 13:35	10/11/18 09:54	EPA 3005A	3,200.8	AM
Arsenic, Total	0.01254		mg/l	0.00100	--	1	10/10/18 13:35	10/11/18 09:54	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	10/10/18 13:35	10/11/18 09:54	EPA 3005A	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	10/10/18 13:35	10/11/18 09:54	EPA 3005A	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	10/10/18 13:35	10/11/18 09:54	EPA 3005A	3,200.8	AM
Iron, Total	0.453		mg/l	0.050	--	1	10/10/18 13:35	10/17/18 03:37	EPA 3005A	19,200.7	AB
Lead, Total	ND		mg/l	0.00100	--	1	10/10/18 13:35	10/11/18 09:54	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	10/16/18 14:49	10/16/18 19:20	EPA 245.1	3,245.1	MG
Nickel, Total	ND		mg/l	0.00200	--	1	10/10/18 13:35	10/11/18 09:54	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	10/10/18 13:35	10/11/18 09:54	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	10/10/18 13:35	10/11/18 09:54	EPA 3005A	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	10/10/18 13:35	10/11/18 09:54	EPA 3005A	3,200.8	AM
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		10/11/18 09:54	NA	107,-	
Dissolved Metals - Mansfield Lab											
Antimony, Dissolved	ND		mg/l	0.0040	--	1	10/11/18 08:20	10/11/18 13:20	EPA 3005A	3,200.8	AM
Arsenic, Dissolved	0.0129		mg/l	0.0010	--	1	10/11/18 08:20	10/11/18 13:20	EPA 3005A	3,200.8	AM
Cadmium, Dissolved	ND		mg/l	0.0002	--	1	10/11/18 08:20	10/11/18 13:20	EPA 3005A	3,200.8	AM
Chromium, Dissolved	ND		mg/l	0.0010	--	1	10/11/18 08:20	10/11/18 13:20	EPA 3005A	3,200.8	AM
Copper, Dissolved	ND		mg/l	0.0010	--	1	10/11/18 08:20	10/11/18 13:20	EPA 3005A	3,200.8	AM
Iron, Dissolved	3.83		mg/l	0.050	--	1	10/11/18 08:20	10/11/18 13:45	EPA 3005A	19,200.7	PE
Lead, Dissolved	ND		mg/l	0.0010	--	1	10/11/18 08:20	10/11/18 13:20	EPA 3005A	3,200.8	AM
Mercury, Dissolved	ND		mg/l	0.00020	--	1	10/10/18 10:44	10/10/18 19:18	EPA 245.1	3,245.1	MG
Nickel, Dissolved	ND		mg/l	0.0020	--	1	10/11/18 08:20	10/11/18 13:20	EPA 3005A	3,200.8	AM
Selenium, Dissolved	ND		mg/l	0.0050	--	1	10/11/18 08:20	10/11/18 13:20	EPA 3005A	3,200.8	AM
Silver, Dissolved	ND		mg/l	0.0004	--	1	10/11/18 08:20	10/11/18 13:20	EPA 3005A	3,200.8	AM
Zinc, Dissolved	ND		mg/l	0.0100	--	1	10/11/18 08:20	10/11/18 13:20	EPA 3005A	3,200.8	AM

Project Name: BU DATA AND SCIENCE BUILDING **Lab Number:** L1840486

Project Number: 132533-002 **Report Date:** 10/17/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 01 Batch: WG1166372-1										
Mercury, Dissolved	ND		mg/l	0.00020	--	1	10/10/18 10:44	10/10/18 19:14	3,245.1	MG

Prep Information

Digestion Method: EPA 245.1

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1166484-1										
Antimony, Total	ND		mg/l	0.00400	--	1	10/10/18 13:35	10/11/18 09:22	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	10/10/18 13:35	10/11/18 09:22	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	10/10/18 13:35	10/11/18 09:22	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	10/10/18 13:35	10/11/18 09:22	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	10/10/18 13:35	10/11/18 09:22	3,200.8	AM
Lead, Total	ND		mg/l	0.00100	--	1	10/10/18 13:35	10/11/18 09:22	3,200.8	AM
Nickel, Total	ND		mg/l	0.00200	--	1	10/10/18 13:35	10/11/18 09:22	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	10/10/18 13:35	10/11/18 09:22	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	10/10/18 13:35	10/11/18 09:22	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	10/10/18 13:35	10/11/18 09:22	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
Dissolved Metals - Mansfield Lab for sample(s): 01 Batch: WG1166806-1										
Antimony, Dissolved	ND		mg/l	0.0040	--	1	10/11/18 08:20	10/11/18 12:19	3,200.8	AM
Arsenic, Dissolved	ND		mg/l	0.0010	--	1	10/11/18 08:20	10/11/18 12:19	3,200.8	AM
Cadmium, Dissolved	ND		mg/l	0.0002	--	1	10/11/18 08:20	10/11/18 12:19	3,200.8	AM
Chromium, Dissolved	ND		mg/l	0.0010	--	1	10/11/18 08:20	10/11/18 12:19	3,200.8	AM
Copper, Dissolved	ND		mg/l	0.0010	--	1	10/11/18 08:20	10/11/18 12:19	3,200.8	AM
Lead, Dissolved	ND		mg/l	0.0010	--	1	10/11/18 08:20	10/11/18 12:19	3,200.8	AM
Nickel, Dissolved	ND		mg/l	0.0020	--	1	10/11/18 08:20	10/11/18 12:19	3,200.8	AM

Project Name: BU DATA AND SCIENCE BUILDING **Lab Number:** L1840486

Project Number: 132533-002 **Report Date:** 10/17/18

Method Blank Analysis
Batch Quality Control

Selenium, Dissolved	ND	mg/l	0.0050	--	1	10/11/18 08:20	10/11/18 12:19	3,200.8	AM
Silver, Dissolved	ND	mg/l	0.0004	--	1	10/11/18 08:20	10/11/18 12:19	3,200.8	AM
Zinc, Dissolved	ND	mg/l	0.0100	--	1	10/11/18 08:20	10/11/18 12:19	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
Dissolved Metals - Mansfield Lab for sample(s): 01 Batch: WG1166807-1										
Iron, Dissolved	ND		mg/l	0.050	--	1	10/11/18 08:20	10/11/18 12:51	19,200.7	PE

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: WG1168660-1										
Iron, Total	ND		mg/l	0.050	--	1	10/10/18 13:35	10/17/18 03:09	19,200.7	AB

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: WG1168685-1										
Mercury, Total	ND		mg/l	0.0002	--	1	10/16/18 14:49	10/16/18 19:11	3,245.1	MG

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING

Project Number: 132533-002

Lab Number: L1840486

Report Date: 10/17/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1166372-2								
Mercury, Dissolved	101		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1166484-2								
Antimony, Total	101		-		85-115	-		
Arsenic, Total	104		-		85-115	-		
Cadmium, Total	95		-		85-115	-		
Chromium, Total	91		-		85-115	-		
Copper, Total	92		-		85-115	-		
Lead, Total	102		-		85-115	-		
Nickel, Total	95		-		85-115	-		
Selenium, Total	103		-		85-115	-		
Silver, Total	98		-		85-115	-		
Zinc, Total	99		-		85-115	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING

Project Number: 132533-002

Lab Number: L1840486

Report Date: 10/17/18

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1166806-2					
Antimony, Dissolved	90	-	85-115	-	
Arsenic, Dissolved	109	-	85-115	-	
Cadmium, Dissolved	102	-	85-115	-	
Chromium, Dissolved	91	-	85-115	-	
Copper, Dissolved	90	-	85-115	-	
Lead, Dissolved	103	-	85-115	-	
Nickel, Dissolved	93	-	85-115	-	
Selenium, Dissolved	108	-	85-115	-	
Silver, Dissolved	101	-	85-115	-	
Zinc, Dissolved	102	-	85-115	-	
Dissolved Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1166807-2					
Iron, Dissolved	103	-	85-115	-	
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1168660-2					
Iron, Total	88	-	85-115	-	
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1168685-2					
Mercury, Total	102	-	85-115	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING
Project Number: 132533-002

Lab Number: L1840486
Report Date: 10/17/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1166372-3 QC Sample: L1840486-01 Client ID: 20181005-NPDES-B18-B4(OW)												
Mercury, Dissolved	ND	0.005	0.00438	88		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1166484-3 QC Sample: L1840791-01 Client ID: MS Sample												
Antimony, Total	ND	0.5	0.5571	111		-	-		70-130	-		20
Arsenic, Total	0.00501	0.12	0.1356	109		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.05554	109		-	-		70-130	-		20
Chromium, Total	0.01072	0.2	0.2102	100		-	-		70-130	-		20
Copper, Total	0.01803	0.25	0.2677	100		-	-		70-130	-		20
Lead, Total	0.00311	0.51	0.5475	107		-	-		70-130	-		20
Nickel, Total	0.00785	0.5	0.5271	104		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1357	113		-	-		70-130	-		20
Silver, Total	ND	0.05	0.05378	108		-	-		70-130	-		20
Zinc, Total	0.02741	0.5	0.5605	107		-	-		70-130	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING
Project Number: 132533-002
Lab Number: L1840486
Report Date: 10/17/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1166806-3 QC Sample: L1800010-104 Client ID: MS Sample									
Antimony, Dissolved	ND	0.5	0.4533	91	-	-	70-130	-	20
Arsenic, Dissolved	ND	0.12	0.1271	106	-	-	70-130	-	20
Cadmium, Dissolved	ND	0.051	0.0525	103	-	-	70-130	-	20
Chromium, Dissolved	ND	0.2	0.1712	86	-	-	70-130	-	20
Copper, Dissolved	0.0032	0.25	0.2228	88	-	-	70-130	-	20
Lead, Dissolved	ND	0.51	0.4949	97	-	-	70-130	-	20
Nickel, Dissolved	0.0094	0.5	0.4502	88	-	-	70-130	-	20
Selenium, Dissolved	ND	0.12	0.1298	108	-	-	70-130	-	20
Silver, Dissolved	ND	0.05	0.0490	98	-	-	70-130	-	20
Zinc, Dissolved	0.0116	0.5	0.5177	101	-	-	70-130	-	20
Dissolved Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1166807-3 QC Sample: L1840225-01 Client ID: MS Sample									
Iron, Dissolved	0.527	1	1.53	100	-	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1168660-3 QC Sample: L1800010-144 Client ID: MS Sample									
Iron, Total	2.38	1	3.32	94	-	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1168685-3 QC Sample: L1840031-01 Client ID: MS Sample									
Mercury, Total	ND	0.005	0.0044	89	-	-	70-130	-	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1168685-5 QC Sample: L1840486-01 Client ID: 20181005-NPDES-B18-B4(OW)									
Mercury, Total	ND	0.005	0.0045	90	-	-	70-130	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING

Project Number: 132533-002

Lab Number: L1840486

Report Date: 10/17/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1166372-4 QC Sample: L1840486-01 Client ID: 20181005-NPDES-B18-B4(OW)						
Mercury, Dissolved	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1166484-4 QC Sample: L1840791-01 Client ID: DUP Sample						
Antimony, Total	ND	ND	mg/l	NC		20
Arsenic, Total	0.00501	0.00505	mg/l	1		20
Cadmium, Total	ND	ND	mg/l	NC		20
Chromium, Total	0.01072	0.01091	mg/l	2		20
Copper, Total	0.01803	0.01866	mg/l	3		20
Lead, Total	0.00311	0.00331	mg/l	6		20
Nickel, Total	0.00785	0.00807	mg/l	3		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	0.02741	0.02901	mg/l	6		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING
Project Number: 132533-002

Lab Number: L1840486
Report Date: 10/17/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1166806-4 QC Sample: L1800010-104 Client ID: DUP Sample					
Antimony, Dissolved	ND	ND	mg/l	NC	20
Arsenic, Dissolved	ND	ND	mg/l	NC	20
Cadmium, Dissolved	ND	ND	mg/l	NC	20
Chromium, Dissolved	ND	ND	mg/l	NC	20
Copper, Dissolved	0.0032	0.0031	mg/l	2	20
Lead, Dissolved	ND	ND	mg/l	NC	20
Nickel, Dissolved	0.0094	0.0098	mg/l	4	20
Selenium, Dissolved	ND	ND	mg/l	NC	20
Silver, Dissolved	ND	ND	mg/l	NC	20
Zinc, Dissolved	0.0116	0.0117	mg/l	1	20
Dissolved Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1166807-4 QC Sample: L1840225-01 Client ID: DUP Sample					
Iron, Dissolved	0.527	0.523	mg/l	1	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1168660-4 QC Sample: L1800010-144 Client ID: DUP Sample					
Iron, Total	2.38	2.33	mg/l	2	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1168685-4 QC Sample: L1840031-01 Client ID: DUP Sample					
Mercury, Total	ND	ND	mg/l	NC	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1168685-6 QC Sample: L1840486-01 Client ID: 20181005-NPDES-B18-B4(OW)					
Mercury, Total	ND	ND	mg/l	NC	20

INORGANICS
&
MISCELLANEOUS

Project Name: BU DATA AND SCIENCE BUILDING
Project Number: 132533-002
Lab Number: L1840486
Report Date: 10/17/18

SAMPLE RESULTS

Lab ID: L1840486-01
Client ID: 20181005-NPDES-B18-B4(OW)
Sample Location: 645 COMM. AVE., BOSTON, MA
Date Collected: 10/05/18 14:35
Date Received: 10/05/18
Field Prep: Refer to COC

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	13.		mg/l	5.0	NA	1	-	10/10/18 11:00	121,2540D	DR
Cyanide, Total	ND		mg/l	0.005	--	1	10/07/18 15:45	10/09/18 11:12	121,4500CN-CE	LH
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	10/06/18 05:07	121,4500CL-D	MA
Nitrogen, Ammonia	3.20		mg/l	0.075	--	1	10/09/18 16:30	10/10/18 21:10	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.00	--	1	10/09/18 16:30	10/09/18 22:00	74,1664A	ML
Phenolics, Total	ND		mg/l	0.030	--	1	10/09/18 06:00	10/10/18 05:32	4,420.1	GD
Chromium, Hexavalent	ND		mg/l	0.010	--	1	10/06/18 07:00	10/06/18 07:29	1,7196A	MA
Anions by Ion Chromatography - Westborough Lab										
Chloride	1210		mg/l	25.0	--	50	-	10/09/18 22:20	44,300.0	AU

Project Name: BU DATA AND SCIENCE BUILDING **Lab Number:** L1840486

Project Number: 132533-002 **Report Date:** 10/17/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1164992-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	10/06/18 07:00	10/06/18 07:27	1,7196A	MA
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1165040-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	10/06/18 05:07	121,4500CL-D	MA
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1165236-1										
Cyanide, Total	ND		mg/l	0.005	--	1	10/07/18 15:45	10/09/18 10:43	121,4500CN-CE	LH
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1165828-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	10/09/18 16:30	10/10/18 21:03	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1165933-1										
Phenolics, Total	ND		mg/l	0.030	--	1	10/09/18 06:00	10/10/18 05:28	4,420.1	GD
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1166063-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	10/09/18 16:30	10/09/18 22:00	74,1664A	ML
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1166293-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	10/10/18 11:00	121,2540D	DR
Anions by Ion Chromatography - Westborough Lab for sample(s): 01 Batch: WG1166614-1										
Chloride	ND		mg/l	0.500	--	1	-	10/09/18 21:32	44,300.0	AU

Lab Control Sample Analysis

Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING

Project Number: 132533-002

Lab Number: L1840486

Report Date: 10/17/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1164992-2								
Chromium, Hexavalent	100		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1165040-2								
Chlorine, Total Residual	93		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1165236-2								
Cyanide, Total	102		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1165828-2								
Nitrogen, Ammonia	104		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1165933-2								
Phenolics, Total	88		-		70-130	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1166063-2								
TPH	90		-		64-132	-		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 Batch: WG1166614-2								
Chloride	100		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING
Project Number: 132533-002

Lab Number: L1840486
Report Date: 10/17/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1164992-4 QC Sample: L1840486-01 Client ID: 20181005-NPDES-B18-B4(OW)												
Chromium, Hexavalent	ND	0.1	0.102	102		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1165040-4 QC Sample: L1840303-01 Client ID: MS Sample												
Chlorine, Total Residual	ND	0.248	ND	**0**	Q	-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1165828-4 QC Sample: L1840479-01 Client ID: MS Sample												
Nitrogen, Ammonia	2.88	4	6.52	91		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1165933-4 QC Sample: L1840486-01 Client ID: 20181005-NPDES-B18-B4(OW)												
Phenolics, Total	ND	0.4	ND	**0**	Q	-	-		70-130	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1166063-4 QC Sample: L1839917-02 Client ID: MS Sample												
TPH	ND	22.2	17.2	78		-	-		64-132	-		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1166614-3 QC Sample: L1840113-01 Client ID: MS Sample												
Chloride	502	100	606	105		-	-		90-110	-		18

Lab Duplicate Analysis

Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING
Project Number: 132533-002

Lab Number: L1840486
Report Date: 10/17/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1164992-3 QC Sample: L1840486-01 Client ID: 20181005-NPDES-B18-B4(OW)						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1165040-3 QC Sample: L1840486-01 Client ID: 20181005-NPDES-B18-B4(OW)						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1165828-3 QC Sample: L1840479-01 Client ID: DUP Sample						
Nitrogen, Ammonia	2.88	2.91	mg/l	1		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1165933-3 QC Sample: L1840486-01 Client ID: 20181005-NPDES-B18-B4(OW)						
Phenolics, Total	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1166063-3 QC Sample: L1840216-02 Client ID: DUP Sample						
TPH	ND	ND	mg/l	NC		34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1166293-2 QC Sample: L1840871-02 Client ID: DUP Sample						
Solids, Total Suspended	100	94	mg/l	6		29
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1166614-4 QC Sample: L1840113-01 Client ID: DUP Sample						
Chloride	502	502	mg/l	5		18

Project Name: BU DATA AND SCIENCE BUILDING
Project Number: 132533-002

Lab Number: L1840486
Report Date: 10/17/18

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1840486-01A	Vial Na2S2O3 preserved	A	NA		3.5	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L1840486-01B	Vial Na2S2O3 preserved	A	NA		3.5	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L1840486-01C	Vial Na2S2O3 preserved	A	NA		3.5	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L1840486-01D	Vial Na2S2O3 preserved	A	NA		3.5	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L1840486-01E	Vial Na2S2O3 preserved	A	NA		3.5	Y	Absent		504(14)
L1840486-01F	Vial Na2S2O3 preserved	A	NA		3.5	Y	Absent		504(14)
L1840486-01G	Vial Na2S2O3 preserved	A	NA		3.5	Y	Absent		504(14)
L1840486-01H	Vial Na2S2O3 preserved	A	NA		3.5	Y	Absent		504(14)
L1840486-01I	Vial HCl preserved	A	NA		3.5	Y	Absent		SUB-ETHANOL(14)
L1840486-01J	Vial HCl preserved	A	NA		3.5	Y	Absent		SUB-ETHANOL(14)
L1840486-01K	Vial HCl preserved	A	NA		3.5	Y	Absent		SUB-ETHANOL(14)
L1840486-01L	Plastic 250ml HNO3 preserved	A	<2	<2	3.5	Y	Absent		AG-2008S(180),CR-2008S(180),FE-RI(180),AS-2008S(180),PB-2008S(180),ZN-2008S(180),NI-2008S(180),SE-2008S(180),CD-2008S(180),CU-2008S(180),SB-2008S(180),HG-R(28)
L1840486-01M	Plastic 250ml HNO3 preserved	A	<2	<2	3.5	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),AG-2008T(180),AS-2008T(180),HG-U(28),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L1840486-01N	Plastic 250ml NaOH preserved	A	>12	>12	3.5	Y	Absent		TCN-4500(14)
L1840486-01O	Plastic 500ml H2SO4 preserved	A	<2	<2	3.5	Y	Absent		NH3-4500(28)
L1840486-01P	Amber 950ml H2SO4 preserved	A	<2	<2	3.5	Y	Absent		TPHENOL-420(28)
L1840486-01Q	Plastic 950ml unpreserved	A	7	7	3.5	Y	Absent		HEXCR-7196(1),TRC-4500(1)
L1840486-01R	Plastic 950ml unpreserved	A	7	7	3.5	Y	Absent		CL-300(28),TSS-2540(7)
L1840486-01S	Amber 1000ml Na2S2O3	A	7	7	3.5	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)

*Values in parentheses indicate holding time in days

Project Name: BU DATA AND SCIENCE BUILDING
Project Number: 132533-002

Lab Number: L1840486
Report Date: 10/17/18

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1840486-01T	Amber 1000ml Na2S2O3	A	7	7	3.5	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L1840486-01U	Amber 1000ml Na2S2O3	A	7	7	3.5	Y	Absent		PCB-608.3(7)
L1840486-01V	Amber 1000ml Na2S2O3	A	7	7	3.5	Y	Absent		PCB-608.3(7)
L1840486-01W	Amber 1000ml Na2S2O3	A	7	7	3.5	Y	Absent		PCB-608.3(7)
L1840486-01X	Amber 1000ml Na2S2O3	A	7	7	3.5	Y	Absent		PCB-608.3(7)
L1840486-01Y	Amber 1000ml HCl preserved	A	NA		3.5	Y	Absent		TPH-1664(28)
L1840486-01Z	Amber 1000ml HCl preserved	A	NA		3.5	Y	Absent		TPH-1664(28)

*Values in parentheses indicate holding time in days

Project Name:	BU DATA AND SCIENCE BUILDING	**Lab Number:**	L1840486
Project Number:	132533-002	**Report Date:**	10/17/18

GLOSSARY

Acronyms

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

Footnotes

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

Terms

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

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

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

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

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

Report Format: Data Usability Report

Project Name:	BU DATA AND SCIENCE BUILDING	**Lab Number:**	L1840486
Project Number:	132533-002	**Report Date:**	10/17/18

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

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

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

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

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

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

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

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

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

Report Format: Data Usability Report

Project Name:	BU DATA AND SCIENCE BUILDING	**Lab Number:**	L1840486
Project Number:	132533-002	**Report Date:**	10/17/18

REFERENCES

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

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

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

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

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

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

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

107 Alpha Analytical - In-house calculation method.

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

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

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

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

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
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

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**
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.**

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.

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

ALPHA ANALYTICAL

Service Centers
Brewer, ME 04412 Portsmouth, NH 03801 Mahwah, NJ 07430 Albany, NY 12205 Tonawanda, NY 14150 Holmes, PA 19043

Westborough, MA 01581, 8 Walkup Dr., TEL: 508-898-9220, FAX: 508-898-9193

Mansfield, MA 02048, 320 Forbes Blvd, TEL: 508-822-9300, FAX: 508-822-3288

Page of

Date Rec'd in Lab: 10/5/18

ALPHA Job #: L1840486

Project Information

Project Name:	BU Data and Science Building
Project Location:	645 Comm. Ave Boston, MA
Project #	132533-002
(Use Project name as Project #) ☐	
Project Manager:	Todd Butler
ALPHAQuote #:	

Deliverables

☑ Email ☐ Fax ☐ EQuIS (1 File) ☑ EQuIS (4 File) ☐ Other:

Billing Information

☑ Same as Client Info
PO #

H&A Information

H&A Client:	Boston University
H&A Address:	465 Medford St. Charlestown
H&A Address:	
H&A Phone:	617.886.7424
H&A Fax:	
H&A Email:	tbutler@haleyaldrich.com

Turn-Around Time

Standard ☐ Due Date:
Rush (only if pre approved) ☑ # of Days: 5 SLG

Regulatory Requirements (Program/Criteria)

S-1 MCP MA RCS-1

Note: Select State from menu & identify criteria.

Disposal Site Information

Please identify below location of applicable disposal facilities.

Disposal Facility: ☐ NJ ☐ NY ☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

Sample Filtration
☑ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Depth	See Note #1	Alcohols by EPA 8015D	See Note#2	See Note#3					Sample Specific Comments	Total Bottles
40486-01	20181005-NPDES-B18-B4(OW)						x	x	x	x					#1: NPDES RGP Parameters	
															Plus CL-300 and Ethanol	
															#2: Ammonia Nitrogen -	
															SM 4500	
															#3: Disolved Metals Fe.Zn.	
															Se.Sb.Pb.Ni.Cu.Cr.Cd.As.Ag	
															.Hg	

Preservative Code: A = None, B = HCl, C = HNO_3, D = H_2SO_4, E = NaOH, F = MeOH, G = $NaHSO_4$, H = $Na_2S_2O_3$, K/E = Zn Ac/NaOH, O = Other

Container Code: P = Plastic, A = Amber Glass, V = Vial, G = Glass, B = Bacteria Cup, C = Cube, O = Other, E = Encore, D = BOD Bottle

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type
Preservative

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	10/5/18 1700	[signature] AAL	10/5/18 1700
[signature]	10/5/18 1900	[signature] 10/5/18 1900	

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. Alpha Analytical's services under this Chain of Custody shall be performed in accordance with terms and conditions within Blanket Service Agreement# 2015-18-Alpha Analytical by and between Haley & Aldrich, Inc., its subsidiaries and affiliates and Alpha Analytical.

Document ID: 20455 Rev 2 (8/9/2016)

ALPHA ANALYTICAL
World Class Chemistry

Subcontract Chain of Custody

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

Alpha Job Number
L1840486

Client Information

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

Phone: 603.319.5010
Email: mgulli@alphalab.com

Project Information

Project Location: MA
Project Manager: Melissa Gulli

Turnaround & Deliverables Information

Due Date: 10/12/18 (RUSH)
Deliverables:

Regulatory Requirements/Report Limits

State/Federal Program:
Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L1840486

Report to include Method Blank, LCS/LCSD:

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

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	20181005-NPDES-B18-B4(OW)	10-05-18 14:35	WATER	Ethanol by EPA 1671 Revision A	

Relinquished By:	Date/Time:	Received By:	Date/Time:
AAL	10/8/18		

Form No: AL_subcoc

ALPHA ANALYTICAL
World Class Chemistry

Subcontract Chain of Custody

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

Alpha Job Number
L1840486

Client Information

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

Phone: 603.319.5010
Email: mgulli@alphalab.com

Project Information

Project Location: MA
Project Manager: Melissa Gulli

Turnaround & Deliverables Information

Due Date: 10/12/18 (RUSH)
Deliverables:

Regulatory Requirements/Report Limits

State/Federal Program:
Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L1840486

Report to include Method Blank, LCS/LCSD:

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

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	20181005-NPDES-B18-B4(OW)	10-05-18 14:35	WATER	Ethanol by EPA 1671 Revision A	

Relinquished By:	Date/Time:	Received By:	Date/Time:
Cheri Tebeau	10/9/18 10:10		

Form No: AL_subcoc

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 490-160795-1
Client Project/Site: L1840486

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

Attn: Melissa Gulli

Authorized for release by:
10/15/2018 10:53:36 AM

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

Table of Contents

Sample Summary

Client: Alpha Analytical Inc
Project/Site: L1840486

TestAmerica Job ID: 490-160795-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-160795-1	20181005-NPDES-B18-B4(OW)	Water	10/05/18 14:35	10/10/18 07:15

Case Narrative

Client: Alpha Analytical Inc
Project/Site: L1840486

TestAmerica Job ID: 490-160795-1

Job ID: 490-160795-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-160795-1

Comments
No additional comments.

Receipt
The sample was received on 10/10/2018 7:15 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.1º C.

GC Semi VOA
Method 1671A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 490-549725.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Definitions/Glossary

Client: Alpha Analytical Inc
Project/Site: L1840486

TestAmerica Job ID: 490-160795-1

Glossary

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

Client Sample Results

Client: Alpha Analytical Inc
Project/Site: L1840486

TestAmerica Job ID: 490-160795-1

Client Sample ID: 20181005-NPDES-B18-B4(OW)
Date Collected: 10/05/18 14:35
Date Received: 10/10/18 07:15

Lab Sample ID: 490-160795-1
Matrix: Water

Method: 1671A - Ethanol (GC/FID)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		2000	500	ug/L			10/12/18 18:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Isopropyl acetate (Surr)	*87*		*70 - 130*		*10/12/18 18:57*	*1*

QC Sample Results

Client: Alpha Analytical Inc
Project/Site: L1840486

TestAmerica Job ID: 490-160795-1

Method: 1671A - Ethanol (GC/FID)

Lab Sample ID: MB 490-549725/13
Matrix: Water
Analysis Batch: 549725

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		2000	500	ug/L			10/12/18 16:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Isopropyl acetate (Surr)	*101*		*70 - 130*		*10/12/18 16:09*	*1*

Lab Sample ID: LCS 490-549725/14
Matrix: Water
Analysis Batch: 549725

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ethanol			50200	54520		ug/L		109	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Isopropyl acetate (Surr)	*111*		*70 - 130*

Lab Sample ID: LCSD 490-549725/15
Matrix: Water
Analysis Batch: 549725

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol			50200	57270		ug/L		114	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Isopropyl acetate (Surr)	*116*		*70 - 130*

Lab Sample ID: 490-160304-D-4 MS
Matrix: Water
Analysis Batch: 549725

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ethanol	ND		50200	52280		ug/L		104	70 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Isopropyl acetate (Surr)	*77*		*70 - 130*

Lab Sample ID: 490-160304-D-4 MSD
Matrix: Water
Analysis Batch: 549725

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol	ND		50200	57200		ug/L		114	70 - 130	9	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Isopropyl acetate (Surr)	*99*		*70 - 130*

QC Association Summary

Client: Alpha Analytical Inc
Project/Site: L1840486

TestAmerica Job ID: 490-160795-1

GC VOA

Analysis Batch: 549725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-160795-1	20181005-NPDES-B18-B4(OW)	Total/NA	Water	1671A	
MB 490-549725/13	Method Blank	Total/NA	Water	1671A	
LCS 490-549725/14	Lab Control Sample	Total/NA	Water	1671A	
LCSD 490-549725/15	Lab Control Sample Dup	Total/NA	Water	1671A	
490-160304-D-4 MS	Matrix Spike	Total/NA	Water	1671A	
490-160304-D-4 MSD	Matrix Spike Duplicate	Total/NA	Water	1671A	

Lab Chronicle

Client: Alpha Analytical Inc
Project/Site: L1840486

TestAmerica Job ID: 490-160795-1

Client Sample ID: 20181005-NPDES-B18-B4(OW) — **Lab Sample ID: 490-160795-1**
Date Collected: 10/05/18 14:35 — **Matrix: Water**
Date Received: 10/10/18 07:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1671A		1			549725	10/12/18 18:57	JML	TAL NSH

Laboratory References:

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

Method Summary

Client: Alpha Analytical Inc
Project/Site: L1840486

TestAmerica Job ID: 490-160795-1

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

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

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

Accreditation/Certification Summary

Client: Alpha Analytical Inc
Project/Site: L1840486

TestAmerica Job ID: 490-160795-1

Laboratory: TestAmerica Nashville

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

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

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1671A		Water	Ethanol

Maine	State Program	1	TN00032	11-03-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
1671A		Water	Ethanol

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-160795 Chain of Custody

Cooler Received/Opened On 10-10-2018 @ 07:15

Time Samples Removed From Cooler 09:12 Time Samples Placed In Storage 09:18 (2 Hour Window)

1. Tracking # 1ZE5306541593439105 (last 4 digits, FedEx) Courier: UPS NDA Early

IR Gun ID 31470368 pH Strip Lot N/A Chlorine Strip Lot N/A

2. Temperature of rep. sample or temp blank when opened: 4.1 *Degrees Celsius*

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

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

If yes, how many and where: _____

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

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

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

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

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

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

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

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

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

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

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

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

Larger than this.

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

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

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

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

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

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

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

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

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

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

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

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

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

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17

Subcontract Chain of Custody

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

Alpha Job Number
L1840486

Client Information	Project Information	Regulatory Requirements/Report Limits
Client: Alpha Analytical Labs Address: Eight Walkup Drive Westborough, MA 01581-1019 Phone: 603.319.5010 Email: mgulli@alphalab.com	Project Location: MA Project Manager: Melissa Gulli **Turnaround & Deliverables Information** Due Date: 10/12/18 (RUSH) Deliverables:	State/Federal Program: Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L1840486

Report to include Method Blank, LCS/LCSD:

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

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	20181005-NPDES-B18-B4(OW)	10-05-18 14:35	WATER	Ethanol by EPA 1671 Revision A	

Loc: 490
160795

Relinquished By:	Date/Time:	Received By:	Date/Time:
Cheri Tebeau	10/9/18 10:10	[signature] TA-NAS	10-10-2018 07:15

Form No: AL_subcoc

4.1

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
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

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**
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.**

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.

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

ALPHA ANALYTICAL
Westborough, MA 01581 — 8 Walkup Dr. — TEL: 508-898-9220 — FAX: 508-898-9193
Mansfield, MA 02048 — 320 Forbes Blvd — TEL: 508-822-9300 — FAX: 508-822-3288

Service Centers
Brewer, ME 04412 Portsmouth, NH 03801 Mahwah, NJ 07430 Albany, NY 12205
Tonawanda, NY 14150 Holmes, PA 19043

Page of

Date Rec'd in Lab: 10/10/18

ALPHA Job #: L1811098

H&A Information
- H&A Client: Boston University
- H&A Address: 465 Medford St. Charlestown
- H&A Address:
- H&A Phone: 617.886.7424
- H&A Fax:
- H&A Email: tbutler@haleyaldrich.com

Project Information
- Project Name: BU Data and Science Building
- Project Location: 645 Comm. Ave Boston, MA
- Project # 132533-002
- (Use Project name as Project #) ☐
- Project Manager: Todd Butler
- ALPHAQuote #:

Turn-Around Time
- Standard ☐ Due Date:
- Rush (only if pre approved) ☑ # of Days: 2

Deliverables
- ☑ Email ☐ Fax
- ☐ EQuIS (1 File) ☑ EQuIS (4 File)
- ☐ Other:

Billing Information
- ☑ Same as Client Info
- PO #

Regulatory Requirements (Program/Criteria)
- S-1 MCP
- MA RCS-1

Note: Select State from menu & identify criteria.

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY ☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☑ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Depth	See Note #1	Hardness	See Note#2	Hex Cr	Total Bottles	Sample Specific Comments
41098-01	~~20181009-NPDES-RIVER~~						x	x	x	x		#1: NPDES RGP Total Metals
	20181010-NPDES-RIVER	10/10/2018	0645	H2O	TRB	0-1	x	x	x	x		#2: Ammonia Nitrogen - SM 4500
												pH: 6.6 Temp: 18.5°C

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

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

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type
Preservative

Relinquished By:	Date/Time	Received By:	Date/Time
Todd Butler	10/10/18 0730	M. Otto	10/10/18 1613
M. Otto	10/10/18 1630	AAL	10/10/18 1640
	10/10/18 1848		18:48

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. Alpha Analytical's services under this Chain of Custody shall be performed in accordance with terms and conditions within Blanket Service Agreement# 2015-18-Alpha Analytical by and between Haley & Aldrich, Inc., its subsidiaries and affiliates and Alpha Analytical.

Document ID: 20455 Rev 2 (8/9/2016)

Lab Control Sample Analysis

Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING

Project Number: 132533-002

Lab Number: L1841098

Report Date: 10/12/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1166941-2								
Antimony, Total	97		-		85-115	-		
Arsenic, Total	110		-		85-115	-		
Cadmium, Total	112		-		85-115	-		
Chromium, Total	104		-		85-115	-		
Copper, Total	100		-		85-115	-		
Lead, Total	110		-		85-115	-		
Nickel, Total	106		-		85-115	-		
Selenium, Total	112		-		85-115	-		
Silver, Total	113		-		85-115	-		
Zinc, Total	112		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1166945-2								
Iron, Total	114		-		85-115	-		
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 Batch: WG1166945-2								
Hardness	94		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1167075-2								
Mercury, Total	95		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING
Project Number: 132533-002

Lab Number: L1841098
Report Date: 10/12/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1166941-3 QC Sample: L1841029-01 Client ID: MS Sample												
Antimony, Total	ND	0.5	0.5737	115		-	-		70-130	-		20
Arsenic, Total	ND	0.12	0.1336	111		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.05139	101		-	-		70-130	-		20
Chromium, Total	ND	0.2	0.1986	99		-	-		70-130	-		20
Copper, Total	ND	0.25	0.2452	98		-	-		70-130	-		20
Lead, Total	ND	0.51	0.5426	106		-	-		70-130	-		20
Nickel, Total	0.00202	0.5	0.4964	99		-	-		70-130	-		20
Selenium, Total	0.00580	0.12	0.1317	105		-	-		70-130	-		20
Silver, Total	ND	0.05	0.05326	106		-	-		70-130	-		20
Zinc, Total	ND	0.5	0.5386	108		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1166941-5 QC Sample: L1841098-01 Client ID: 20181010-NPDES-RIVER												
Antimony, Total	ND	0.5	0.5238	105		-	-		70-130	-		20
Arsenic, Total	ND	0.12	0.1301	108		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.05176	101		-	-		70-130	-		20
Chromium, Total	ND	0.2	0.2007	100		-	-		70-130	-		20
Copper, Total	0.00276	0.25	0.2487	98		-	-		70-130	-		20
Lead, Total	0.00281	0.51	0.5384	105		-	-		70-130	-		20
Nickel, Total	ND	0.5	0.5022	100		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1266	106		-	-		70-130	-		20
Silver, Total	ND	0.05	0.05260	105		-	-		70-130	-		20
Zinc, Total	ND	0.5	0.5451	109		-	-		70-130	-		20

ANALYTICAL REPORT

Lab Number:	L1841098
Client:	Haley & Aldrich, Inc. 465 Medford Street, Suite 2200 Charlestown, MA 02129-1400
ATTN:	Todd Butler
Phone:	(617) 886-7424
Project Name:	BU DATA AND SCIENCE BUILDING
Project Number:	132533-002
Report Date:	10/12/18

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: BU DATA AND SCIENCE BUILDING
Project Number: 132533-002

Lab Number: L1841098
Report Date: 10/12/18

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1841098-01	20181010-NPDES-RIVER	WATER	645 COMM. AVE, BOSTON, MA	10/10/18 06:45	10/10/18

Project Name: BU DATA AND SCIENCE BUILDING **Lab Number:** L1841098
Project Number: 132533-002 **Report Date:** 10/12/18

Case Narrative

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

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

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

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

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

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

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:  Amita Naik

Title: Technical Director/Representative Date: 10/12/18

METALS

Project Name: BU DATA AND SCIENCE BUILDING **Lab Number:** L1841098

Project Number: 132533-002 **Report Date:** 10/12/18

SAMPLE RESULTS

Lab ID: L1841098-01 Date Collected: 10/10/18 06:45

Client ID: 20181010-NPDES-RIVER Date Received: 10/10/18

Sample Location: 645 COMM. AVE, 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	10/11/18 12:15	10/12/18 10:39	EPA 3005A	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	10/11/18 12:15	10/12/18 10:39	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	10/11/18 12:15	10/12/18 10:39	EPA 3005A	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	10/11/18 12:15	10/12/18 10:39	EPA 3005A	3,200.8	AM
Copper, Total	0.00276		mg/l	0.00100	--	1	10/11/18 12:15	10/12/18 10:39	EPA 3005A	3,200.8	AM
Iron, Total	0.663		mg/l	0.050	--	1	10/11/18 12:15	10/12/18 01:16	EPA 3005A	19,200.7	AB
Lead, Total	0.00281		mg/l	0.00100	--	1	10/11/18 12:15	10/12/18 10:39	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	10/11/18 14:21	10/11/18 20:05	EPA 245.1	3,245.1	MG
Nickel, Total	ND		mg/l	0.00200	--	1	10/11/18 12:15	10/12/18 10:39	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	10/11/18 12:15	10/12/18 10:39	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	10/11/18 12:15	10/12/18 10:39	EPA 3005A	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	10/11/18 12:15	10/12/18 10:39	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	50.6		mg/l	0.660	NA	1	10/11/18 12:15	10/12/18 01:16	EPA 3005A	19,200.7	AB
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		10/12/18 10:39	NA	107,-	

Project Name: BU DATA AND SCIENCE BUILDING **Lab Number:** L1841098

Project Number: 132533-002 **Report Date:** 10/12/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1166941-1										
Antimony, Total	ND		mg/l	0.00400	--	1	10/11/18 12:15	10/12/18 10:02	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	10/11/18 12:15	10/12/18 10:02	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	10/11/18 12:15	10/12/18 10:02	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	10/11/18 12:15	10/12/18 10:02	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	10/11/18 12:15	10/12/18 10:02	3,200.8	AM
Lead, Total	ND		mg/l	0.00100	--	1	10/11/18 12:15	10/12/18 10:02	3,200.8	AM
Nickel, Total	ND		mg/l	0.00200	--	1	10/11/18 12:15	10/12/18 10:02	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	10/11/18 12:15	10/12/18 10:02	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	10/11/18 12:15	10/12/18 10:02	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	10/11/18 12:15	10/12/18 10:02	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: WG1166945-1										
Iron, Total	ND		mg/l	0.050	--	1	10/11/18 12:15	10/12/18 01:07	19,200.7	AB

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab for sample(s): 01 Batch: WG1166945-1										
Hardness	ND		mg/l	0.660	NA	1	10/11/18 12:15	10/12/18 01:07	19,200.7	AB

Prep Information

Digestion Method: EPA 3005A

Project Name: BU DATA AND SCIENCE BUILDING **Lab Number:** L1841098

Project Number: 132533-002 **Report Date:** 10/12/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1167075-1										
Mercury, Total	ND		mg/l	0.0002	--	1	10/11/18 14:21	10/11/18 19:25	3,245.1	MG

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING

Project Number: 132533-002

Lab Number: L1841098

Report Date: 10/12/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1166941-2								
Antimony, Total	97		-		85-115	-		
Arsenic, Total	110		-		85-115	-		
Cadmium, Total	112		-		85-115	-		
Chromium, Total	104		-		85-115	-		
Copper, Total	100		-		85-115	-		
Lead, Total	110		-		85-115	-		
Nickel, Total	106		-		85-115	-		
Selenium, Total	112		-		85-115	-		
Silver, Total	113		-		85-115	-		
Zinc, Total	112		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1166945-2								
Iron, Total	114		-		85-115	-		
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 Batch: WG1166945-2								
Hardness	94		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1167075-2								
Mercury, Total	95		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING
Project Number: 132533-002

Lab Number: L1841098
Report Date: 10/12/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1166941-3 QC Sample: L1841029-01 Client ID: MS Sample												
Antimony, Total	ND	0.5	0.5737	115		-	-		70-130	-		20
Arsenic, Total	ND	0.12	0.1336	111		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.05139	101		-	-		70-130	-		20
Chromium, Total	ND	0.2	0.1986	99		-	-		70-130	-		20
Copper, Total	ND	0.25	0.2452	98		-	-		70-130	-		20
Lead, Total	ND	0.51	0.5426	106		-	-		70-130	-		20
Nickel, Total	0.00202	0.5	0.4964	99		-	-		70-130	-		20
Selenium, Total	0.00580	0.12	0.1317	105		-	-		70-130	-		20
Silver, Total	ND	0.05	0.05326	106		-	-		70-130	-		20
Zinc, Total	ND	0.5	0.5386	108		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1166941-5 QC Sample: L1841098-01 Client ID: 20181010-NPDES-RIVER												
Antimony, Total	ND	0.5	0.5238	105		-	-		70-130	-		20
Arsenic, Total	ND	0.12	0.1301	108		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.05176	101		-	-		70-130	-		20
Chromium, Total	ND	0.2	0.2007	100		-	-		70-130	-		20
Copper, Total	0.00276	0.25	0.2487	98		-	-		70-130	-		20
Lead, Total	0.00281	0.51	0.5384	105		-	-		70-130	-		20
Nickel, Total	ND	0.5	0.5022	100		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1266	106		-	-		70-130	-		20
Silver, Total	ND	0.05	0.05260	105		-	-		70-130	-		20
Zinc, Total	ND	0.5	0.5451	109		-	-		70-130	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING
Project Number: 132533-002

Lab Number: L1841098
Report Date: 10/12/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1166945-3 QC Sample: L1841098-01 Client ID: 20181010-NPDES-RIVER									
Iron, Total	0.663	1	1.67	101	-	-	75-125	-	20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1166945-3 QC Sample: L1841098-01 Client ID: 20181010-NPDES-RIVER									
Hardness	50.6	66.2	113	94	-	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1167075-3 QC Sample: L1839918-01 Client ID: MS Sample									
Mercury, Total	0.00292	0.005	0.0072	85	-	-	70-130	-	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1167075-5 QC Sample: L1839918-02 Client ID: MS Sample									
Mercury, Total	ND	0.005	0.0035	71	-	-	70-130	-	20

Lab Duplicate Analysis

Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING

Project Number: 132533-002

Lab Number: L1841098

Report Date: 10/12/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1166941-4 QC Sample: L1841029-01 Client ID: DUP Sample						
Antimony, Total	ND	ND	mg/l	NC		20
Arsenic, Total	ND	ND	mg/l	NC		20
Cadmium, Total	ND	ND	mg/l	NC		20
Chromium, Total	ND	ND	mg/l	NC		20
Copper, Total	ND	ND	mg/l	NC		20
Lead, Total	ND	ND	mg/l	NC		20
Nickel, Total	0.00202	ND	mg/l	NC		20
Selenium, Total	0.00580	0.00610	mg/l	5		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	ND	ND	mg/l	NC		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING
Project Number: 132533-002

Lab Number: L1841098
Report Date: 10/12/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1166941-6 QC Sample: L1841098-01 Client ID: 20181010-NPDES-RIVER					
Antimony, Total	ND	ND	mg/l	NC	20
Arsenic, Total	ND	ND	mg/l	NC	20
Cadmium, Total	ND	ND	mg/l	NC	20
Chromium, Total	ND	0.00155	mg/l	NC	20
Copper, Total	0.00276	0.00293	mg/l	6	20
Lead, Total	0.00281	0.00290	mg/l	3	20
Nickel, Total	ND	ND	mg/l	NC	20
Selenium, Total	ND	ND	mg/l	NC	20
Silver, Total	ND	ND	mg/l	NC	20
Zinc, Total	ND	ND	mg/l	NC	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1166945-4 QC Sample: L1841098-01 Client ID: 20181010-NPDES-RIVER					
Iron, Total	0.663	0.672	mg/l	1	20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1166945-4 QC Sample: L1841098-01 Client ID: 20181010-NPDES-RIVER					
Hardness	50.6	51.5	mg/l	2	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1167075-4 QC Sample: L1839918-01 Client ID: DUP Sample					
Mercury, Total	0.00292	0.00278	mg/l	5	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1167075-6 QC Sample: L1839918-02 Client ID: DUP Sample					
Mercury, Total	ND	ND	mg/l	NC	20

INORGANICS
&
MISCELLANEOUS

Project Name: BU DATA AND SCIENCE BUILDING
Project Number: 132533-002
Lab Number: L1841098
Report Date: 10/12/18

SAMPLE RESULTS

Lab ID: L1841098-01
Client ID: 20181010-NPDES-RIVER
Sample Location: 645 COMM. AVE, BOSTON, MA
Sample Depth:
Matrix: Water
Date Collected: 10/10/18 06:45
Date Received: 10/10/18
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Nitrogen, Ammonia	0.077		mg/l	0.075	--	1	10/11/18 16:09	10/11/18 23:50	121,4500NH3-BH	AT
Chromium, Hexavalent	ND		mg/l	0.010	--	1	10/11/18 01:30	10/11/18 02:24	1,7196A	MA

Project Name: BU DATA AND SCIENCE BUILDING **Lab Number:** L1841098

Project Number: 132533-002 **Report Date:** 10/12/18

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1166731-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	10/11/18 01:30	10/11/18 02:17	1,7196A	MA
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1166929-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	10/11/18 16:09	10/11/18 23:38	121,4500NH3-BH	AT

Lab Control Sample Analysis

Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING

Project Number: 132533-002

Lab Number: L1841098

Report Date: 10/12/18

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1166731-2								
Chromium, Hexavalent	96		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1166929-2								
Nitrogen, Ammonia	100		-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING
Project Number: 132533-002

Lab Number: L1841098
Report Date: 10/12/18

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1166731-4 QC Sample: L1841098-01 Client ID: 20181010-NPDES-RIVER												
Chromium, Hexavalent	ND	0.1	0.089	89		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1166929-4 QC Sample: L1840077-02 Client ID: MS Sample												
Nitrogen, Ammonia	0.275	4	4.13	96		-	-		80-120	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: BU DATA AND SCIENCE BUILDING

Project Number: 132533-002

Lab Number: L1841098

Report Date: 10/12/18

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1166731-3 QC Sample: L1841098-01 Client ID: 20181010-NPDES-RIVER						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1166929-3 QC Sample: L1840077-02 Client ID: DUP Sample						
Nitrogen, Ammonia	0.275	0.288	mg/l	5		20

Project Name: BU DATA AND SCIENCE BUILDING
Project Number: 132533-002

Lab Number: L1841098
Report Date: 10/12/18

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1841098-01A	Plastic 250ml unpreserved	A	7	7	3.7	Y	Absent		HEXCR-7196(1)
L1841098-01B	Plastic 250ml HNO3 preserved	A	<2	<2	3.7	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),HARDU(180),AG-2008T(180),AS-2008T(180),HG-U(28),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L1841098-01C	Plastic 500ml H2SO4 preserved	A	<2	<2	3.7	Y	Absent		NH3-4500(28)

*Values in parentheses indicate holding time in days

Project Name:	BU DATA AND SCIENCE BUILDING	**Lab Number:**	L1841098
Project Number:	132533-002	**Report Date:**	10/12/18

GLOSSARY

Acronyms

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

Footnotes

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

Terms

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

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

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

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

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

Report Format: Data Usability Report

Project Name:	BU DATA AND SCIENCE BUILDING	**Lab Number:**	L1841098
Project Number:	132533-002	**Report Date:**	10/12/18

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

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

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

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

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

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

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

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

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

Report Format: Data Usability Report

Project Name:	BU DATA AND SCIENCE BUILDING	**Lab Number:**	L1841098
Project Number:	132533-002	**Report Date:**	10/12/18

REFERENCES

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

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

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

107 Alpha Analytical - In-house calculation method.

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

Westborough Facility
EPA 624/624.1: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.

EPA 6860: SCM: Perchlorate

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**
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.**

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.

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

ALPHA ANALYTICAL
Westborough, MA 01581 — 8 Walkup Dr. — TEL: 508-898-9220 — FAX: 508-898-9193
Mansfield, MA 02048 — 320 Forbes Blvd — TEL: 508-822-9300 — FAX: 508-822-3288

Service Centers
Brewer, ME 04412 Portsmouth, NH 03801 Mahwah, NJ 07430 Albany, NY 12205
Tonawanda, NY 14150 Holmes, PA 19043

Page of

Date Rec'd in Lab: 10/10/18

ALPHA Job #: L1811098

H&A Information
- H&A Client: Boston University
- H&A Address: 465 Medford St. Charlestown
- H&A Address:
- H&A Phone: 617.886.7424
- H&A Fax:
- H&A Email: tbutler@haleyaldrich.com

Project Information
- Project Name: BU Data and Science Building
- Project Location: 645 Comm. Ave Boston, MA
- Project # 132533-002
- (Use Project name as Project #) ☐
- Project Manager: Todd Butler
- ALPHAQuote #:

Turn-Around Time
- Standard ☐ Due Date:
- Rush (only if pre approved) ☑ # of Days: 2

Deliverables
- ☑ Email ☐ Fax
- ☐ EQuIS (1 File) ☑ EQuIS (4 File)
- ☐ Other:

Billing Information
- ☑ Same as Client Info
- PO #

Regulatory Requirements (Program/Criteria)
- S-1 MCP
- MA RCS-1

Note: Select State from menu & identify criteria.

Disposal Site Information
Please identify below location of applicable disposal facilities.
Disposal Facility:
☐ NJ ☐ NY ☐ Other:

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
☑ Done
☐ Lab to do
Preservation
☐ Lab to do
(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Depth	See Note #1	Hardness	See Note#2	Hex Cr	Total Bottles	Sample Specific Comments
41098-01	~~20181009-NPDES-RIVER~~						x	x	x	x		#1: NPDES RGP Total Metals
	20181010-NPDES-RIVER	10/10/2018	0645	H2O	TRB	0-1	x	x	x	x		#2: Ammonia Nitrogen - SM 4500
												pH: 6.6 Temp: 18.5°C

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_4$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

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

Westboro: Certification No: MA935
Mansfield: Certification No: MA015

Container Type
Preservative

Relinquished By:	Date/Time	Received By:	Date/Time
Todd Butler	10/10/18 0730	M. Otto	10/10/18 1613
M. Otto	10/10/18 1630	AAL	10/10/18 1640
	10/10/18 1848		18:48

Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. Alpha Analytical's services under this Chain of Custody shall be performed in accordance with terms and conditions within Blanket Service Agreement# 2015-18-Alpha Analytical by and between Haley & Aldrich, Inc., its subsidiaries and affiliates and Alpha Analytical.

Document ID: 20455 Rev 2 (8/9/2016)