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

3686, 3688 & 3690 WASHINGTON ST. FOREST HILLS

BOSTON, MASSACHUSETTS

DECEMBER 21, 2017

Prepared For:

U.S. Environmental Protection Agency
Office of Ecosystem Protection
5 Post Office Square – Suite 100
Mail Code OEP06-01
Boston, MA 02109-3912

On Behalf Of:

Residences at Forest Hills Station, LLP
1601 Trapelo Road, Suite 280
Waltham, MA 02451

PROJECT NO. 6130

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

December 21, 2017

U.S. Environmental Protection Agency
Dewatering GP Processing
Industrial Permit Unit (OEP 06-4)
5 Post Office Square – Suite 100
Mail Code OEP06-01
Boston, MA 02109-3912

Attention: To Whom It May Concern

Reference: 3686, 3688 & 3690 Washington Street – Forest Hills
Boston, Massachusetts
Notice of Intent for Construction Dewatering Discharge Under
Massachusetts Remediation General Permit MAG910000

Ladies and Gentlemen:

On behalf of Residences at Forest Hills Station, LLP, McPhail Associates, LLC (McPhail) has prepared the attached Notice of Intent (NOI) for coverage under the Remediation General Permit (RGP) MAG910000 that has been prepared for the Commonwealth of Massachusetts for the discharge of construction dewatering effluent into the Charles River via the City of Boston storm drainage system. The temporary construction dewatering discharge will occur during construction of the proposed residential development to be located at 3686, 3688 and 3690 Washington Street in Boston, Massachusetts (subject site). Refer to **Figure 1** entitled: "Project Location Plan" for the general site locus.

These services were performed and this permit application was prepared in accordance with our proposal dated January 27, 2017, and the subsequent authorization of Residences at Forest Hills Station, LLP. These services are subject to the limitations contained in **Appendix A**.

The required Notice of Intent Form contained in the RGP permit and Boston Water & Sewer Commission (BWSC) Dewatering Discharge Permit Application are included in **Appendix B** and supporting information is included in **Appendix C**.

A Best Management Practice Plan (BMPP) is contained in **Appendix F**.

Applicant/Operator

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

Dimeo Construction Company
4 Hyde Park
Jamaica Plain, MA 02130

Attention: Martin Abt
Title: Superintendant

Phone: 617-502-3080
Email: MAbt@Dimeo.com

Site Location and Existing Conditions

The site of the proposed development is located on the east side of Washington Street opposite the Massachusetts Bay Transportation Authority (MBTA) Forest Hills Station and currently serves as a commuter parking lot. The subject site is bordered by Morton Street to the north, Orchardhill Road and residential properties to the east, and residential and commercial properties to the south. In addition, the southwest portion of the site abuts an existing shopping plaza. An existing drainage easement, approximately 40 feet in width, is located between the eastern portion of the proposed development site and the northwestern quadrant, and is controlled by the BWSC.

The irregularly-shaped site measures approximately 450 feet north to south and varies in width east to west from about 250 feet within the northern half of the site to 125 feet with the southern half of the site. The northwestern quadrant of the site slopes downward from north to south from approximately Elevation +42.5 to Elevation +38.5, over an approximate 150-foot distance. Similarly, the eastern portion of the site gently slopes downward north to south from approximately Elevation +42 to Elevation +40, over an approximate distance of 450 feet. The existing bituminous concrete parking surface which exists across the site terminates along the base of a partially wooded slope located along the eastern property limits. The slope ranges in height from approximately 15 to 40 feet, peaking at approximately Elevation +54 to +61, a portion of which extends beyond the eastern property line. The Orchardhill roadway, residential properties and a church are located at the top of the slope.

Elevations contained herein are referenced to the Boston City Base (BSB) Datum which is 5.65 feet below the National Geodetic Vertical Datum (NGVD) of 1929. The limits of the subject site are depicted on **Figure 2.**

Available BWSC drawings indicate that a large reinforced concrete storm water drainage conduit and smaller adjacent sewer conduit, collectively known as the Stony Brook Conduit, are located within the BWSC easement. The drawings indicate that the section of the Stony Brook Conduit which crosses the proposed site is approximately 27 feet wide and approximately 20 feet in height, encapsulating the larger 20-foot by 16-foot storm drain conduit and the smaller sewer drain which is approximately 2.8 feet by 4 feet. The invert of the large storm drain is at approximately Elevation +13.6 and the invert of the smaller sewer drain is at approximately Elevation +24.4 which correspond to depths of about 25.5 to 29.5 feet and about 14.5 to 18.5 feet, respectively, below the existing ground surface. It is understood that the Stony Brook Conduit was constructed in the 1910's.

Proposed Scope of Site Development

Plans for the proposed development of the site are understood to include construction of two 6-story buildings. It is understood that the eastern building (Building 2) will contain

approximately 41,000 square feet of below-grade garage space having its lowest level slab located at approximately Elevation +36. A small portion of the lowest level slab is proposed to be located about 2 feet deeper, at approximately Elevation +34. Above grade, Building 2 is split into a southern building, Building 2A, and a northern building, Building 2B, which are divided by a drive lane which allows access to the rear of the building. The building on the west side of the easement (Building 1) is planned to have a footprint of approximately 7,000 square feet and is planned to include ground floor retail. The lowest level slab of the Building 1 is planned to be located at Elevation +40. Based on the grading plan, it is understood that the northern third of Building 1 will have a lowest level slab located below grade, and the remainder of the Building 1 slab will be at grade level.

The structures will be separated by the existing drainage easement, which is planned to be used as a service road. Portions of both of the proposed structures are planned to immediately abut the limits of the easement. Building 1 is proposed to be located approximately 2 feet west of the approximate limits of the BWSC easement and Building 2 is proposed to be located generally at least approximately 2 feet east of the BWSC easement.

Additionally, the northeast portion of the proposed Building 2 is planned to be benched into the lower portion of the existing hillside along Orchardhill Road.

Site History

Sanborn Maps from 1898 through 2002 and Aerial Photographs from 1938 through 2012, included in **Appendix C,** indicate that the subject site has generally been used as a parking lot since at least the 1920s. In addition, the northwestern portion of the subject site was formerly occupied by a small structure in the 1890s and a filling station with four to six gasoline tanks from the 1920s through the 1970s. Two small structures were formerly located in the center of the subject site from 1950 through the 1960s.

Site Environmental Setting and Surrounding Historical Places

Based on an on-line edition of the Massachusetts Geographic Information System DEP Phase I Site Assessment Map viewed on July 24, 2017, the subject site is not located within the boundaries of a Sole Source Aquifer, Potentially Productive Aquifer or within a Zone II, Interim Wellhead Protection Area as defined by the Massachusetts Department of Environmental Protection. Further, there are no public drinking water supply wells, no Areas of Critical Environmental Concern, no fish habitats, no habitats of Species of Special Concern or Threatened or Endangered Species within specified distances of the subject site.

A review of information provided by the U.S. Fish and Wildlife Service in an Information for Planning and Conservation (IPaC) Trust Resource Report for the subject site did not identify the presence of endangered species at or in the vicinity of the discharge location and/or discharge outfall. Further, the Trust Resource Report did not identify the presence of a critical habitat in the vicinity of the discharge outfall and/or discharge location. Based upon

the above, the site is considered a criterion A pursuant to Appendix IV of the RGP. A copy of the IPaC Trust Resource Report and correspondence are included in **Appendix C**.

The GIS Map indicates that there are no water bodies or wetland areas on or within 1,000 feet of the subject site. The map indicates that the closest Protected Open Space to the subject site is located approximately 850 feet to the east-southeast. A copy of the Massachusetts GIS Priority Resources Map is included in **Appendix C**.

A review of the online Massachusetts Cultural Resource Information System (MACRIS) and the National Register of Historical Places for Suffolk County in Boston, Massachusetts did not identify records or addresses of historic places that exist in the immediate vicinity of the subject site and/or outfall location, with the exception of the Forest Hills Elevated Railway Station located on the opposite side of Washington Street, to the west of the subject site. Given that the station is located over 250 feet from the subject site and site development activities are not anticipated to disturb this nearby station, the nearby historical place is not considered a concern. Copies of the MACRIS Reports are included in **Appendix C**.

Massachusetts Contingency Plan (MCP) Regulatory Status

In preparation of the upcoming development of the subject site, McPhail conducted assessments of subsurface conditions in 2016 and 2017 primarily to precharacterize soil for off-site disposal. In general, the laboratory analysis of soil detected several petroleum constituents and anthropogenic contaminants in Historic Fill at concentrations above the applicable RCS-1 Reportable Concentrations. Fill material samples collected from borings completed in the vicinity of the former filling station and submitted for laboratory analysis had elevated levels of C11-C22 aromatics along with polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH) and volatile organic compound (VOC) naphthalene. Results of the laboratory analysis of fill samples collected from the remaining portion of the subject site also detected elevated levels of total lead, several semivolatile organic compounds (SVOCs), and TPH. Therefore, two (2) 120-day release conditions were reported to the DEP on December 18, 2017 in relation to the petroleum release and the presence of historic urban fill to which Release Tracking Numbers (RTNs) 3-34683 and 3-34682 were assigned, respectively.

Summary of Groundwater Analysis

In 2016, groundwater samples were collected from three monitoring wells installed by McPhail and identified as B-7 (OW), B-8 (OW) and B-9 (OW). The groundwater samples were collected by McPhail and submitted to the laboratory for analysis for the presence of total phosphorous, VOCs and extractable petroleum hydrocarbons (EPH) with target polycyclic aromatic hydrocarbons (PAHs). The groundwater results did not indicate PAHs or EPHs above laboratory detection limits. The VOC compound (tetrahydrofuran) detected is well below the applicable RCGW-2 MCP Reportable Concentration.

On July 3, 2017, a second round of groundwater sampling was conducted from monitoring wells B-8 (OW) and B-9 (OW) and the samples were analyzed for the following parameters: total residual chlorine, trivalent chromium, hexavalent chromium, total cyanide, ammonia, total suspended solids (TSS), total metals (antimony, arsenic, cadmium, chromium, copper, iron, lead, mercury, nickel, selenium, silver, and zinc), anions, TPH, and PAHs. A summary of the groundwater results is shown in the enclosed **Table 1**. Note that no compounds were detected in any of the groundwater samples at concentrations above the applicable RCGW-2 MCP Reportable Concentration.

In conjunction with the updated 2017 NPDES RGP, a sample of water from the Charles River was obtained and analyzed for recoverable metals, ammonia, pH, and hardness. The results of testing conducted on the water sample obtained from the Charles River are summarized in **Table 2**.

Laboratory reports are included in **Appendix D and E.**

Construction Dewatering

In general, groundwater was typically observed between 12.3 feet and 16.8 feet below ground surface. However, in the southeastern portion of the subject site, in the area of borings B-4 (OW) and B-101 (OW), where the surface of the glacial till deposit is shallower, groundwater appeared to be perched on the surface of the glacial till deposit and was observed at depths of 1.5 feet and 6.7 feet below ground surface.

Although general excavation activities may not extend below the surface of groundwater in some areas, it is anticipated that excavation activities may encounter perched groundwater. In addition, storm water run-off is anticipated to accumulate within localized trenches after periods of heavy precipitation requiring dewatering. Hence, groundwater dewatering may be necessary.

Given that the scope of redevelopment will affect the entire footprint of the subject site, temporary on-site collection and recharge of groundwater is not considered to be feasible. As a result, construction dewatering will require the discharge of collected groundwater and stormwater into the storm drain system under the requested Remediation General Permit.

It is anticipated that dewatering by means of strategically located sumps and trenches should suffice during construction operations. Intermittent groundwater discharge will likely be required during excavation with an average design flow rate of 20 gallons per minute (GPM) and a maximum design flow rate of 50 GPM.

A review of available subgrade sanitary and storm sewer system plans accessed from the BWSC indicates the presence of two dedicated stormwater drain systems: one located beneath Washington Street adjacent to the western boundary of the subject site and another one as part of the Stony Brook Conduit which crosses through the subject site. Records supplied by BWSC indicate the dedicated stormwater drain systems connect to the north of the subject site as one discharge flow path with one primary and one secondary

outfall location. The discharge flow path continues north away from the subject site within the Stony Brook Conduit, flows north-northeast along the MBTA line and under Park Street. The flow path then flows west under Forsyth Way towards the Back Bay Fens. The secondary discharge location is an emergency outfall at a gate house that, per BWSC, is only used in high discharge flow emergency events. The flow path follows along the Back Bay Fens under I-90, Commonwealth Avenue, and Storrow Drive out to the Charles River. The primary discharge location is an outfall pipe listed as CSO 023 according to the BWSC. The singular discharge flow path, the subject site and possible discharge locations and both outfall locations are shown on the enclosed **Figure 3** and **Figures 4A, 4B,** and **4C**, respectively.

Due to the location of discharge into the Charles River, a Stream Stats Flow calculation was completed to determine a dilution factor for the surrounding area. The online program Stream Stats 4 was used to determine a 7Q10 value (the lowest 7-day average flow that occurs on average once every 10 years) of 11.5 cubic feet per second (ft^3/s). This paired with the unit conversion and equation presented in Appendix V of the 2017 RGP indicated a dilution factor of 104.22 exists and is applied to water quality limitations. A copy of the dilution factor calculation is included in **Appendix C**.

Groundwater Treatment

Concentrations of several metals and non-halogenated SVOCs were detected during the sampling event and evaluated in accordance with Appendix V of the 2017 RGP, to determine if Water Quality-Based Effluent Limitations (WQBELs) for specific inorganics apply. WQBELs apply for lead, silver, zinc, copper, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene. The Appendix V calculations also indicate Technology-Based Effluent Limitations (TBELs) apply for all other inorganics and SVOCs. A copy of the TBEL and WQBEL calculations are included in **Appendix C.**

Based on the results of the above referenced groundwater analyses, it is our opinion that a 5,000-gallon capacity settling tank and bag filters in series will be required to settle and filter out suspended inorganic metals and suspended SVOCs in the discharge during construction dewatering to meet applicable effluent limits established by the US EPA prior to off-site discharge. An Ion Exchange Resin Filter will also be needed to treat levels of metals in the effluent in order to meet the WQBELs that are considered applicable. In the case that a sheen is observed during dewatering activities, granular activated carbon (GAC) filters in series may also be needed to further treat the levels of SVOCs. A schematic of the treatment system is shown on **Figure 5**.

Summary and Conclusions

The purpose of this report is to assess site environmental conditions and groundwater data to support an application for a Massachusetts Remediation General Permit for off-site discharge of dewatered groundwater which will be encountered during the proposed

development located at 3686, 3688 and 3690 Washington Street located in Boston, Massachusetts.

Based on the results of the above referenced groundwater analyses, treatment of construction dewatering will be necessary to meet allowable WQBELs for lead, silver, zinc, copper, benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, dibenzo(a,h)anthracene and indeno(1,2,3-cd)pyrene, as well as allowable TBELs for other inorganics and SVOCs established by the US EPA prior to off-site discharge. The proposed construction dewatering effluent treatment system will consist of one settling tank 5,000-gallons in capacity and bag filter in series to filter out sediment containing elevated levels of metals and SVOCs. An Ion Exchange Resin Filter will also be needed to treat levels of metals in the effluent in order to meet the allowable discharge limits (WQBELs established in the Massachusetts RGP). In the case that a sheen is observed during dewatering activities, GAC filters in series may also be needed to further treat the levels of SVOCs.

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

Sincerely,

McPHAIL ASSOCIATES, LLC

Gina M. Garten

Peter J. DeChaves, L.S.P.

F:\WP5\REPORTS\6130_RGP_122117.docx

GMG/kws/pjd

FIGURE 1

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N

SCALE 1:25,000

PROJECT LOCATION PLAN

RESIDENCES AT FOREST HILLS

BOSTON MASSACHUSETTS

APPROXIMATE LIMITS OF EXISTING SEWER DRAIN WITHIN THE STONY BROOK CONDUIT. APPROXIMATE INVERT EL.+24.4 (2.8 FT. x 4 FT.)
APPROXIMATE LIMITS OF EXISTING STORM DRAIN WITHIN THE STONY BROOK CONDUIT. APPROXIMATE INVERT EL.+13.6 (20 FT. x16 FT.) (HATCHED)
POSSIBLE DISCHARGE LOCATIONS
APPROXIMATE LIMITS OF PROPOSED BUILDING 1 (LOWEST LEVEL SLAB AT APPROXIMATELY EL.+40)
N/F COMM. OF MASS DEPT. OF CONSERVATION AND RECREATION BOOK 6725 PAGE 232
NORTH
MORTON STREET
(PUBLIC - VARIABLE WIDTH)
N/F JOHN IAOKIMIDIS ETAL BOOK 9177 PAGE 311
1 STORY CONCRETE BUILDING
APPROXIMATE LIMITS OF PROPOSED INFILTRATION SYSTEM No.3
APPROXIMATE LIMITS OF SUBJECT SITE
POSSIBLE DISCHARGE LOCATION
EXISTING SEWER LINE (2.8FT x 4FT)
APPROXIMATE LIMITS OF PROPOSED INFILTRATION SYSTEM No.2
APPROXIMATE LIMITS OF EXISTING DRAINAGE EASEMENT
N/F TEN TOWER ST. LLC BOOK 48607 PAGE 24
N/F EMILIE LAHOUD BOOK 20813 PAGE 110
APPROXIMATE LIMITS OF PROPOSED INFILTRATION SYSTEM No. 1
AREA=79,160± S.F.
N/F TWENTY TOWER STREET TRUST BOOK 24077 PAGE 162
N/F ZAIGA GOSTS BOOK 16881 PAGE 77
N/F HARRY A. BROCK II ETAL BOOK 11166 PAGE 323
N/F LOUISE M. DELTRECCO BOOK 40662 PAGE 245
N/F KIN WAI YOUNG TS BOOK 17318 PAGE 177
APPROXIMATE LIMITS OF PROPOSED BUILDING 2 (LOWEST LEVEL SLAB AT APPROXIMATELY EL.+35.5 TO EL.+34.5 EXCEPT AS NOTED)
ORCHARDHILL ROAD
ORCHARDHILL ROAD (PUBLIC - VARIABLE WIDTH)
B2-209 B-8 (OW) B-8A B-85a B-8W B-85b B-8N B2-208 B-85 B2-206 B2-207 TP-9 TP-11 TP-12 B-8E TP-8 SIS-4 B2-1 B2-205 TP-10 TP-7 B2-204 B2-2 B-7 (OW) B2-203 B2-201 TP-5 TP-6
B1-210 B-9 (OW) B1-234 B1-23 B1-6 B1-211 B1-9A B1-9 B1-207 B1-3 B1-1 B1-1A B1-200 B-5 B1-21 B1-233 B1-208 B1-213 B1-212 SIS-3 B1-224 B1-19 B1-24 SIS-2 B1-206 B1-229 B1-232 B-6 B1-201 B1-4 B1-4A B1-205 B1-7 B1-7A B1-214 B1-216 B1-3A B-3 B1-17A B1-22 B1-2A B1-2 B1-12 B1-10 B1-225 B1-231 B1-17 B1-228 B1-20 TP-1 B1-202 B1-203 B1-204 B1-215 B1-220 B1-16 B1-18 B1-14 B-100 B1-226 B1-13 B1-15 B1-227 TP-2 SIS-1 B-2 B-2A B1-8 B1-11 B1-5 B-4 (OW) B-4A TP-3 B-301A B-301 B-101 (OW) B-302 TP-4
GRAPHIC SCALE
20 0 20 40 80

REFERENCE: THIS PLAN WAS PREPARED FROM A 20-SCALE DRAWING ENTITLED "EXISTING CONDITIONS SURVEY" DATED JULY 21, 2015 BY NITSCH ENGINEERING.

LEGEND

- APPROXIMATE LOCATION OF TEST PIT PERFORMED BY MATTUCHIO CONSTRUCTION CO., INC. ON APRIL 6, 2016 FOR McPHAIL ASSOCIATES, LLC
- APPROXIMATE LOCATION OF TEST PIT PERFORMED BY MATTUCHIO CONSTRUCTION CO., INC. ON AUGUST 26, 2017 FOR McPHAIL ASSOCIATES, LLC
- APPROXIMATE LOCATION OF GEOPROBE / BORING PERFORMED BY CARR-DEE CORP. IN FEBRUARY AND MARCH 2017 FOR McPHAIL ASSOCIATES, LLC
- APPROXIMATE LOCATION OF BORING PERFORMED BY CARR-DEE CORP. DURING JULY THROUGH AUGUST 2017 FOR McPHAIL ASSOCIATES, LLC
- APPROXIMATE LOCATION OF BORING PERFORMED BY CARR-DEE CORP. DURING THE PERIOD OF MARCH 30 THROUGH APRIL 5, 2016 FOR McPHAIL ASSOCIATES, LLC
- APPROXIMATE LOCATION OF BORING PERFORMED BY CARR-DEE CORP. ON JUNE 30, 2017 FOR McPHAIL ASSOCIATES, LLC
- (OW)— INDICATES OBSERVATION WELL INSTALLED WITHIN COMPLETED BOREHOLE

FILE NAME: \\McPhail-fs2\McPhail\acad\JOBS\6130RGP\6130-F02.dwg

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3686, 3688 & 3690 WASHINGTON STREET

BOSTON MASSACHUSETTS

SITE PLAN AND POSSIBLE DISCHARGE LOCATIONS

FOR

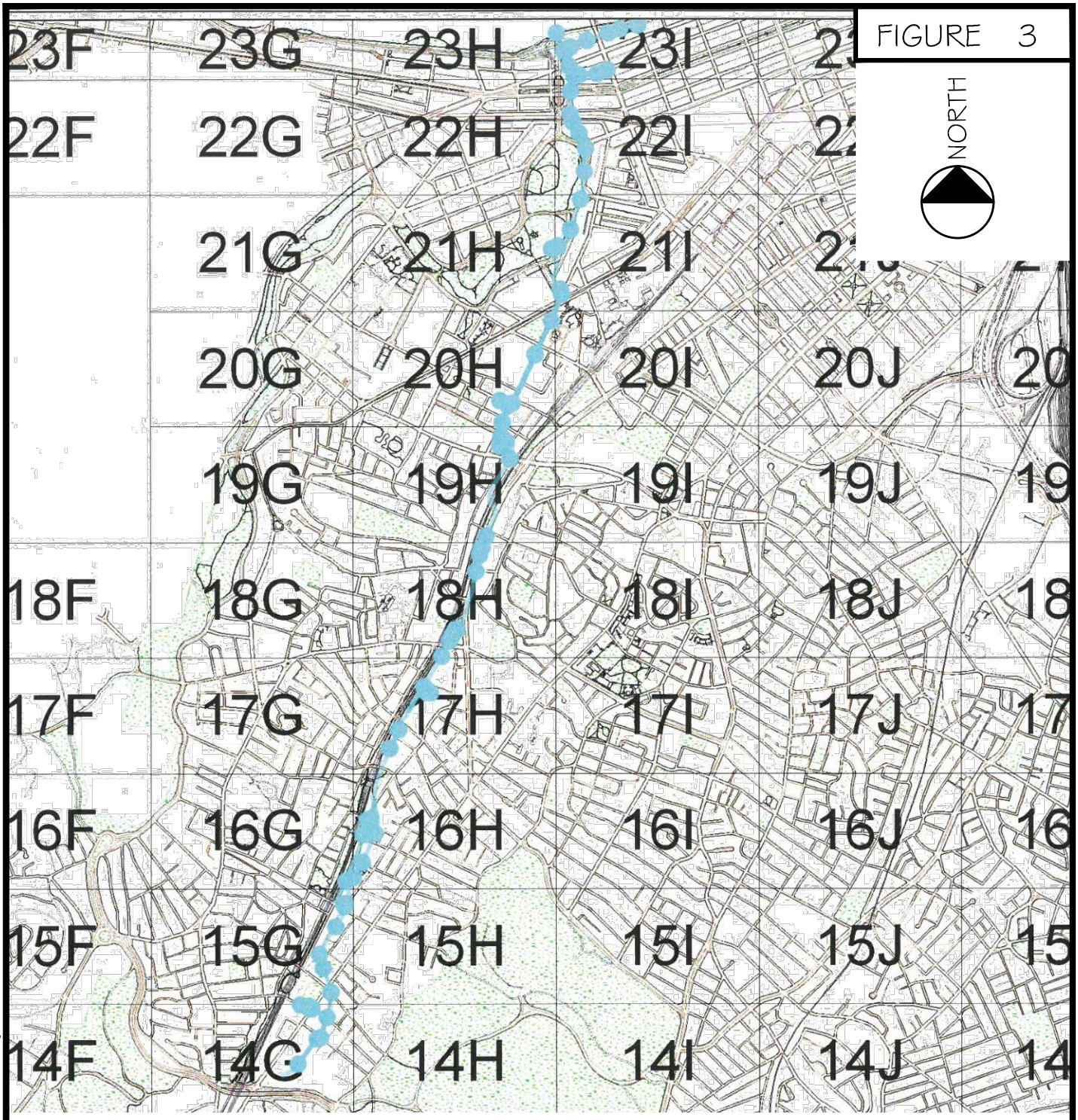
RESIDENCES AT FOREST HILLS STATION, LLP

BY

McPHAIL ASSOCIATES, LLC

Date: NOVEMBER 2017	Dwn: F.G.P.	Chkd: G.M.G.	Scale: 1" = 20'
Project No: 6130			FIGURE 2

FIGURE 3



GRAPHIC SCALE

2500 0 2500 5000

REFERENCE: THIS PLAN WAS PREPARED FROM AN 2,100-SCALE DRAWING GENERATED FROM THE BOSTON WATER AND SEWER DATABASE PRINTED ON JULY 26, 2017

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3686, 3688 & 3690 WASHINGTON STREET - FOREST HILLS

BOSTON MASSACHUSETTS

DISCHARGE FLOW PATH

FOR

RESIDENCES AT FOREST HILLS STATION, LLP

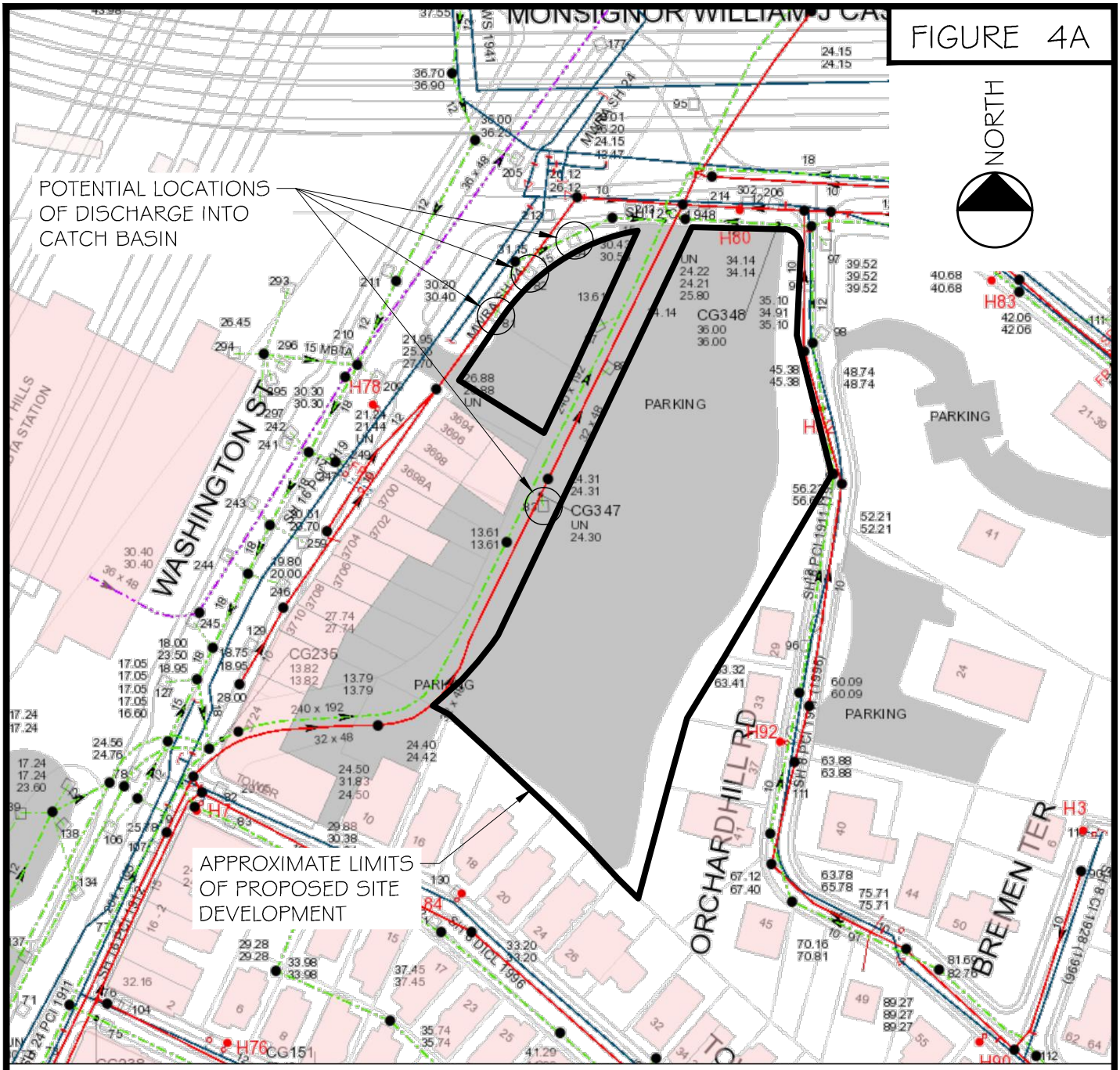
BY

McPHAIL ASSOCIATES, LLC

Date: NOVEMBER 2017	Dwn: F.G.P.	Chkd: G.M.G.	Scale: 1" = 2500'
Project No: 6130			

FILE NAME: \\McPhail-fs2\McPhail\Acad\JOBS\6130\RGP\6130-F03.dwg

FIGURE 4A



GRAPHIC SCALE

120 0 120 240

REFERENCE: THIS PLAN WAS PREPARED FROM AN 30-SCALE DRAWING GENERATED FROM THE BOSTON WATER AND SEWER DATABASE PRINTED ON JULY 24, 2017

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3686, 3688 & 3690 WASHINGTON STREET - FOREST HILLS
BOSTON MASSACHUSETTS

POSSIBLE BWSC SYSTEM ENTRY LOCATIONS

FOR

RESIDENCES AT FOREST HILLS STATION, LLP

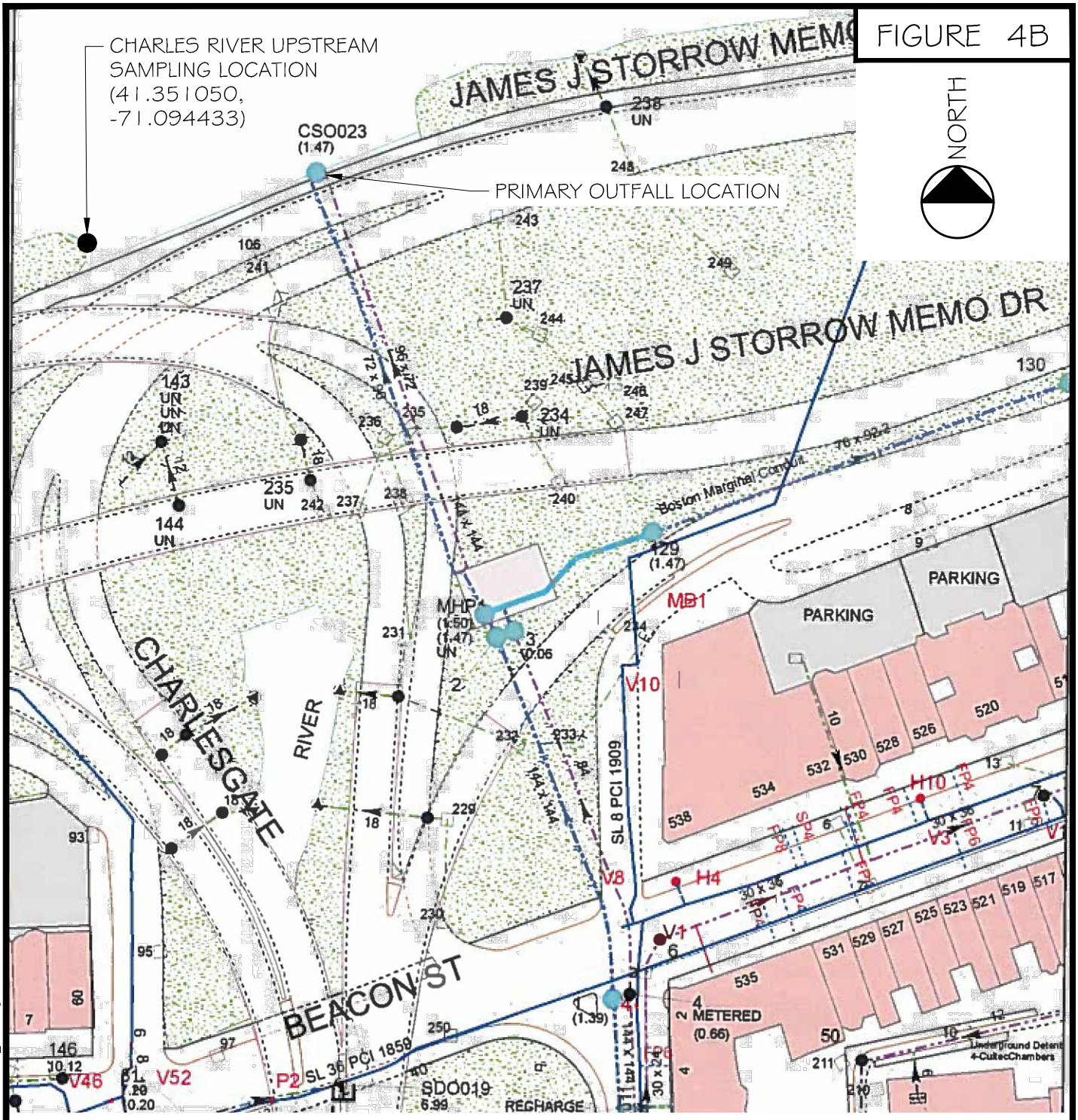
BY

McPHAIL ASSOCIATES, LLC

Date: NOVEMBER 2017	Dwn: F.G.P.	Chkd: G.M.G.	Scale: 1" = 120'
Project No: 6130			

FILE NAME: \\McPhail-fs2\McPhail\Cad\JOBS\6130\RGP\6130-F04.dwg

FIGURE 4B



GRAPHIC SCALE

100 0 100 200

REFERENCE: THIS PLAN WAS PREPARED FROM AN 100-SCALE DRAWING GENERATED FROM THE BOSTON WATER AND SEWER DATABASE ON MAY 11, 2017

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3686, 3688 & 3690 WASHINGTON STREET - FOREST HILLS
BOSTON MASSACHUSETTS

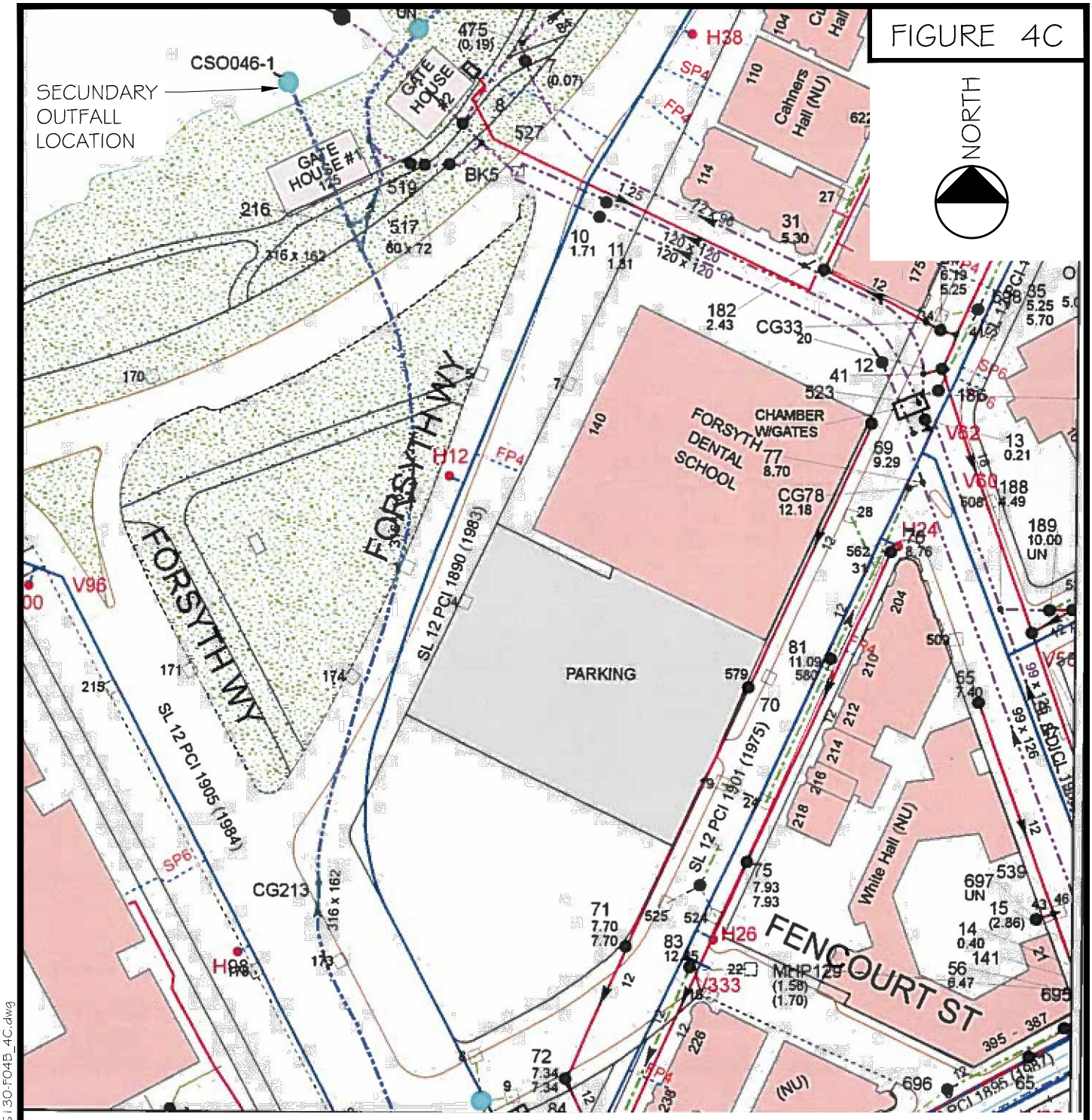
PRIMARY OUTFALL LOCATION & UPSTREAM SAMPLING LOCATION

FOR
RESIDENCES AT FOREST HILLS STATION, LLP
BY
McPHAIL ASSOCIATES, LLC

Date: NOVEMBER 2017	Dwn: F.G.P.	Chkd: G.M.G.	Scale: 1" = 100'
Project No: 6130			

FILE NAME: \\McPhail-fs2\McPhail\Acad\JOBS\6130\RGP\6130-F04B_4C.dwg

FIGURE 4C



REFERENCE: THIS PLAN WAS PREPARED FROM AN 100-SCALE DRAWING GENERATED FROM THE BOSTON WATER AND SEWER DATABASE ON MAY 11, 2017

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3686, 3688 & 3690 WASHINGTON STREET - FOREST HILLS
BOSTON MASSACHUSETTS

SECONDARY OUTFALL LOCATION

FOR

RESIDENCES AT FOREST HILLS STATION, LLP

BY

McPHAIL ASSOCIATES, LLC

Date: NOVEMBER 2017	Dwn: F.G.P.	Chkd: G.M.G.	Scale: 1" = 100'
Project No: 6130			

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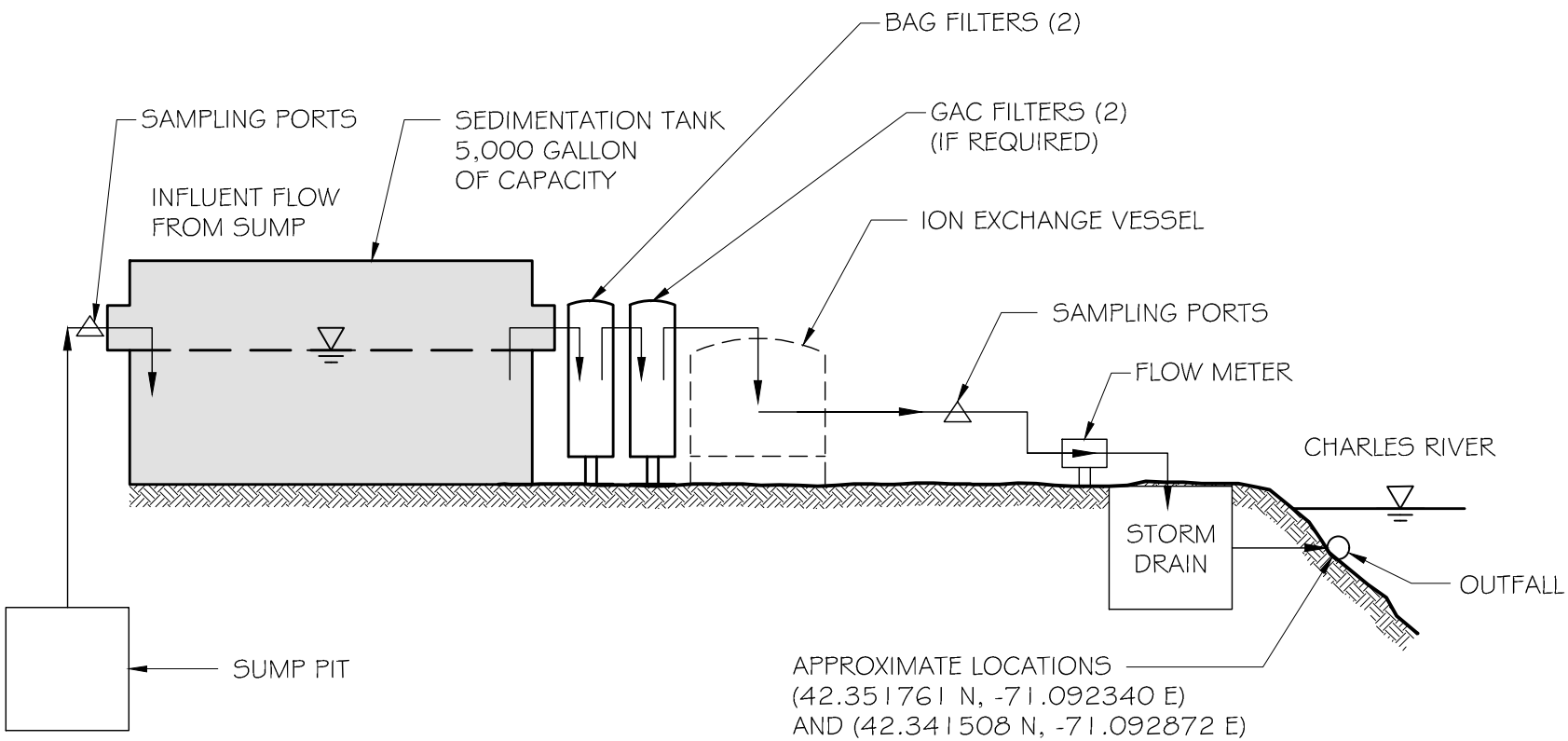
FILE NAME: \\McPhail-fs2\McPhail\Acad\JOBS\6130\RGP\6130-F05.dwg

FIGURE 5



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3686, 3688 & 3690 WASHINGTON STREET - FOREST HILLS
BOSTON MASSACHUSETTS

SCHEMATIC OF TREATMENT SYSTEM

FOR

RESIDENCES AT FOREST HILLS STATION, LLP

BY

McPHAIL ASSOCIATES, LLC
CONSULTING GEOTECHNICAL ENGINEERS

Date: NOVEMBER 2017	Dwn: F.G.P.	Chkd: G.M.G.	Scale: N.T.S.
Project No: 6130			

TABLE 1
Results of Groundwater Laboratory Analysis

3686, 3688 and 3690 Washington Street - Forest Hills
Project No. 6130

LOCATION	B-7 (OW)	B-7 (OW)	B-8 (OW)	B-8 (OW)	B-9 (OW)	B-9 (OW)	B-8 (OW)	B-9 (OW)
SAMPLING DATE	4/21/2016	5/6/2016	4/21/2016	5/6/2016	4/21/2016	5/6/2016	7/3/2017	7/3/2017
LAB SAMPLE ID	L1611886-03	L1613810-01	L1611886-01	L1613810-02	L1611886-02	L1613810-03	L1722656-02	L1722656-01
General Chemistry (µg/l)								
Chromium, Trivalent	-	-	-	-	-	-	ND(10)	ND(10)
Chromium, Hexavalent	-	-	-	-	-	-	ND(10)	ND(10)
Cyanide, Total	-	-	-	-	-	-	ND(5)	9
Nitrogen, Ammonia	-	-	-	-	-	-	231	164
Chlorine, Total Residual	-	-	-	-	-	-	ND(20)	ND(20)
Solids, Total Suspended	-	-	-	-	-	-	7400	8300
Total Phosphorous	-	17	-	17	-	19	-	-
TPH, SGT-HEM	-	-	-	-	-	-	ND(4000)	ND(4000)
Total Metals (µg/l)								
Iron, Total	-	-	-	-	-	-	219	118
Lead, Total	-	-	-	-	-	-	ND(0.5)	1.04
Mercury, Total	-	-	-	-	-	-	ND(0.2)	ND(0.2)
Nickel, Total	-	-	-	-	-	-	ND(2)	ND(2)
Silver, Total	-	-	-	-	-	-	ND(0.4)	0.6
Antimony, Total	-	-	-	-	-	-	ND(4)	ND(4)
Arsenic, Total	-	-	-	-	-	-	ND(1)	ND(1)
Cadmium, Total	-	-	-	-	-	-	ND(0.2)	0.21
Chromium, Total	-	-	-	-	-	-	ND(1)	ND(1)
Copper, Total	-	-	-	-	-	-	1.48	4.41
Zinc, Total	-	-	-	-	-	-	ND(10)	19.38
Selenium, Total	-	-	-	-	-	-	ND(5)	5.27
Anions by Ion Chromatography (µg/l)								
Chloride	-	-	-	-	-	-	432000	1080000
Extractable Petroleum Hydrocarbons (ug/l)								
C9-C18 Aliphatics	ND(100)	-	ND(100)	-	ND(100)	-	-	-
C19-C36 Aliphatics	ND(100)	-	ND(100)	-	ND(100)	-	-	-
C11-C22 Aromatics, Adjusted	ND(100)	-	ND(100)	-	ND(100)	-	-	-
Naphthalene	ND(10)	-	ND(10)	-	ND(10)	-	-	-
2-Methylnaphthalene	ND(10)	-	ND(10)	-	ND(10)	-	-	-
Acenaphthylene	ND(10)	-	ND(10)	-	ND(10)	-	-	-
Acenaphthene	ND(10)	-	ND(10)	-	ND(10)	-	-	-
Fluorene	ND(10)	-	ND(10)	-	ND(10)	-	-	-
Phenanthrene	ND(10)	-	ND(10)	-	ND(10)	-	-	-
Anthracene	ND(10)	-	ND(10)	-	ND(10)	-	-	-
Fluoranthene	ND(10)	-	ND(10)	-	ND(10)	-	-	-
Pyrene	ND(10)	-	ND(10)	-	ND(10)	-	-	-
Benzo(a)anthracene	ND(10)	-	ND(10)	-	ND(10)	-	-	-
Chrysene	ND(10)	-	ND(10)	-	ND(10)	-	-	-
Benzo(b)fluoranthene	ND(10)	-	ND(10)	-	ND(10)	-	-	-
Benzo(k)fluoranthene	ND(10)	-	ND(10)	-	ND(10)	-	-	-
Benzo(a)pyrene	ND(10)	-	ND(10)	-	ND(10)	-	-	-
Indeno(1,2,3-cd)Pyrene	ND(10)	-	ND(10)	-	ND(10)	-	-	-
Dibenzo(a,h)anthracene	ND(10)	-	ND(10)	-	ND(10)	-	-	-
Benzo(ghi)perylene	ND(10)	-	ND(10)	-	ND(10)	-	-	-
MCP PAHs by SIM (µg/l)								
Anthracene	-	-	-	-	-	-	ND(0.1)	0.31
Pyrene	-	-	-	-	-	-	ND(0.1)	0.34
Benzo(ghi)perylene	-	-	-	-	-	-	ND(0.1)	1.6
Indeno(1,2,3-cd)pyrene	-	-	-	-	-	-	ND(0.1)	1.5
Benzo(b)fluoranthene	-	-	-	-	-	-	ND(0.1)	1.1
Fluoranthene	-	-	-	-	-	-	ND(0.1)	0.34
Benzo(k)fluoranthene	-	-	-	-	-	-	ND(0.1)	1.2
Acenaphthylene	-	-	-	-	-	-	ND(0.1)	0.32
Chrysene	-	-	-	-	-	-	ND(0.1)	0.61
Benzo(a)pyrene	-	-	-	-	-	-	ND(0.1)	1.1
Dibenzo(a,h)anthracene	-	-	-	-	-	-	ND(0.1)	1.7
Benzo(a)anthracene	-	-	-	-	-	-	ND(0.1)	0.5
Acenaphthene	-	-	-	-	-	-	ND(0.1)	0.35
Phenanthrene	-	-	-	-	-	-	ND(0.1)	0.32
Fluorene	-	-	-	-	-	-	ND(0.1)	0.39
Naphthalene	-	-	-	-	-	-	ND(0.1)	0.4
2-Methylnaphthalene	-	-	-	-	-	-	ND(0.1)	0.35
SUM	-	-	-	-	-	-	-	12.43
MCP Volatile Organics (ug/l)								
Tetrahydrofuran	4	-	ND(2)	-	ND(2)	-	-	-
SUM	4	-	ALL ND	-	ALL ND	-	-	-

ND - not detected in excess of laboratory method detection limits
Blank-Not Tested
(xx)-Laboratory Method Detection Limits

TABLE 2
Results of Surfacewater Laboratory Analysis

3686, 3688 3690 Washington Street - Forest Hills
Project No. 6130

LOCATION	CHARLES RIVER
SAMPLING DATE	5/12/2017
LAB SAMPLE ID	L1715658-01
General Chemistry (ug/l)	
Chromium, Trivalent	ND(10)
Nitrogen, Ammonia	304
Chromium, Hexavalent	3
Total Hardness by SM 2340B (ug/l)	
Hardness	96500
Total Metals (ug/l)	
Antimony, Total	2.02
Arsenic, Total	1.05
Cadmium, Total	ND(1)
Chromium, Total	1.24
Copper, Total	3.66
Iron, Total	1010
Lead, Total	4.13
Mercury, Total	ND(0.2)
Nickel, Total	3.2
Selenium, Total	ND(5)
Silver, Total	ND(1)
Zinc, Total	11.11

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

APPENDIX A:

LIMITATIONS

LIMITATIONS

The purpose of this report is to present a summary of environmental conditions, including the results of testing of groundwater samples obtained from groundwater monitoring wells on the property located at 3686, 3688 and 3690 Washington Street in Boston, Massachusetts in support of an application for approval of temporary construction dewatering discharge of groundwater into surface waters of the Commonwealth of Massachusetts under EPA's Massachusetts Remediation General Permit MAG910000.

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

The conclusions submitted in this report are based in part upon analytical data obtained from analysis of groundwater samples, and are contingent upon their validity. The data have been reviewed, and interpretations have been made in the text. It should also be noted that fluctuations in the types and levels of contaminants and variations in their flow paths may occur due to changes in seasonal water table, past practices used in disposal and other factors.

Laboratory analyses have been performed for specific constituents during the course of this assessment, as described in the text. However, it should be noted that additional constituents not searched for during the current study may be present in soil and/or groundwater at the site.

This report and application have been prepared on behalf of and for the exclusive use of Residences at Forest Hills Station, LLP. This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, other than the submission to relevant governmental agencies, nor used in whole or in part by any other party without prior written consent of McPhail Associates, LLC.

APPENDIX B:

NOTICE OF INTENT - NPDES REMEDIATION GENERAL PERMIT
BOSTON WATER & SEWER DEWATERING DISCHARGE PERMIT APPLICATION

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

A. General site information:

<table>
<tr><td rowspan="2">1. Name of site:
3686, 3688 & 3690 Washington Street - Forest Hills</td><td colspan="3">Site address:
Street: 3686, 3688 & 3690 Washington Street</td></tr>
<tr><td>City: Boston</td><td>State: MA</td><td>Zip: 02130</td></tr>
<tr><td rowspan="4">2. Site owner
Residences at Forest Hills Station, LLp

Owner is (check one): ☐ Federal ☐ State/Tribal ■ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: Andrew Kaye</td></tr>
<tr><td colspan="2">Telephone: (781) 890 5600 x101</td><td>Email: akaye@criteriondp.com</td></tr>
<tr><td colspan="3">Mailing address:
Street: 1601 Trapelo Road | Suite 280</td></tr>
<tr><td>City: Waltham</td><td>State: MA</td><td>Zip: 02451</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
Dimeo Construction Company</td><td colspan="3">Contact Person: Martin Abt</td></tr>
<tr><td colspan="2">Telephone: (617) 502 3080</td><td>Email: MAbt@Dimeo.com</td></tr>
<tr><td colspan="3">Mailing address:
Street: 4 Hyde Park</td></tr>
<tr><td>City: Jamaica Plain</td><td>State: MA</td><td>Zip: 02130</td></tr>
<tr><td>4. NPDES permit number assigned by EPA:

NPDES permit is (check all that apply: ☐ RGP ☐ DGP ☐ CGP
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td><td colspan="3">5. Other regulatory program(s) that apply to the site (check all that apply):
■ MA Chapter 21e; list RTN(s): 3-34682 & 3-34683
☐ 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	MA72-36	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.

Charles River MA72-36 - See Appendix C for further information

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.	11.5
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.	104.222

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: 5/16/2017

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

C. Source water information:

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

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

2. Source water contaminants: TSS, lead, silver, zinc, copper, PAHs	
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 023	Outfall location(s): (Latitude, Longitude) 42.351726, -71.092511
Discharges enter the receiving water(s) via (check any that apply): ■ Direct discharge to the receiving water ☐ Indirect discharge, if so, specify: Discharge outfall direct into Charles River ☐ 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: Submission of documentation to and approval from BWSC in tandem with this NOI Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ■ Yes ☐ No	
Provide the expected start and end dates of discharge(s) (month/year): January 2018 - January 2019 Indicate if the discharge is expected to occur over a duration of: ■ less than 12 months ☐ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ■ Yes ☐ No	

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

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

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

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✔	2	121,4500	75	231	197.5	Report mg/L	---
Chloride		✔	2	44,3000	50,000	1,080,000	756,000	Report µg/l	---
Total Residual Chlorine	✔		2	121,4500C	20	<DL	<DL	0.2 mg/L	
Total Suspended Solids		✔	2	121,2540D	5000	8,300	7,850	30 mg/L	
Antimony	✔		2	3,200.8	4	<DL	<DL	206 µg/L	
Arsenic	✔		2	3,200.8	1	<DL	<DL	104 µg/L	
Cadmium		✔	2	3,200.8	0.2	0.21	.21	10.2 µg/L	
Chromium III	✔		2	107,-	10	<DL	<DL	323 µg/L	
Chromium VI	✔		2	97,7196A	10	<DL	<DL	323 µg/L	
Copper		✔	2	3,200.8	1	4.41	2.95	242 µg/L	
Iron		✔	2	19,200.7	50	219	168.5	5,000 µg/L	
Lead		✔	2	3,200.8	0.5	1.04	1.54	160 µg/L	
Mercury	✔		2	3,245.1	0.2	<DL	<DL	0.739 µg/L	
Nickel	✔		2	3,200.8	2	<DL	<DL	1,450 µg/L	
Selenium		✔	2	3,200.8	5	5.27	5.14	235.8 µg/L	
Silver		✔	2	3,200.8	0.4	0.6	0.5	35.1 µg/L	
Zinc		✔	2	3,200.8	10	19.38	14.69	420 µg/L	
Cyanide		✔	2	121,4500C	5	9	7	178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX	✔		3	97,8260C	1	<DL	<DL	100 µg/L	---
Benzene	✔		3	97,8260C	0.5	<DL	<DL	5.0 µg/L	---
1,4 Dioxane	✔		3	97,8260C	250	<DL	<DL	200 µg/L	---
Acetone	✔		3	97,8260C	5	>DL	<DL	7.97 mg/L	---
Phenol	✔		0					1,080 µg/L	

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✔		3	97,8260C	1	<DL	<DL	4.4 µg/L	
1,2 Dichlorobenzene	✔		3	97,8260C	1	<DL	<DL	600 µg/L	---
1,3 Dichlorobenzene	✔		3	97,8260C	1	<DL	<DL	320 µg/L	---
1,4 Dichlorobenzene	✔		3	97,8260C	1	<DL	<DL	5.0 µg/L	---
Total dichlorobenzene	✔		3	97,8260C	1	<DL	<DL	763 µg/L in NH	---
1,1 Dichloroethane	✔		3	97,8260C	1	<DL	<DL	70 µg/L	---
1,2 Dichloroethane	✔		3	97,8260C	1	<DL	<DL	5.0 µg/L	---
1,1 Dichloroethylene	✔		3	97,8260C	1	<DL	<DL	3.2 µg/L	---
Ethylene Dibromide	✔		3	97,8260C	2	<DL	<DL	0.05 µg/L	---
Methylene Chloride	✔		3	97,8260C	2	<DL	<DL	4.6 µg/L	---
1,1,1 Trichloroethane	✔		3	97,8260C	1	<DL	<DL	200 µg/L	---
1,1,2 Trichloroethane	✔		3	97,8260C	1	<DL	<DL	5.0 µg/L	---
Trichloroethylene	✔		3	97,8260C	1	<DL	<DL	5.0 µg/L	---
Tetrachloroethylene	✔		3	97,8260C	1	<DL	<DL	5.0 µg/L	
cis-1,2 Dichloroethylene	✔		3	97,8260C	1	<DL	<DL	70 µg/L	---
Vinyl Chloride	✔		3	97,8260C	1	<DL	<DL	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✔		0					190 µg/L	
Diethylhexyl phthalate	✔		0	0		ND	ND	101 µg/L	
Total Group I PAHs		✔	2	0		7.71	4.11	1.0 µg/L	---
Benzo(a)anthracene		✔	2	8270D-	0.1	0.5	0.3	As Total PAHs	
Benzo(a)pyrene		✔	2	8270D-	0.1	1.1	0.55		
Benzo(b)fluoranthene		✔	2	8270D-	0.1	1.1	0.55		
Benzo(k)fluoranthene		✔	2	8270D-	0.1	1.2	0.65		
Chrysene		✔	2	8270D-	0.1	0.61	0.36		
Dibenzo(a,h)anthracene		✔	2	8270D-	0.1	1.7	0.9		
Indeno(1,2,3-cd)pyrene		✔	2	8270D-	0.1	1.5	0.8		

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs		✔	1	8270D-	0.1	0.4	0.25	100 µg/L	---
Naphthalene		✔	1	8270D-	2.5	0.4	0.25	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✔		0					0.000064 µg/L	---
Pentachlorophenol	✔		0					1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons		✔	1	74,1664A	4,000	<DL	<DL	5.0 mg/L	---
Ethanol	✔		0					Report mg/L	---
Methyl-tert-Butyl Ether		✔	3	97,8260C	2	<DL	<DL	70 µg/L	
tert-Butyl Alcohol	✔		0					120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether		✔	3	97,8260C	2	<DL	<DL	90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									
Total Phosphorous		✔	3	121.4500P	10	19	18		
Tetrahydrofuran		✔	3	97,8260C	2	4	<DL		

E. Treatment system information

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

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

2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge.
Settling tank, bag filters, Ion exchange resin filter and, if necessary, GAC filters

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: Ion exchange resin filter and GAC filter if necessary

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

3. Provide the **design flow capacity** in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: Frac Tank Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	50
Provide the proposed maximum effluent flow in gpm.	50
Provide the average effluent flow in gpm.	20
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:
n/a

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

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

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

G. Endangered Species Act eligibility determination

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

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

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

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

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

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

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

H. National Historic Preservation Act eligibility determination

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

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

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

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

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

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

I. Supplemental information

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

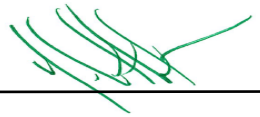
n/a

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

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

J. Certification requirement

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

BMPP certification statement:	A BMPP has been prepared in accordance with good engineering practices following Part 2.5 of 2017 RGP and shall be implemented upon initiation of discharge.
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ■ No ☐
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested. Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.	Check one: Yes ■ No ☐ NA ☐ Submission of documentation to and approval from BWSC in tandem with this NOI Check one: Yes ☐ No ■ NA ☐
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Check one: Yes ■ No ☐ NA ☐
Signature: 	Date: 12/28/17
Print Name and Title: Martin Abt, Superintendent	

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

DEWATERING DISCHARGE PERMIT APPLICATION

OWNER / AUTHORIZED APPLICANT PROVIDE INFORMATION HERE:

Company Name: Residences at Forest Hills Station, LLP Address: 1601 Trapelo Road, Suite 280, Waltham, MA 02451

Phone Number: (781) 890-5600 Fax number: _____

Contact person name: Andrew Kaye Title: Executive Vice President

Cell number: _____ Email address: akaye@criteriondp.com

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

Owner's Information (if different from above):

Owner of property being dewatered: _____

Owner's mailing address: _____ Phone number: _____

Location of Discharge & Proposed Treatment System(s):

Street number and name: 3686, 3688 & 3690 Washington St Neighborhood Jamaica Plain

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

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

BWSC Outfall No. CSO 023 Receiving Waters Charles River

Temporary Discharges (Provide Anticipated Dates of Discharge): From 01/2018 To 01/2019

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

Permanent Discharges

- ☐ Foundation Drainage
- ☐ Accumulated Surface Water
- ☐ Non-contact/Uncontaminated Process
- ☐ Crawl Space/Footing Drain
- ☐ Non-contact/Uncontaminated Cooling
- ☐ 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: 1/3/18

APPENDIX C:

DEP PRIORITY RESOURCES MAP

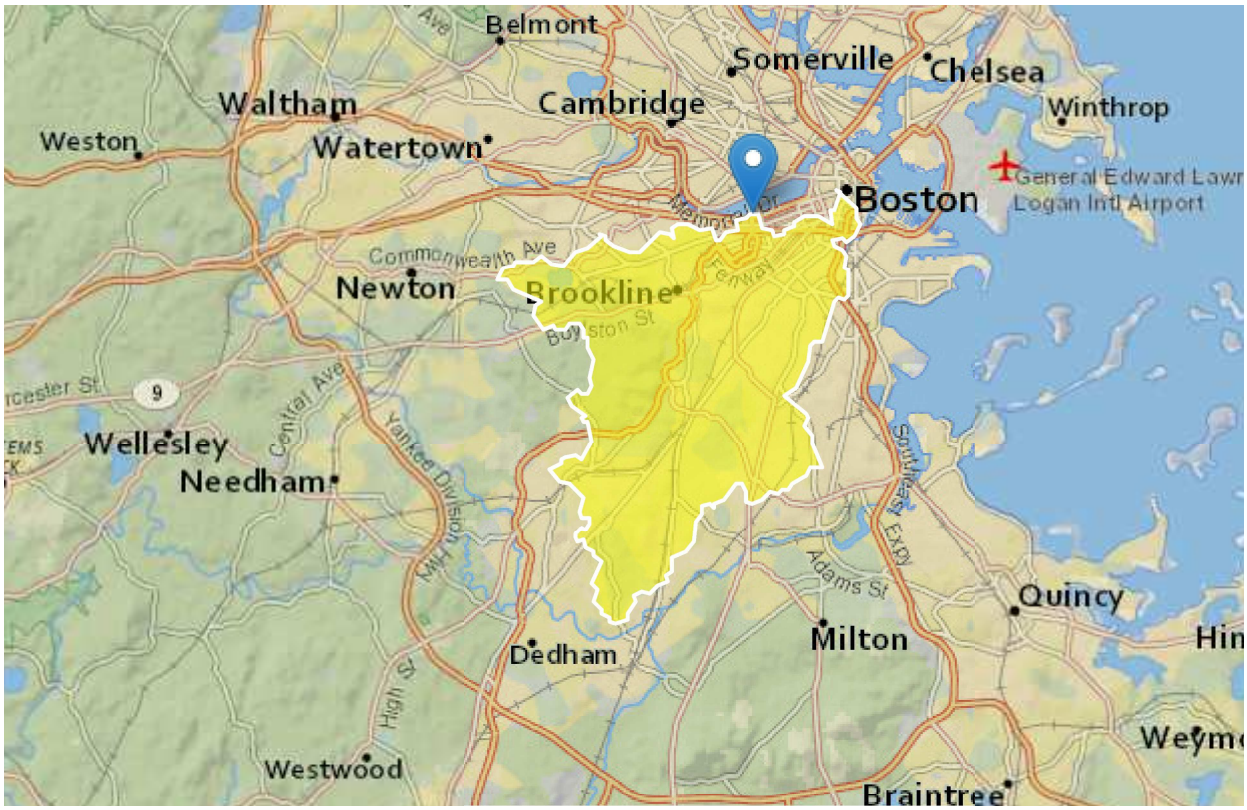
USGS STREAMFLOW STATISTICS REPORT

DILUTION FACTOR AND WQBEL CALCULATIONS

ADDITIONAL NOI SUPPORT INFORMATION

StreamStats Report

Region ID: MA
Workspace ID: MA20170810161215998000
Clicked Point (Latitude, Longitude): 42.35184, -71.09285
Time: 2017-08-10 16:13:09 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	23.9	square miles
BSLDEM250	Mean basin slope computed from 1:250K DEM	2.525	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	1.83	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionlesstest

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	23.9	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	2.525	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	1.83	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionlesstest	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	14.1	ft^3/s
7 Day 10 Year Low Flow	11.5	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/)

From: Gina Garten
Sent: Tuesday, August 15, 2017 9:29 AM
To: Kirk W. Seaman
Subject: FW: NOI Dilution Factor
Attachments: 3686, 3688 and 3690 Washington Street, Boston.pdf

Gina M. Garten

McPHAIL ASSOCIATES, LLC
Tel: 617-868-1420 Ext. 331

From: Ruan, Xiaodan (DEP) [mailto:xiaodan.ruan@state.ma.us]
Sent: Thursday, August 10, 2017 4:23 PM
To: Gina Garten
Subject: RE: NOI Dilution Factor

Hi Gina,

Thank you for providing the information!

I run the Streamstats by clicking on the blue cell that is nearest to the discharge location (CSO023 outfall) based on the map you provided. The generated Streamstats report shows that the 7Q10 is 11.5 cfs (7.433 MGD) (see attached report).

With the design flow of 0.072 MGD (50 GPM), the dilution factor is:

Dilution Factor = (0.072+7.433) / 0.072 = 104.2

If you have any questions, please let me know. Otherwise you can attach this email to the NOI or write in today's date on the NOI where you have to check off that you have consulted with MassDEP. This will make it easier for Shauna Little when she is reviewing the NOI. Since the Charles River is not listed as an Outstanding Resource Water, you are all set from MassDEP.

Thank you,
Xiaodan

From: Gina Garten [mailto:ggarten@mcphailgeo.com]
Sent: Wednesday, August 09, 2017 1:13 PM
To: Ruan, Xiaodan (DEP)
Subject: RE: NOI Dilution Factor

Xiaodan,

See the attached discharge flow path to the Charles River, which was provided by BWSC. I also attached close-up figures of the flow path. Based on the figures, the discharge flow path continues north away from the subject site on the Stony Brook Conduit. The primary discharge location is an outfall pipe listed

as CSO 023 (according to the BWSC). Attached is the close-up of the primary discharge location in the Charles River. Let me know if you have any other questions.

Gina M. Garten

McPHAIL ASSOCIATES, LLC
Tel: 617-868-1420 Ext. 331

From: Ruan, Xiaodan (DEP) [mailto:xiaodan.ruan@state.ma.us]
Sent: Tuesday, August 08, 2017 3:37 PM
To: Gina Garten
Subject: RE: NOI Dilution Factor

Could you describe in detail how the discharge gets to Charles River?

From: Gina Garten [mailto:ggarten@mcphailgeo.com]
Sent: Tuesday, August 08, 2017 2:08 PM
To: Ruan, Xiaodan (DEP)
Subject: RE: NOI Dilution Factor

The address is 3686, 3688 and 3690 Washington Street, Boston. And yes that is the design flow (not average). Let me know if you have other questions.

Gina M. Garten

McPHAIL ASSOCIATES, LLC
Tel: 617-868-1420 Ext. 331

From: Ruan, Xiaodan (DEP) [mailto:xiaodan.ruan@state.ma.us]
Sent: Tuesday, August 08, 2017 11:36 AM
To: Gina Garten
Subject: RE: NOI Dilution Factor

Hi Gina,

Could you send me the address of the site so that I can see where it is in relation to the discharge location on Charles River?
Could you confirm that 0.072 MGD (50 GPM) is the design flow of the treatment system not the average flow?

Thanks,
Xiaodan

From: Gina Garten [mailto:ggarten@mcphailgeo.com]
Sent: Monday, August 07, 2017 5:04 PM
To: Little, Shauna
Cc: Ruan, Xiaodan (DEP)
Subject: RE: NOI Dilution Factor

Thanks.

Xiaodan, attached are the excel spreadsheet and StreamStats report. Let me if you have questions.

Gina M. Garten

McPHAIL ASSOCIATES, LLC
Tel: 617-868-1420 Ext. 331

From: Little, Shauna [mailto:Little.Shauna@epa.gov]
Sent: Monday, August 07, 2017 4:54 PM
To: Gina Garten
Cc: Ruan, Xiaodan (DEP)
Subject: RE: NOI Dilution Factor

Hi Gina,

The permit requires MassDEP to confirm 7Q10 and dilution factors. Cathy Vakalopoulos, the RGP contact, is out of the office at the moment, but I have copied Xiaodan, who can help.

Regards,

Shauna Little
Physical Scientist
USEPA New England
5 Post Office Square, Suite 100/OEP06-1
Boston, Massachusetts 02109-3912
Phone (617)918-1989

From: Gina Garten [mailto:ggarten@mcphailgeo.com]
Sent: Monday, August 07, 2017 4:36 PM
To: Little, Shauna <Little.Shauna@epa.gov>
Subject: RE: NOI Dilution Factor

Hi Shauna – I wanted to see if you received my email below. I am looking to get confirmation on the calculated dilution factor. Let me know if you have any questions. Thanks.

Gina M. Garten

McPHAIL ASSOCIATES, LLC
Tel: 617-868-1420 Ext. 331

From: Gina Garten
Sent: Friday, July 28, 2017 8:45 AM
To: 'Little.Shauna@epa.gov'
Subject: NOI Dilution Factor [Filed 28 Jul 2017 08:45]

Good morning Shauna,

I am emailing you to get confirmation on a dilution factor for a discharge to the Charles River. The calculated dilution factor is 222.72. The design flow is 0.072 MGD (50 GPM). See attached the excel spreadsheet and the StreamStats report. Let me know if you have any questions or if you need anything else.

Thanks,

Gina M. Garten

McPHAIL ASSOCIATES, LLC
2269 Massachusetts Avenue
Cambridge, MA 02140
Tel: 617-868-1420 Ext. 331
Direct: 617-349-7331
www.mcphailgeo.com

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Suffolk County, Massachusetts

Local office

New England Ecological Services Field Office

(603) 223-2541
(603) 223-0104

70 Commercial Street, Suite 300
Concord, NH 03301-5094

http://www.fws.gov/newengland

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.

5. Click REQUEST SPECIES LIST.

Listed species[1] are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.

THERE ARE NO ENDANGERED SPECIES EXPECTED TO OCCUR AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service[3]. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data http://www.birdscanada.org/birdmon/default/datasummaries.jsp

The migratory birds species listed below are species of particular conservation concern (e.g. Birds of Conservation Concern) that may be potentially affected by activities in this location. It is not a list of every bird species you may find in this location, nor a guarantee that all of the bird species on this list will be found on or near this location. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To view available data on other bird species that may occur in your project area, please visit the AKN Histogram Tools and Other Bird Data Resources. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

NAME	SEASON(S)
American Bittern Botaurus lentiginosus https://ecos.fws.gov/ecp/species/6582	On Land: Breeding
American Oystercatcher Haematopus palliatus https://ecos.fws.gov/ecp/species/8935	On Land: Breeding
Bald Eagle Haliaeetus leucocephalus https://ecos.fws.gov/ecp/species/1626	On Land: Year-round
Black-billed Cuckoo Coccyzus erythropthalmus https://ecos.fws.gov/ecp/species/9399	On Land: Breeding
Blue-winged Warbler Vermivora pinus	On Land: Breeding
Canada Warbler Wilsonia canadensis	On Land: Breeding
Hudsonian Godwit Limosa haemastica	At Sea: Migrating
Least Bittern Ixobrychus exilis https://ecos.fws.gov/ecp/species/6175	On Land: Breeding
Olive-sided Flycatcher Contopus cooperi https://ecos.fws.gov/ecp/species/3914	On Land: Breeding

Peregrine Falcon Falco peregrinus https://ecos.fws.gov/ecp/species/8831	On Land: Wintering
Pied-billed Grebe Podilymbus podiceps	On Land: Breeding
Prairie Warbler Dendroica discolor	On Land: Breeding
Purple Sandpiper Calidris maritima	On Land: Wintering
Saltmarsh Sparrow Ammodramus caudacutus	On Land: Breeding
Seaside Sparrow Ammodramus maritimus	On Land: Breeding
Short-eared Owl Asio flammeus https://ecos.fws.gov/ecp/species/9295	On Land: Wintering
Snowy Egret Egretta thula	On Land: Breeding
Upland Sandpiper Bartramia longicauda https://ecos.fws.gov/ecp/species/9294	On Land: Breeding
Willow Flycatcher Empidonax traillii https://ecos.fws.gov/ecp/species/3482	On Land: Breeding
Wood Thrush Hylocichla mustelina	On Land: Breeding
Worm Eating Warbler Helmitheros vermivorum	On Land: Breeding

What does IPaC use to generate the list of migratory bird species potentially occurring in my specified location?

Landbirds:

Migratory birds that are displayed on the IPaC species list are based on ranges in the latest edition of the National Geographic Guide, Birds of North America (6th Edition, 2011 by Jon L. Dunn, and Jonathan Alderfer). Although these ranges are coarse in nature, a number of U.S. Fish and Wildlife Service migratory bird biologists agree that these maps are some of the best range maps to date. These ranges were clipped to a specific Bird Conservation Region (BCR) or USFWS Region/Regions, if it was indicated in the 2008 list of Birds of Conservation Concern (BCC) that a species was a BCC species only in a particular Region/Regions. Additional modifications have been made to some ranges based on more local or refined range information and/or information provided by U.S. Fish and Wildlife Service biologists with species expertise. All migratory birds that show in areas on land in IPaC are those that appear in the 2008 Birds of Conservation Concern report.

Atlantic Seabirds:

Ranges in IPaC for birds off the Atlantic coast are derived from species distribution models developed by the National Oceanic and Atmospheric Association (NOAA) National Centers for Coastal Ocean Science (NCCOS) using the best available seabird survey data for the offshore Atlantic Coastal region to date. NOAANCCOS assisted USFWS in developing seasonal species ranges from their models for specific use in IPaC. Some of these birds are not BCC species but were of interest for inclusion because they may occur in high abundance off the coast at different times throughout the year, which potentially makes them more susceptible to certain types of development and activities taking place in that area. For more refined details about the abundance and richness of bird species within your project area off the Atlantic Coast, see the Northeast Ocean Data Portal. The Portal also offers data and information about other types of taxa that may be helpful in your project review.

About the NOAANCCOS models: the models were developed as part of the NOAANCCOS project: Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf. The models resulting from this project are being used in a number of decision-support/mapping products in order to help guide decision-making on activities off the Atlantic Coast with the goal of reducing impacts to migratory birds. One such product is the Northeast Ocean Data Portal, which can be used to explore details about the relative occurrence and abundance of bird species in a particular area off the Atlantic Coast.

All migratory bird range maps within IPaC are continuously being updated as new and better information becomes available.

Can I get additional information about the levels of occurrence in my project area of specific birds or groups of birds listed in IPaC?

Landbirds:

The Avian Knowledge Network (AKN) provides a tool currently called the "Histogram Tool", which draws from the data within the AKN (latest,survey, point count, citizen science datasets) to create a view of relative abundance of species within a particular location over the course of the year. The results of the tool depict the frequency of detection of a species in survey events, averaged between multiple datasets within AKN in a particular week of the year. You may access the histogram tools through the Migratory Bird Programs AKN Histogram Tools webpage.

The tool is currently available for 4 regions (California, Northeast U.S., Southeast U.S. and Midwest), which encompasses the following 32 states: Alabama, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North, Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin.

In the near future, there are plans to expand this tool nationwide within the AKN, and allow the graphs produced to appear with the list of trust resources generated by IPaC, providing you with an additional level of detail about the level of occurrence of the species of particular concern potentially occurring in your project area throughout the course of the year.

Atlantic Seabirds:

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAANCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Facilities

Wildlife refuges

Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGES AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

MassDEP - Bureau of Waste Site Cleanup

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

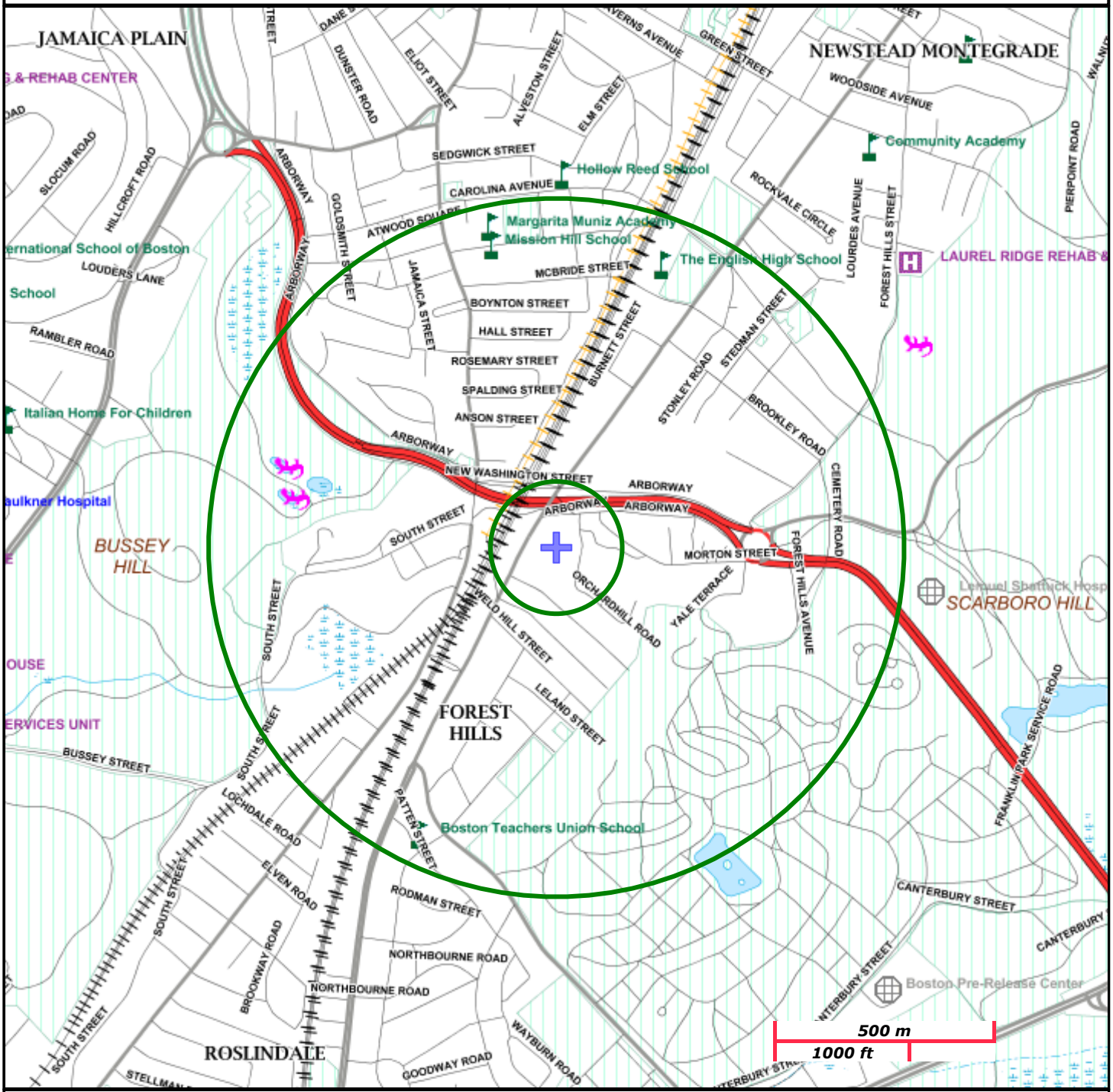
Site Information:

3694 WASHINGTON STREET BOSTON, MA

NAD83 UTM Meters:
4685303mN , 325891mE (Zone: 19)
July 24, 2017

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

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



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

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

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

Aquifers: Medium Yield, High Yield, EPA Sole Source

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

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

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

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

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Street No: 3694; Street Name: washington St; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Street No: 3696; Street Name: washington St; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Street No: 3698-3690; Street Name: washington St; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Street No: 15; Street Name: Morton St; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Place: Jamaica Plain; Street Name: Washington st; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year
BOS.10189		Union Ave	Boston	1870
BOS.9340	Forest Hills Elevated Railway Station	Washington St	Boston	1909
BOS.9345	Green Street Rapid Transit Station	Washington St	Boston	1912
BOS.10182	Arborway Garage	Washington St	Boston	c 1925
BOS.10177	Littlefield, D. T. and W. S. Apartment Block	3115-3125 Washington St	Boston	1893
BOS.10172	Littlefield, D. F. and W. S. Apartment House	3116-3122 Washington St	Boston	r 1905
BOS.10173	Curless, Margaret Three-Family House	3142 Washington St	Boston	1897
BOS.10174	Kraft, T. J. Three-Family House	3144 Washington St	Boston	1897
BOS.10178	Preising, John P. Three Decker	3147-3149 Washington St	Boston	1894
BOS.10179	Franklin Brewery Company	3179 Washington St	Boston	1894
BOS.10175	Parlon, William Three Decker	3236 Washington St	Boston	1892
BOS.10180	Jackson, Samuel House	3313 Washington St	Boston	c 1858
BOS.10176	West Roxbury Primary School	3328 Washington St	Boston	r 1860
BOS.10181	Arborway Carmen's Lobby	3640 Washington St	Boston	1924
BOS.9344	Lotus Place Carbarn and Trolley Repair Facility	3740 Washington St	Boston	1925

APPENDIX D:

LABORATORY ANALYTIC DATA - GROUNDWATER

ANALYTICAL REPORT

Lab Number:	L1611886
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	FOREST HILLS
Project Number:	6130.9.00
Report Date:	04/30/16

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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

Project Name: FOREST HILLS
Project Number: 6130.9.00

Lab Number: L1611886
Report Date: 04/30/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1611886-01	B-8 (OW)	WATER	3694 WASHINGTON	04/21/16 11:15	04/21/16
L1611886-02	B-9 (OW)	WATER	3694 WASHINGTON	04/21/16 10:00	04/21/16
L1611886-03	B-7 (OW)	WATER	3694 WASHINGTON	04/21/16 08:30	04/21/16

Project Name: FOREST HILLS **Lab Number:** L1611886

Project Number: 6130.9.00 **Report Date:** 04/30/16

MADEP MCP Response Action Analytical Report Certification

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

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

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

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

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

Project Name: FOREST HILLS
Project Number: 6130.9.00

Lab Number: L1611886
Report Date: 04/30/16

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:	FOREST HILLS	**Lab Number:**	L1611886
Project Number:	6130.9.00	**Report Date:**	04/30/16

Case Narrative (continued)

MCP Related Narratives

Volatile Organics

In reference to question H:

The initial calibration, associated with L1611886-01 through -03, did not meet the method required minimum response factor on the lowest calibration standard for 2-butanone (0.07707) and 1,4-dioxane (0.00186), as well as the average response factor for 2-butanone and 1,4-dioxane.

The continuing calibration standard, associated with L1611886-01 through -03, is outside the acceptance criteria for several compounds; however, it is within overall method allowances. A copy of the continuing calibration standard is included as an addendum to this report.

EPH

In reference to question G:

One or more of the target analytes did not achieve the requested CAM reporting limits.

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

Authorized Signature: Cristin Walker

Title: Technical Director/Representative Date: 04/30/16

ORGANICS

VOLATILES

Project Name: FOREST HILLS
Project Number: 6130.9.00
Lab Number: L1611886
Report Date: 04/30/16

SAMPLE RESULTS

Lab ID: L1611886-01
Client ID: B-8 (OW)
Sample Location: 3694 WASHINGTON
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/26/16 13:35
Analyst: MM

Date Collected: 04/21/16 11:15
Date Received: 04/21/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: FOREST HILLS **Lab Number:** L1611886

Project Number: 6130.9.00 **Report Date:** 04/30/16

SAMPLE RESULTS

Lab ID: L1611886-01 Date Collected: 04/21/16 11:15

Client ID: B-8 (OW) Date Received: 04/21/16

Sample Location: 3694 WASHINGTON Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylene (Total)	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethene (total)	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1

Project Name: FOREST HILLS **Lab Number:** L1611886

Project Number: 6130.9.00 **Report Date:** 04/30/16

SAMPLE RESULTS

Lab ID: L1611886-01 Date Collected: 04/21/16 11:15

Client ID: B-8 (OW) Date Received: 04/21/16

Sample Location: 3694 WASHINGTON Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	ND		ug/l	2.0	--	1
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	98		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	99		70-130

Project Name: FOREST HILLS
Project Number: 6130.9.00
Lab Number: L1611886
Report Date: 04/30/16

SAMPLE RESULTS

Lab ID: L1611886-02
Client ID: B-9 (OW)
Sample Location: 3694 WASHINGTON
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/26/16 14:07
Analyst: MM

Date Collected: 04/21/16 10:00
Date Received: 04/21/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: FOREST HILLS **Lab Number:** L1611886

Project Number: 6130.9.00 **Report Date:** 04/30/16

SAMPLE RESULTS

Lab ID: L1611886-02 Date Collected: 04/21/16 10:00

Client ID: B-9 (OW) Date Received: 04/21/16

Sample Location: 3694 WASHINGTON Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylene (Total)	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethene (total)	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1

Project Name: FOREST HILLS **Lab Number:** L1611886

Project Number: 6130.9.00 **Report Date:** 04/30/16

SAMPLE RESULTS

Lab ID: L1611886-02 Date Collected: 04/21/16 10:00

Client ID: B-9 (OW) Date Received: 04/21/16

Sample Location: 3694 WASHINGTON Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	ND		ug/l	2.0	--	1
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	101		70-130
Toluene-d8	96		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	99		70-130

Project Name: FOREST HILLS
Project Number: 6130.9.00
Lab Number: L1611886
Report Date: 04/30/16

SAMPLE RESULTS

Lab ID: L1611886-03
Client ID: B-7 (OW)
Sample Location: 3694 WASHINGTON
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 04/26/16 14:40
Analyst: MM

Date Collected: 04/21/16 08:30
Date Received: 04/21/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1

Project Name: FOREST HILLS **Lab Number:** L1611886

Project Number: 6130.9.00 **Report Date:** 04/30/16

SAMPLE RESULTS

Lab ID: L1611886-03 Date Collected: 04/21/16 08:30

Client ID: B-7 (OW) Date Received: 04/21/16

Sample Location: 3694 WASHINGTON Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylene (Total)	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethene (total)	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	4.0		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1

Project Name: FOREST HILLS
Lab Number: L1611886
Project Number: 6130.9.00
Report Date: 04/30/16

SAMPLE RESULTS

Lab ID: L1611886-03
Client ID: B-7 (OW)
Sample Location: 3694 WASHINGTON
Date Collected: 04/21/16 08:30
Date Received: 04/21/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Ethyl ether	ND		ug/l	2.0	--	1
Isopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	95		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	99		70-130

Project Name: FOREST HILLS
Project Number: 6130.9.00

Lab Number: L1611886
Report Date: 04/30/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/26/16 05:25
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-03 Batch: WG887282-3					
Methylene chloride	ND		ug/l	2.0	--
1,1-Dichloroethane	ND		ug/l	1.0	--
Chloroform	ND		ug/l	1.0	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,2-Dichloropropane	ND		ug/l	1.0	--
Dibromochloromethane	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.0	--
Tetrachloroethene	ND		ug/l	1.0	--
Chlorobenzene	ND		ug/l	1.0	--
Trichlorofluoromethane	ND		ug/l	2.0	--
1,2-Dichloroethane	ND		ug/l	1.0	--
1,1,1-Trichloroethane	ND		ug/l	1.0	--
Bromodichloromethane	ND		ug/l	1.0	--
trans-1,3-Dichloropropene	ND		ug/l	0.50	--
cis-1,3-Dichloropropene	ND		ug/l	0.50	--
1,3-Dichloropropene, Total	ND		ug/l	0.50	--
1,1-Dichloropropene	ND		ug/l	2.0	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--
Benzene	ND		ug/l	0.50	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Chloromethane	ND		ug/l	2.0	--
Bromomethane	ND		ug/l	2.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	2.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
trans-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--

Project Name: FOREST HILLS
Project Number: 6130.9.00

Lab Number: L1611886
Report Date: 04/30/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/26/16 05:25
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-03 Batch: WG887282-3					
1,2-Dichlorobenzene	ND		ug/l	1.0	--
1,3-Dichlorobenzene	ND		ug/l	1.0	--
1,4-Dichlorobenzene	ND		ug/l	1.0	--
Methyl tert butyl ether	ND		ug/l	2.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-Xylene	ND		ug/l	1.0	--
Xylene (Total)	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
1,2-Dichloroethene (total)	ND		ug/l	1.0	--
Dibromomethane	ND		ug/l	2.0	--
1,2,3-Trichloropropane	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	2.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	2.0	--
2-Butanone	ND		ug/l	5.0	--
4-Methyl-2-pentanone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.0	--
Tetrahydrofuran	ND		ug/l	2.0	--
2,2-Dichloropropane	ND		ug/l	2.0	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--
Bromobenzene	ND		ug/l	2.0	--
n-Butylbenzene	ND		ug/l	2.0	--
sec-Butylbenzene	ND		ug/l	2.0	--
tert-Butylbenzene	ND		ug/l	2.0	--
o-Chlorotoluene	ND		ug/l	2.0	--

Project Name: FOREST HILLS
Project Number: 6130.9.00

Lab Number: L1611886
Report Date: 04/30/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 04/26/16 05:25
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-03 Batch: WG887282-3					
p-Chlorotoluene	ND		ug/l	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--
Hexachlorobutadiene	ND		ug/l	0.60	--
Isopropylbenzene	ND		ug/l	2.0	--
p-Isopropyltoluene	ND		ug/l	2.0	--
Naphthalene	ND		ug/l	2.0	--
n-Propylbenzene	ND		ug/l	2.0	--
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--
Ethyl ether	ND		ug/l	2.0	--
Isopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	96		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: FOREST HILLS

Project Number: 6130.9.00

Lab Number: L1611886

Report Date: 04/30/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-03 Batch: WG887282-1 WG887282-2								
Methylene chloride	99		105		70-130	6		20
1,1-Dichloroethane	109		116		70-130	6		20
Chloroform	105		114		70-130	8		20
Carbon tetrachloride	95		109		70-130	14		20
1,2-Dichloropropane	108		115		70-130	6		20
Dibromochloromethane	85		99		70-130	15		20
1,1,2-Trichloroethane	111		123		70-130	10		20
Tetrachloroethene	103		108		70-130	5		20
Chlorobenzene	99		106		70-130	7		20
Trichlorofluoromethane	101		107		70-130	6		20
1,2-Dichloroethane	114		119		70-130	4		20
1,1,1-Trichloroethane	106		113		70-130	6		20
Bromodichloromethane	97		110		70-130	13		20
trans-1,3-Dichloropropene	93		104		70-130	11		20
cis-1,3-Dichloropropene	100		108		70-130	8		20
1,1-Dichloropropene	110		112		70-130	2		20
Bromoform	88		98		70-130	11		20
1,1,2,2-Tetrachloroethane	109		119		70-130	9		20
Benzene	107		112		70-130	5		20
Toluene	104		109		70-130	5		20
Ethylbenzene	100		105		70-130	5		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: FOREST HILLS

Project Number: 6130.9.00

Lab Number: L1611886

Report Date: 04/30/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-03 Batch: WG887282-1 WG887282-2								
Chloromethane	113		114		70-130	1		20
Bromomethane	76		83		70-130	9		20
Vinyl chloride	114		117		70-130	3		20
Chloroethane	94		97		70-130	3		20
1,1-Dichloroethene	102		109		70-130	7		20
trans-1,2-Dichloroethene	102		106		70-130	4		20
Trichloroethene	105		108		70-130	3		20
1,2-Dichlorobenzene	97		104		70-130	7		20
1,3-Dichlorobenzene	92		98		70-130	6		20
1,4-Dichlorobenzene	96		101		70-130	5		20
Methyl tert butyl ether	104		112		70-130	7		20
p/m-Xylene	99		103		70-130	4		20
o-Xylene	96		103		70-130	7		20
cis-1,2-Dichloroethene	112		113		70-130	1		20
Dibromomethane	112		114		70-130	2		20
1,2,3-Trichloropropane	117		121		70-130	3		20
Styrene	100		106		70-130	6		20
Dichlorodifluoromethane	118		124		70-130	5		20
Acetone	126		**138**	Q	70-130	9		20
Carbon disulfide	90		103		70-130	13		20
2-Butanone	130		**139**	Q	70-130	7		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: FOREST HILLS

Project Number: 6130.9.00

Lab Number: L1611886

Report Date: 04/30/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-03 Batch: WG887282-1 WG887282-2								
4-Methyl-2-pentanone	104		115		70-130	10		20
2-Hexanone	109		117		70-130	7		20
Bromochloromethane	107		110		70-130	3		20
Tetrahydrofuran	120		128		70-130	6		20
2,2-Dichloropropane	114		123		70-130	8		20
1,2-Dibromoethane	114		117		70-130	3		20
1,3-Dichloropropane	112		124		70-130	10		20
1,1,1,2-Tetrachloroethane	96		106		70-130	10		20
Bromobenzene	100		106		70-130	6		20
n-Butylbenzene	92		88		70-130	4		20
sec-Butylbenzene	90		88		70-130	2		20
tert-Butylbenzene	90		90		70-130	0		20
o-Chlorotoluene	98		102		70-130	4		20
p-Chlorotoluene	99		102		70-130	3		20
1,2-Dibromo-3-chloropropane	108		119		70-130	10		20
Hexachlorobutadiene	106		102		70-130	4		20
Isopropylbenzene	97		99		70-130	2		20
p-Isopropyltoluene	89		87		70-130	2		20
Naphthalene	108		117		70-130	8		20
n-Propylbenzene	98		96		70-130	2		20
1,2,3-Trichlorobenzene	101		110		70-130	9		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: FOREST HILLS

Project Number: 6130.9.00

Lab Number: L1611886

Report Date: 04/30/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-03 Batch: WG887282-1 WG887282-2								
1,2,4-Trichlorobenzene	101		109		70-130	8		20
1,3,5-Trimethylbenzene	94		96		70-130	2		20
1,2,4-Trimethylbenzene	95		99		70-130	4		20
Ethyl ether	102		111		70-130	8		20
Isopropyl Ether	101		105		70-130	4		20
Ethyl-Tert-Butyl-Ether	111		114		70-130	3		20
Tertiary-Amyl Methyl Ether	109		113		70-130	4		20
1,4-Dioxane	112		123		70-130	9		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	102		104		70-130
Toluene-d8	100		101		70-130
4-Bromofluorobenzene	108		111		70-130
Dibromofluoromethane	97		95		70-130

PETROLEUM HYDROCARBONS

Project Name: FOREST HILLS
Project Number: 6130.9.00
Lab Number: L1611886
Report Date: 04/30/16

SAMPLE RESULTS

Lab ID:	L1611886-01	Date Collected:	04/21/16 11:15
Client ID:	B-8 (OW)	Date Received:	04/21/16
Sample Location:	3694 WASHINGTON	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	98,EPH-04-1.1	Extraction Date:	04/28/16 21:10
Analytical Date:	04/29/16 13:17	Cleanup Method1:	EPH-04-1
Analyst:	SR	Cleanup Date1:	04/29/16

Quality Control Information

Condition of sample received:	Satisfactory
Aqueous Preservative:	Laboratory Provided Preserved Container
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

Project Name: FOREST HILLS
Project Number: 6130.9.00
Lab Number: L1611886
Report Date: 04/30/16

SAMPLE RESULTS

Lab ID: L1611886-01
Client ID: B-8 (OW)
Sample Location: 3694 WASHINGTON
Date Collected: 04/21/16 11:15
Date Received: 04/21/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Extractable Petroleum Hydrocarbons - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	48		40-140
o-Terphenyl	61		40-140
2-Fluorobiphenyl	65		40-140
2-Bromonaphthalene	69		40-140

Project Name: FOREST HILLS
Project Number: 6130.9.00
Lab Number: L1611886
Report Date: 04/30/16

SAMPLE RESULTS

Lab ID:	L1611886-02	Date Collected:	04/21/16 10:00
Client ID:	B-9 (OW)	Date Received:	04/21/16
Sample Location:	3694 WASHINGTON	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	98,EPH-04-1.1	Extraction Date:	04/28/16 21:10
Analytical Date:	04/29/16 13:49	Cleanup Method1:	EPH-04-1
Analyst:	SR	Cleanup Date1:	04/29/16

Quality Control Information

Condition of sample received:	Satisfactory
Aqueous Preservative:	Laboratory Provided Preserved Container
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

Project Name: FOREST HILLS
Project Number: 6130.9.00
Lab Number: L1611886
Report Date: 04/30/16

SAMPLE RESULTS

Lab ID: L1611886-02
Client ID: B-9 (OW)
Sample Location: 3694 WASHINGTON
Date Collected: 04/21/16 10:00
Date Received: 04/21/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Extractable Petroleum Hydrocarbons - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	47		40-140
o-Terphenyl	69		40-140
2-Fluorobiphenyl	66		40-140
2-Bromonaphthalene	70		40-140

Project Name: FOREST HILLS
Project Number: 6130.9.00
Lab Number: L1611886
Report Date: 04/30/16

SAMPLE RESULTS

Lab ID:	L1611886-03	Date Collected:	04/21/16 08:30
Client ID:	B-7 (OW)	Date Received:	04/21/16
Sample Location:	3694 WASHINGTON	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	98,EPH-04-1.1	Extraction Date:	04/28/16 21:10
Analytical Date:	04/29/16 14:21	Cleanup Method1:	EPH-04-1
Analyst:	SR	Cleanup Date1:	04/29/16

Quality Control Information

Condition of sample received:	Satisfactory
Aqueous Preservative:	Laboratory Provided Preserved Container
Sample Temperature upon receipt:	Received on Ice
Sample Extraction method:	Extracted Per the Method

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1
Naphthalene	ND		ug/l	10.0	--	1
2-Methylnaphthalene	ND		ug/l	10.0	--	1
Acenaphthylene	ND		ug/l	10.0	--	1
Acenaphthene	ND		ug/l	10.0	--	1
Fluorene	ND		ug/l	10.0	--	1
Phenanthrene	ND		ug/l	10.0	--	1
Anthracene	ND		ug/l	10.0	--	1
Fluoranthene	ND		ug/l	10.0	--	1
Pyrene	ND		ug/l	10.0	--	1
Benzo(a)anthracene	ND		ug/l	10.0	--	1
Chrysene	ND		ug/l	10.0	--	1
Benzo(b)fluoranthene	ND		ug/l	10.0	--	1
Benzo(k)fluoranthene	ND		ug/l	10.0	--	1
Benzo(a)pyrene	ND		ug/l	10.0	--	1
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--	1
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--	1
Benzo(ghi)perylene	ND		ug/l	10.0	--	1

Project Name: FOREST HILLS
Project Number: 6130.9.00
Lab Number: L1611886
Report Date: 04/30/16

SAMPLE RESULTS

Lab ID: L1611886-03
Client ID: B-7 (OW)
Sample Location: 3694 WASHINGTON
Date Collected: 04/21/16 08:30
Date Received: 04/21/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Extractable Petroleum Hydrocarbons - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	44		40-140
o-Terphenyl	69		40-140
2-Fluorobiphenyl	70		40-140
2-Bromonaphthalene	75		40-140

Project Name: FOREST HILLS
Project Number: 6130.9.00

Lab Number: L1611886
Report Date: 04/30/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 98,EPH-04-1.1
Analytical Date: 04/29/16 11:41
Analyst: SR

Extraction Method: EPA 3510C
Extraction Date: 04/28/16 21:10
Cleanup Method: EPH-04-1
Cleanup Date: 04/29/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-03 Batch: WG888521-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	55		40-140
o-Terphenyl	71		40-140
2-Fluorobiphenyl	67		40-140
2-Bromonaphthalene	71		40-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: FOREST HILLS

Project Number: 6130.9.00

Lab Number: L1611886

Report Date: 04/30/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-03 Batch: WG888521-2 WG888521-3								
C9-C18 Aliphatics	49		57		40-140	15		25
C19-C36 Aliphatics	61		71		40-140	15		25
C11-C22 Aromatics	65		60		40-140	8		25
Naphthalene	53		47		40-140	12		25
2-Methylnaphthalene	58		53		40-140	9		25
Acenaphthylene	58		54		40-140	7		25
Acenaphthene	59		55		40-140	7		25
Fluorene	62		58		40-140	7		25
Phenanthrene	64		61		40-140	5		25
Anthracene	64		61		40-140	5		25
Fluoranthene	67		64		40-140	5		25
Pyrene	67		65		40-140	3		25
Benzo(a)anthracene	67		64		40-140	5		25
Chrysene	62		59		40-140	5		25
Benzo(b)fluoranthene	72		68		40-140	6		25
Benzo(k)fluoranthene	73		69		40-140	6		25
Benzo(a)pyrene	63		60		40-140	5		25
Indeno(1,2,3-cd)Pyrene	68		65		40-140	5		25
Dibenzo(a,h)anthracene	50		47		40-140	6		25
Benzo(ghi)perylene	47		44		40-140	7		25
Nonane (C9)	**28**	Q	33		30-140	16		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: FOREST HILLS

Project Number: 6130.9.00

Lab Number: L1611886

Report Date: 04/30/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-03 Batch: WG888521-2 WG888521-3								
Decane (C10)	**37**	Q	44		40-140	17		25
Dodecane (C12)	49		56		40-140	13		25
Tetradecane (C14)	54		62		40-140	14		25
Hexadecane (C16)	56		65		40-140	15		25
Octadecane (C18)	61		71		40-140	15		25
Nonadecane (C19)	60		70		40-140	15		25
Eicosane (C20)	61		71		40-140	15		25
Docosane (C22)	61		71		40-140	15		25
Tetracosane (C24)	61		71		40-140	15		25
Hexacosane (C26)	60		70		40-140	15		25
Octacosane (C28)	60		69		40-140	14		25
Triacontane (C30)	59		68		40-140	14		25
Hexatriacontane (C36)	59		67		40-140	13		25

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Chloro-Octadecane	53		59		40-140
o-Terphenyl	78		71		40-140
2-Fluorobiphenyl	63		59		40-140
2-Bromonaphthalene	70		64		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Project Name: FOREST HILLS
Project Number: 6130.9.00

Lab Number: L1611886
Report Date: 04/30/16

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1611886-01A	Vial HCl preserved	A	N/A	3.6	Y	Absent	MCP-8260-10(14)
L1611886-01B	Vial HCl preserved	A	N/A	3.6	Y	Absent	MCP-8260-10(14)
L1611886-01C	Vial HCl preserved	A	N/A	3.6	Y	Absent	MCP-8260-10(14)
L1611886-01D	Amber 1000ml HCl preserved	A	<2	3.6	Y	Absent	EPH-DELUX-10(14)
L1611886-01E	Amber 1000ml HCl preserved	A	<2	3.6	Y	Absent	EPH-DELUX-10(14)
L1611886-02A	Vial HCl preserved	A	N/A	3.6	Y	Absent	MCP-8260-10(14)
L1611886-02B	Vial HCl preserved	A	N/A	3.6	Y	Absent	MCP-8260-10(14)
L1611886-02C	Vial HCl preserved	A	N/A	3.6	Y	Absent	MCP-8260-10(14)
L1611886-02D	Amber 1000ml HCl preserved	A	<2	3.6	Y	Absent	EPH-DELUX-10(14)
L1611886-02E	Amber 1000ml HCl preserved	A	<2	3.6	Y	Absent	EPH-DELUX-10(14)
L1611886-03A	Vial HCl preserved	A	N/A	3.6	Y	Absent	MCP-8260-10(14)
L1611886-03B	Vial HCl preserved	A	N/A	3.6	Y	Absent	MCP-8260-10(14)
L1611886-03C	Vial HCl preserved	A	N/A	3.6	Y	Absent	MCP-8260-10(14)
L1611886-03D	Amber 1000ml HCl preserved	A	<2	3.6	Y	Absent	EPH-DELUX-10(14)
L1611886-03E	Amber 1000ml HCl preserved	A	<2	3.6	Y	Absent	EPH-DELUX-10(14)

*Values in parentheses indicate holding time in days

Project Name:	FOREST HILLS	**Lab Number:**	L1611886
Project Number:	6130.9.00	**Report Date:**	04/30/16

GLOSSARY

Acronyms

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

EPA - Environmental Protection Agency.

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

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

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

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

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

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

NI - Not Ignitable.

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

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

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

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

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

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

Footnotes

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

Terms

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

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

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

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

Report Format: Data Usability Report

Project Name:	FOREST HILLS	**Lab Number:**	L1611886
Project Number:	6130.9.00	**Report Date:**	04/30/16

Data Qualifiers

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:	FOREST HILLS	**Lab Number:**	L1611886
Project Number:	6130.9.00	**Report Date:**	04/30/16

REFERENCES

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

98 Method for the Determination of Extractable Petroleum Hydrocarbons (EPH), MassDEP, May 2004, Revision 1.1 with QC Requirements & Performance Standards for the Analysis of EPH under the Massachusetts Contingency Plan, WSC-CAM-IVB, July 2010.

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 524.2: 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene
EPA 624: 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene
EPA 625: Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.
EPA 1010A: NPW: Ignitability
EPA 6010C: NPW: Strontium; SCM: Strontium
EPA 8151A: NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 9010: NPW: Amenable Cyanide Distillation, Total Cyanide Distillation
EPA 9038: NPW: Sulfate
EPA 9050A: NPW: Specific Conductance
EPA 9056: NPW: Chloride, Nitrate, Sulfate
EPA 9065: NPW: Phenols
EPA 9251: NPW: Chloride
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
EPA 8270D: NPW: Biphenyl; SCM: Biphenyl, Caprolactam
EPA 8270D-SIM Isotope Dilution: SCM: 1,4-Dioxane
SM 2540D: TSS
SM2540G: SCM: Percent Solids
EPA 1631E: SCM: Mercury
EPA 7474: SCM: Mercury
EPA 8081B: NPW and SCM: Mirex, Hexachlorobenzene.
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA 8270-SIM: NPW and SCM: Alkylated PAHs.
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, n-Butylbenzene, n-Propylbenzene, sec-Butylbenzene, tert-Butylbenzene.
Biological Tissue Matrix: ***8270D-SIM; 3050B; 3051A; 7471B; 8081B; 8082A; 6020A:*** Lead***; 8270D:*** bis(2-ethylhexyl)phthalate, Butylbenzylphthalate, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Di-n-octyl phthalate, Fluoranthene, Pentachlorophenol.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F,**
EPA 353.2: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

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

CHAIN OF CUSTODY

PAGE 1 OF 1

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

Date Rec'd in Lab: 4/22/16

ALPHA Job #: L1611886

Project Information
- Project Name: FOREST HILLS
- Project Location: 3694 WASHINGTON
- Project #: 6130.9.00
- Project Manager: AMY APFELBAUM
- ALPHA Quote #:

Report Information - Data Deliverables
- [X] ADEx
- [ ] EMAIL

Billing Information
- [ ] Same as Client info
- PO #:

Client Information
- Client: McPHAIL
- Address:
- Phone:
- Email:

Regulatory Requirements & Project Information Requirements
- [X] Yes [ ] No MA MCP Analytical Methods
- [ ] Yes [X] No CT RCP Analytical Methods
- [ ] Yes [X] No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
- [ ] Yes [X] No GW1 Standards (Info Required for Metals & EPH with Targets)
- [ ] Yes [X] No NPDES RGP
- [ ] Other State /Fed Program _____ Criteria _____

Turn-Around Time
- [X] Standard [ ] RUSH (only confirmed if pre-approved!)
- Date Due: 4/28/16 4PM

Additional Project Information:

* SCREEN BEFORE RUNNING VOC LOW. IF ELEVATED LEVELS DETECTED, RUN VOC HIGH.

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: [X] 8260 [ ] 624 [ ] 524.2	SVOC: [ ] ABN [ ] PAH	METALS: [ ] MCP 13 [ ] MCP 14 [ ] RCP 15	METALS: [ ] RCRA5 [ ] RCRA8 [ ] PP13	EPH: [X] Ranges & Targets [ ] Ranges Only	VPH: [ ] Ranges & Targets [ ] Ranges Only	[ ] PCB [ ] PEST	TPH: [ ] Quant Only [ ] Fingerprint	Sample Comments	TOTAL # BOTTLES
11886 -01	B-8 (OW)	4/21/16	1115	MW	TMC	X				X					5
-02	B-9 (OW)		1000			X				X					5
-03	B-7 (OW)		830			X				X					5
Container Type						V				A					
Preservative						B				B					

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
	4/21/16 1200		4/21/16 1600
	4/21/16 18:20		4/21/16 1820

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

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

4A

VOLATILE ORGANICS METHOD BLANK SUMMARY

SAMPLE NO.
WG887282-3BLANK

Lab Name: Alpha Analytical Labs

SDG No.: L1611886

Lab File ID: 0423B07 Lab Sample ID: WG887282-3

Date Analyzed: 04/26/16 Time Analyzed: 05:25

Instrument ID: JACK.I

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WG887282-1LCS	WG887282-1	0423B01	04/26/16 03:49
02	WG887282-2LCSD	WG887282-2	0423B03	04/26/16 04:22
03	B-8 (OW)	L1611886-01	0423B37	04/26/16 13:35
04	B-9 (OW)	L1611886-02	0423B39	04/26/16 14:07
05	B-7 (OW)	L1611886-03	0423B41	04/26/16 14:40

COMMENTS: _____

_____

page 1 of 1

FORM IV MCP-8260-10 LOW

7A
Volatile Organics CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1611886

Instrument ID: Jack.i Calibration Date: 26-APR-2016 Time: 03:49

Lab File ID: 0423B01 Init. Calib. Date(s): 13-APR-2 14-APR-2

Sample No: CCAL 1 Init. Calib. Times : 20:44 00:00

Compound	RRF	RRF	MIN RRF	%D	MAX %D	
dichlorodifluoromethane	.33636	.3975	.1	18	20	
chloromethane	.36585	.41315	.1	13	20	
vinyl chloride	.33904	.38837	.1	15	20	
bromomethane	100	76.190	.1	-24	20	F
chloroethane	.24687	.23242	.1	-6	20	
trichlorofluoromethane	.57479	.58174	.1	1	20	
ethyl ether	.1433	.14566	.05	2	20	
1,1,-dichloroethene	.3405	.34757	.1	2	20	
carbon disulfide	.86113	.7749	.1	-10	20	
freon-113	.37655	.39373	.1	5	20	
iodomethane	.67898	.49772	.05	-27	20	F
acrolein	.03051	.03861	.05	27	20	F
methylene chloride	.34362	.33948	.1	-1	20	
acetone	100	126	.1	26	20	F
trans-1,2-dichloroethene	.37139	.37736	.1	2	20	
methyl acetate	.12592	.14777	.1	17	20	
methyl tert butyl ether	.64046	.66519	.1	4	20	
tert butyl alcohol	.01475	.01541	.05	4	20	F
Diisopropyl Ether	1.1207	1.1360	.01	1	20	
1,1-dichloroethane	.54876	.59933	.2	9	20	
acrylonitrile	100	128	.05	28	20	F
Halothane	.3139	.30515	.05	-3	20	
Ethyl-Tert-Butyl-Ether	.77367	.85806	.05	11	20	
vinyl acetate	.53932	.63783	.05	18	20	
cis-1,2-dichloroethene	.37155	.41764	.1	12	20	
2,2-dichloropropane	.42429	.48572	.05	14	20	
cyclohexane	.57737	.62026	.01	7	30	
bromochloromethane	.18624	.19904	.05	7	20	
chloroform	.5891	.61985	.2	5	20	
carbontetrachloride	.51204	.48696	.1	-5	20	
tetrahydrofuran	100	120	.05	20	20	
ethyl acetate	.17004	.19946	.05	17	20	
1,1,1-trichloroethane	.56866	.6041	.1	6	20	
1,1-dichloropropene	.43859	.48158	.05	10	20	
2-butanone	.07148	.09296	.1	30	20	F
benzene	1.3895	1.4812	.5	7	20	
Tertiary-Amyl Methyl Ether	.66296	.72149	.05	9	20	
1,2-dichloroethane	.34104	.38746	.1	14	20	

FORM VII MCP-8260-10

7A
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1611886

Instrument ID: Jack.i Calibration Date: 26-APR-2016 Time: 03:49

Lab File ID: 0423B01 Init. Calib. Date(s): 13-APR-2 14-APR-2

Sample No: CCAL 1 Init. Calib. Times : 20:44 00:00

Compound	RRF	RRF	MIN RRF	%D	MAX %D	
methyl cyclohexane	.70431	.69324	.01	-2	30	
trichloroethene	.41579	.43577	.2	5	20	
dibromomethane	.17028	.19019	.05	12	20	
1,2-dichloropropane	.30361	.32834	.1	8	20	
bromodichloromethane	.41813	.40544	.2	-3	20	
1,4-dioxane	.00242	.00272	.05	12	20	F
2-chloroethylvinyl ether	.14943	.15057	.05	1	20	
cis-1,3-dichloropropene	.47546	.47779	.2	0	20	
toluene	1.0700	1.1180	.4	4	20	
tetrachloroethene	.57604	.59472	.2	3	20	
4-methyl-2-pentanone	100	105	.1	5	20	
trans-1,3-dichloropropene	100	92.712	.1	-7	20	
1,1,2-trichloroethane	.20317	.2255	.1	11	20	
ethyl-methacrylate	.26016	.28235	.01	9	30	
chlorodibromomethane	100	85.034	.1	-15	20	
1,3-dichloropropane	.38318	.42805	.05	12	20	
1,2-dibromoethane	.2719	.31083	.1	14	20	
2-hexanone	.11915	.1303	.1	9	20	
chlorobenzene	1.4114	1.3929	.5	-1	20	
ethyl benzene	2.2361	2.2426	.1	0	20	
1,1,1,2-tetrachloroethane	.45374	.43497	.05	-4	20	
p/m xylene	.99855	.99228	.1	-1	20	
o xylene	.97971	.9439	.3	-4	20	
bromoform	100	87.643	.1	-12	20	
styrene	1.5423	1.5433	.3	0	20	
isopropylbenzene	3.9756	3.8488	.1	-3	20	
bromobenzene	.99675	.99358	.05	0	20	
1,4-dichlorobutane	.70334	.77096	.01	10	30	
n-propylbenzene	4.3924	4.2899	.05	-2	20	
1,1,2,2,-tetrachloroethane	.48226	.52778	.3	9	20	
4-ethyltoluene	4.2588	4.1389	.05	-3	20	
2-chlorotoluene	2.9432	2.8784	.05	-2	20	
1,2,3-trichloropropane	.3576	.41925	.05	17	20	
1,3,5-trimethybenzene	3.3869	3.1981	.05	-6	20	
trans-1,4-dichloro-2-butene	.12951	.14309	.05	10	20	
4-chorotoluene	2.5547	2.5339	.05	-1	20	
tert-butylbenzene	3.0935	2.7842	.05	-10	20	
1,2,4-trimethylbenzene	3.3559	3.1909	.05	-5	20	

FORM VII MCP-8260-10

7A
CONTINUING CALIBRATION CHECK

Lab Name: Alpha Analytical Labs

SDG No.: L1611886

Instrument ID: Jack.i Calibration Date: 26-APR-2016 Time: 03:49

Lab File ID: 0423B01 Init. Calib. Date(s): 13-APR-2 14-APR-2

Sample No: CCAL 1 Init. Calib. Times : 20:44 00:00

Compound	RRF	RRF	MIN RRF	%D	MAX %D
sec-butylbenzene	4.3955	3.9695	.01	-10	20
p-isopropyltoluene	3.8871	3.4716	.05	-11	20
1,3-dichlorobenzene	2.1421	1.9765	.6	-8	20
1,4-dichlorobenzene	2.0459	1.9655	.5	-4	20
p-diethylbenzene	2.1386	2.0324	.05	-5	20
n-butylbenzene	2.9069	2.6645	.05	-8	20
1,2-dichlorobenzene	1.8345	1.7858	.4	-3	20
1,2,4,5-tetramethylbenzene	3.2801	3.3396	.05	2	20
1,2-dibromo-3-chloropropane	.07322	.0791	.05	8	20
1,3,5-trichlorobenzene	1.0493	1.0213	.05	-3	20
1,2,4-trichlorobenzene	1.1474	1.1551	.2	1	20
hexachlorobutadiene	.45607	.48543	.05	6	20
naphthalene	2.1179	2.2795	.05	8	20
1,2,3-trichlorobenzene	.96253	.96913	.05	1	20
dibromofluoromethane	.25324	.24655	.05	-3	20
1,2-dichloroethane-d4	.20728	.21182	.05	2	20
toluene-d8	1.0341	1.0336	.01	0	20
4-bromofluorobenzene	.66686	.72071	.05	8	20

FORM VII MCP-8260-10

ANALYTICAL REPORT

Lab Number:	L1613810
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	3694 WASHINGTON ST.
Project Number:	6130.9.00
Report Date:	05/09/16

Certifications & Approvals: MA (M-MA086), NY (11148), CT (PH-0574), NH (2003), NJ NELAP (MA935), RI (LAO00065), ME (MA00086), PA (68-03671), VA (460195), MD (348), IL (200077), NC (666), TX (T104704476), DOD (L2217), USDA (Permit #P-330-11-00240).

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

Project Name: 3694 WASHINGTON ST.
Project Number: 6130.9.00

Lab Number: L1613810
Report Date: 05/09/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1613810-01	B-7 (OW)-GW050616	WATER	BOSTON, MA	05/06/16 11:15	05/06/16
L1613810-02	B-8 (OW)-GW050616	WATER	BOSTON, MA	05/06/16 09:45	05/06/16
L1613810-03	B-9 (OW)-GW050616	WATER	BOSTON, MA	05/06/16 12:15	05/06/16

Project Name: 3694 WASHINGTON ST. **Lab Number:** L1613810

Project Number: 6130.9.00 **Report Date:** 05/09/16

MADEP MCP Response Action Analytical Report Certification

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

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

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	YES
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	YES

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

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

Project Name: 3694 WASHINGTON ST. **Lab Number:** L1613810
Project Number: 6130.9.00 **Report Date:** 05/09/16

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:	3694 WASHINGTON ST.	**Lab Number:**	L1613810
Project Number:	6130.9.00	**Report Date:**	05/09/16

Case Narrative (continued)

MCP Related Narratives

Report Submission

All MCP required questions were answered with affirmative responses; therefore, there are no relevant protocol-specific QC and/or performance standard non-conformances to report.

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

Authorized Signature:  Kelly Stenstrom

Title: Technical Director/Representative Date: 05/09/16

INORGANICS
&
MISCELLANEOUS

Project Name: 3694 WASHINGTON ST.
Project Number: 6130.9.00

Lab Number: L1613810
Report Date: 05/09/16

SAMPLE RESULTS

Lab ID: L1613810-01
Client ID: B-7 (OW)-GW050616
Sample Location: BOSTON, MA
Matrix: Water

Date Collected: 05/06/16 11:15
Date Received: 05/06/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Phosphorus, Total	0.017		mg/l	0.010	--	1	05/09/16 08:15	05/09/16 12:16	121,4500P-E	SD

Project Name: 3694 WASHINGTON ST.
Project Number: 6130.9.00

Lab Number: L1613810
Report Date: 05/09/16

SAMPLE RESULTS

Lab ID: L1613810-02
Client ID: B-8 (OW)-GW050616
Sample Location: BOSTON, MA
Matrix: Water

Date Collected: 05/06/16 09:45
Date Received: 05/06/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Phosphorus, Total	0.017		mg/l	0.010	--	1	05/09/16 08:15	05/09/16 12:18	121,4500P-E	SD

Project Name: 3694 WASHINGTON ST.
Project Number: 6130.9.00

Lab Number: L1613810
Report Date: 05/09/16

SAMPLE RESULTS

Lab ID: L1613810-03
Client ID: B-9 (OW)-GW050616
Sample Location: BOSTON, MA
Matrix: Water

Date Collected: 05/06/16 12:15
Date Received: 05/06/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Phosphorus, Total	0.019		mg/l	0.010	--	1	05/09/16 08:15	05/09/16 12:18	121,4500P-E	SD

Project Name: 3694 WASHINGTON ST.
Lab Number: L1613810
Project Number: 6130.9.00
Report Date: 05/09/16

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): 01-03 Batch: WG891870-1										
Phosphorus, Total	ND		mg/l	0.010	--	1	05/09/16 08:15	05/09/16 12:16	121,4500P-E	SD

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3694 WASHINGTON ST.

Project Number: 6130.9.00

Lab Number: L1613810

Report Date: 05/09/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 Batch: WG891870-2								
Phosphorus, Total	97		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 3694 WASHINGTON ST.
Project Number: 6130.9.00

Lab Number: L1613810
Report Date: 05/09/16

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): 01-03 QC Batch ID: WG891870-3 QC Sample: L1613810-01 Client ID: B-7 (OW)-GW050616												
Phosphorus, Total	0.017	0.5	0.505	98		-	-		75-125	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 3694 WASHINGTON ST.
Project Number: 6130.9.00

Lab Number: L1613810
Report Date: 05/09/16

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-03 QC Batch ID: WG891870-4 QC Sample: L1613810-01 Client ID: B-7 (OW)-GW050616						
Phosphorus, Total	0.017	0.020	mg/l	16		20

Project Name: 3694 WASHINGTON ST.
Project Number: 6130.9.00

Lab Number: L1613810
Report Date: 05/09/16

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information	Custody Seal
Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1613810-01A	Amber 1000ml H2SO4 preserved	A	<2	2.6	Y	Absent	TPHOS-4500(28)
L1613810-02A	Amber 1000ml H2SO4 preserved	A	<2	2.6	Y	Absent	TPHOS-4500(28)
L1613810-03A	Amber 1000ml H2SO4 preserved	A	<2	2.6	Y	Absent	TPHOS-4500(28)

*Values in parentheses indicate holding time in days

Project Name:	3694 WASHINGTON ST.	**Lab Number:**	L1613810
Project Number:	6130.9.00	**Report Date:**	05/09/16

GLOSSARY

Acronyms

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

EPA - Environmental Protection Agency.

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

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

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

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

MS - Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

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

NI - Not Ignitable.

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

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

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

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

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

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

Footnotes

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

Terms

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

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

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

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

Report Format: Data Usability Report

Project Name:	3694 WASHINGTON ST.	**Lab Number:**	L1613810
Project Number:	6130.9.00	**Report Date:**	05/09/16

Data Qualifiers

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:	3694 WASHINGTON ST.	**Lab Number:**	L1613810
Project Number:	6130.9.00	**Report Date:**	05/09/16

REFERENCES

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

Westborough Facility
EPA 524.2: 1,2-Dibromo-3-chloropropane, 1,2-Dibromoethane, m/p-xylene, o-xylene
EPA 624: 2-Butanone (MEK), 1,4-Dioxane, tert-Amylmethyl Ether, tert-Butyl Alcohol, m/p-xylene, o-xylene
EPA 625: Aniline, Benzoic Acid, Benzyl Alcohol, 4-Chloroaniline, 3-Methylphenol, 4-Methylphenol.
EPA 1010A: NPW: Ignitability
EPA 6010C: NPW: Strontium; SCM: Strontium
EPA 8151A: NPW: 2,4-DB, Dicamba, Dichloroprop, MCPA, MCPP; SCM: 2,4-DB, Dichloroprop, MCPA, MCPP
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene, Isopropanol; SCM: Iodomethane (methyl iodide), Methyl methacrylate (soil); 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Pentachloronitrobenzene, 1-Methylnaphthalene, Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 9010: NPW: Amenable Cyanide Distillation, Total Cyanide Distillation
EPA 9038: NPW: Sulfate
EPA 9050A: NPW: Specific Conductance
EPA 9056: NPW: Chloride, Nitrate, Sulfate
EPA 9065: NPW: Phenols
EPA 9251: NPW: Chloride
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
EPA 8270D: NPW: Biphenyl; SCM: Biphenyl, Caprolactam
EPA 8270D-SIM Isotope Dilution: SCM: 1,4-Dioxane
SM 2540D: TSS
SM2540G: SCM: Percent Solids
EPA 1631E: SCM: Mercury
EPA 7474: SCM: Mercury
EPA 8081B: NPW and SCM: Mirex, Hexachlorobenzene.
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA 8270-SIM: NPW and SCM: Alkylated PAHs.
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, n-Butylbenzene, n-Propylbenzene, sec-Butylbenzene, tert-Butylbenzene.
Biological Tissue Matrix: ***8270D-SIM; 3050B; 3051A; 7471B; 8081B; 8082A; 6020A:*** Lead***; 8270D:*** bis(2-ethylhexyl)phthalate, Butylbenzylphthalate, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Di-n-octyl phthalate, Fluoranthene, Pentachlorophenol.

The following analytes are included in our Massachusetts DEP Scope of Accreditation, Westborough Facility:

Drinking Water
EPA 200.8: Sb,As,Ba,Be,Cd,Cr,Cu,Pb,Ni,Se,Tl; **EPA 200.7**: Ba,Be,Ca,Cd,Cr,Cu,Na; **EPA 245.1:** Mercury;
EPA 300.0: Nitrate-N, Fluoride, Sulfate; **EPA 353.2**: Nitrate-N, Nitrite-N; **SM4500NO3-F**: Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE, EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B**
EPA 332: Perchlorate.
Microbiology: **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, Enterolert-QT.**

Non-Potable Water
EPA 200.8: Al,Sb,As,Be,Cd,Cr,Cu,Pb,Mn,Ni,Se,Ag,Tl,Zn;
EPA 200.7: Al,Sb,As,Be,Cd,Ca,Cr,Co,Cu,Fe,Pb,Mg,Mn,Mo,Ni,K,Se,Ag,Na,Sr,Ti,Tl,V,Zn;
EPA 245.1, SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2340B, SM2320B, SM4500CL-E, SM4500F-BC, SM426C, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F,**
EPA 353.2: Nitrate-N**, SM4500NH3-BC-NES, EPA 351.1, SM4500P-E, SM4500P-B, E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, SM14 510AC, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9222D-MF**.

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

mg 05/07/16 updated COC

Serial_No:05091613:05

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 5/6/16

ALPHA Job #: L1613910

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

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

Project Information

Project Name: 3694 Washington St.
Project Location: Boston, MA
Project #: 6130.9.00
Project Manager: Amy Apfelbaum
ALPHA Quote #:

Report Information - Data Deliverables

☐ ADEx ☐ EMAIL

Billing Information

☐ Same as Client info PO #:

Client Information

Client: McPhail Assoc.
Address: 2269 Mass Ave Cambridge, MA
Phone: 617-868-1420
Email:

Turn-Around Time

☐ Standard ☒ RUSH 24 hr (only confirmed if pre-approved!)
Date Due: 5/9/2016

Regulatory Requirements & Project Information Requirements

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

Additional Project Information:

ANALYSIS

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

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Sample Comments	TOTAL # BOTTLES
1361010	B-7(OW)-GW050616	5/6/2016	11:15	GW	TAS		1
.02	B-8(OW)-GW050616	5/6/2016	9:45	GW	TAS		1
.03	B-9(OW)-GW050616	5/6/2016	12:15	GW	TAS		1

Container Type										X									
Preservative										D									

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
Thomas Julian	5/6/2016 17:40	AALS	5/6/16 16:14
AALS	5/6/16 19:55	Richard Smith	5/6/16 19:55

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

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

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 5/6/16

ALPHA Job #: L1613910

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

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

Project Information

Project Name: 3694 Washington St.
Project Location: Boston, MA
Project #: 6130.9.00
Project Manager: Amy Apfelbaum
ALPHA Quote #:

Report Information - Data Deliverables

☐ ADEx ☐ EMAIL

Billing Information

☐ Same as Client info PO #:

Client Information

Client: McPhail Assoc.
Address: 2269 Mass Ave Cambridge, MA
Phone: 617-868-1420
Email:

Regulatory Requirements & Project Information Requirements

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

Turn-Around Time

☐ Standard ☒ RUSH 24 hr (only confirmed if pre-approved!)
Date Due: 5/9/2016

Additional Project Information:

ANALYSIS

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

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Sample Comments	TOTAL # BOTTLES
1361.01	B-7(OW)-GW050616	5/6/2016	11:15	GW	TAS		1
.02	B-8(OW)-GW050616	5/6/2016	9:45	GW	TAS		1
.03	B-9(OW)-GW050616	5/6/2016	12:15	GW	TAS		1

Container Type												A							
Preservative												D							

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
Thomas Julian	5/6/2016 17:40	AALS	5/6/16 16:14
AALS	5/6/16 19:55	Richard Smith	5/6/16 19:55

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

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

ANALYTICAL REPORT

Lab Number:	L1722656
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	3694 WASHINGTON ST.
Project Number:	6130.2.11
Report Date:	07/13/17

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

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

Project Name: 3694 WASHINGTON ST.
Project Number: 6130.2.11

Lab Number: L1722656
Report Date: 07/13/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1722656-01	B-9 (OW)	WATER	JAMAICA PLAIN, BOSTON, MA	07/03/17 10:30	07/03/17
L1722656-02	B-8 (OW)	WATER	JAMAICA PLAIN, BOSTON, MA	07/03/17 13:00	07/03/17

Project Name: 3694 WASHINGTON ST. **Lab Number:** L1722656
Project Number: 6130.2.11 **Report Date:** 07/13/17

Case Narrative

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

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

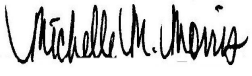
In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances the specific failure is not narrated but noted in the associated QC table. The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

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

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

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

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

Authorized Signature:  Michelle M. Morris

Title: Technical Director/Representative Date: 07/13/17

ORGANICS

SEMIVOLATILES

Project Name: 3694 WASHINGTON ST.
Lab Number: L1722656
Project Number: 6130.2.11
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722656-01
Client ID: B-9 (OW)
Sample Location: JAMAICA PLAIN, BOSTON, MA

Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/08/17 09:42
Analyst: KL

Date Collected: 07/03/17 10:30
Date Received: 07/03/17
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/04/17 08:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by SIM - Westborough Lab						
Acenaphthene	0.35		ug/l	0.10	--	1
Fluoranthene	0.34		ug/l	0.10	--	1
Naphthalene	0.40		ug/l	0.10	--	1
Benzo(a)anthracene	0.50		ug/l	0.10	--	1
Benzo(a)pyrene	1.1		ug/l	0.10	--	1
Benzo(b)fluoranthene	1.1		ug/l	0.10	--	1
Benzo(k)fluoranthene	1.2		ug/l	0.10	--	1
Chrysene	0.61		ug/l	0.10	--	1
Acenaphthylene	0.32		ug/l	0.10	--	1
Anthracene	0.31		ug/l	0.10	--	1
Benzo(ghi)perylene	1.6		ug/l	0.10	--	1
Fluorene	0.39		ug/l	0.10	--	1
Phenanthrene	0.32		ug/l	0.10	--	1
Dibenzo(a,h)anthracene	1.7		ug/l	0.10	--	1
Indeno(1,2,3-cd)pyrene	1.5		ug/l	0.10	--	1
Pyrene	0.34		ug/l	0.10	--	1
2-Methylnaphthalene	0.35		ug/l	0.10	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	70		30-130
2-Fluorobiphenyl	83		30-130
4-Terphenyl-d14	73		30-130

Project Name: 3694 WASHINGTON ST.
Lab Number: L1722656
Project Number: 6130.2.11
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722656-02
Client ID: B-8 (OW)
Sample Location: JAMAICA PLAIN, BOSTON, MA

Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 07/08/17 10:52
Analyst: KL

Date Collected: 07/03/17 13:00
Date Received: 07/03/17
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 07/04/17 08:19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP PAHs by 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
2-Methylnaphthalene	ND		ug/l	0.10	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	62		30-130
2-Fluorobiphenyl	75		30-130
4-Terphenyl-d14	78		30-130

Project Name: 3694 WASHINGTON ST.
Project Number: 6130.2.11
Lab Number: L1722656
Report Date: 07/13/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 07/10/17 12:21
Analyst: KL

Extraction Method: EPA 3510C
Extraction Date: 07/04/17 08:19

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01-02 Batch: WG1019587-1					
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	--
2-Methylnaphthalene	ND		ug/l	0.10	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	63		30-130
2-Fluorobiphenyl	81		30-130
4-Terphenyl-d14	65		30-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3694 WASHINGTON ST.

Project Number: 6130.2.11

Lab Number: L1722656

Report Date: 07/13/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1019587-2 WG1019587-3								
Acenaphthene	84		84		40-140	0		20
Fluoranthene	71		71		40-140	0		20
Naphthalene	73		75		40-140	3		20
Benzo(a)anthracene	70		66		40-140	6		20
Benzo(a)pyrene	69		60		40-140	14		20
Benzo(b)fluoranthene	68		60		40-140	13		20
Benzo(k)fluoranthene	72		63		40-140	13		20
Chrysene	76		71		40-140	7		20
Acenaphthylene	79		79		40-140	0		20
Anthracene	77		76		40-140	1		20
Benzo(ghi)perylene	74		62		40-140	18		20
Fluorene	98		99		40-140	1		20
Phenanthrene	76		76		40-140	0		20
Dibenzo(a,h)anthracene	80		66		40-140	19		20
Indeno(1,2,3-cd)pyrene	70		58		40-140	19		20
Pyrene	72		70		40-140	3		20
2-Methylnaphthalene	73		76		40-140	4		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3694 WASHINGTON ST.

Project Number: 6130.2.11

Lab Number: L1722656

Report Date: 07/13/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1019587-2 WG1019587-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	75		77		30-130
2-Fluorobiphenyl	93		94		30-130
4-Terphenyl-d14	89		87		30-130

METALS

Project Name: 3694 WASHINGTON ST. **Lab Number:** L1722656

Project Number: 6130.2.11 **Report Date:** 07/13/17

SAMPLE RESULTS

Lab ID: L1722656-01 Date Collected: 07/03/17 10:30

Client ID: B-9 (OW) Date Received: 07/03/17

Sample Location: JAMAICA PLAIN, BOSTON, MA Field Prep: Not Specified

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	07/10/17 10:15	07/11/17 15:19	EPA 3005A	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	07/10/17 10:15	07/11/17 15:19	EPA 3005A	3,200.8	AM
Cadmium, Total	0.00021		mg/l	0.00020	--	1	07/10/17 10:15	07/11/17 15:19	EPA 3005A	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	07/10/17 10:15	07/11/17 15:19	EPA 3005A	3,200.8	AM
Copper, Total	0.00441		mg/l	0.00100	--	1	07/10/17 10:15	07/11/17 15:19	EPA 3005A	3,200.8	AM
Iron, Total	0.118		mg/l	0.050	--	1	07/10/17 10:15	07/10/17 16:08	EPA 3005A	19,200.7	PS
Lead, Total	0.00104		mg/l	0.00050	--	1	07/10/17 10:15	07/11/17 15:19	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	07/07/17 16:12	07/10/17 19:53	EPA 245.1	3,245.1	EA
Nickel, Total	ND		mg/l	0.00200	--	1	07/10/17 10:15	07/11/17 15:19	EPA 3005A	3,200.8	AM
Selenium, Total	0.00527		mg/l	0.00500	--	1	07/10/17 10:15	07/11/17 15:19	EPA 3005A	3,200.8	AM
Silver, Total	0.00060		mg/l	0.00040	--	1	07/10/17 10:15	07/11/17 15:19	EPA 3005A	3,200.8	AM
Zinc, Total	0.01938		mg/l	0.01000	--	1	07/10/17 10:15	07/11/17 15:19	EPA 3005A	3,200.8	AM
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		07/11/17 15:19	NA	107,-	

Project Name: 3694 WASHINGTON ST.
Lab Number: L1722656
Project Number: 6130.2.11
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722656-02
Client ID: B-8 (OW)
Sample Location: JAMAICA PLAIN, BOSTON, MA
Matrix: Water
Date Collected: 07/03/17 13:00
Date Received: 07/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	07/10/17 10:15	07/11/17 15:23	EPA 3005A	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	07/10/17 10:15	07/11/17 15:23	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	07/10/17 10:15	07/11/17 15:23	EPA 3005A	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	07/10/17 10:15	07/11/17 15:23	EPA 3005A	3,200.8	AM
Copper, Total	0.00148		mg/l	0.00100	--	1	07/10/17 10:15	07/11/17 15:23	EPA 3005A	3,200.8	AM
Iron, Total	0.219		mg/l	0.050	--	1	07/10/17 10:15	07/10/17 16:12	EPA 3005A	19,200.7	PS
Lead, Total	ND		mg/l	0.00050	--	1	07/10/17 10:15	07/11/17 15:23	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	07/11/17 12:12	07/11/17 19:09	EPA 245.1	3,245.1	EA
Nickel, Total	ND		mg/l	0.00200	--	1	07/10/17 10:15	07/11/17 15:23	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	07/10/17 10:15	07/11/17 15:23	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	07/10/17 10:15	07/11/17 15:23	EPA 3005A	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	07/10/17 10:15	07/11/17 15:23	EPA 3005A	3,200.8	AM
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		07/11/17 15:23	NA	107,-	

Project Name: 3694 WASHINGTON ST. **Lab Number:** L1722656

Project Number: 6130.2.11 **Report Date:** 07/13/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1020570-1										
Mercury, Total	ND		mg/l	0.00020	--	1	07/07/17 16:12	07/10/17 19:45	3,245.1	EA

Prep Information

Digestion Method: EPA 245.1

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1020951-1										
Antimony, Total	ND		mg/l	0.00400	--	1	07/10/17 10:15	07/11/17 13:27	3,200.8	BV
Arsenic, Total	ND		mg/l	0.00100	--	1	07/10/17 10:15	07/11/17 13:27	3,200.8	BV
Cadmium, Total	ND		mg/l	0.00020	--	1	07/10/17 10:15	07/11/17 13:27	3,200.8	BV
Chromium, Total	ND		mg/l	0.00100	--	1	07/10/17 10:15	07/11/17 13:27	3,200.8	BV
Copper, Total	ND		mg/l	0.00100	--	1	07/10/17 10:15	07/11/17 13:27	3,200.8	BV
Lead, Total	ND		mg/l	0.0010	--	1	07/10/17 10:15	07/11/17 13:27	3,200.8	BV
Nickel, Total	ND		mg/l	0.00200	--	1	07/10/17 10:15	07/11/17 13:27	3,200.8	BV
Selenium, Total	ND		mg/l	0.00500	--	1	07/10/17 10:15	07/11/17 13:27	3,200.8	BV
Silver, Total	ND		mg/l	0.00040	--	1	07/10/17 10:15	07/11/17 13:27	3,200.8	BV
Zinc, Total	ND		mg/l	0.01000	--	1	07/10/17 10:15	07/11/17 13:27	3,200.8	BV

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1020954-1										
Iron, Total	ND		mg/l	0.050	--	1	07/10/17 10:15	07/10/17 15:42	19,200.7	PS

Prep Information

Digestion Method: EPA 3005A

Project Name: 3694 WASHINGTON ST.
Lab Number: L1722656
Project Number: 6130.2.11
Report Date: 07/13/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 02 Batch: WG1021385-1										
Mercury, Total	ND		mg/l	0.00020	--	1	07/11/17 12:12	07/11/17 19:05	3,245.1	EA

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3694 WASHINGTON ST.

Project Number: 6130.2.11

Lab Number: L1722656

Report Date: 07/13/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1020570-2								
Mercury, Total	104		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1020951-2								
Antimony, Total	97		-		85-115	-		
Arsenic, Total	102		-		85-115	-		
Cadmium, Total	114		-		85-115	-		
Chromium, Total	103		-		85-115	-		
Copper, Total	107		-		85-115	-		
Lead, Total	103		-		85-115	-		
Nickel, Total	106		-		85-115	-		
Selenium, Total	102		-		85-115	-		
Silver, Total	103		-		85-115	-		
Zinc, Total	112		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1020954-2								
Iron, Total	106		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 02 Batch: WG1021385-2								
Mercury, Total	107		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 3694 WASHINGTON ST.
Project Number: 6130.2.11

Lab Number: L1722656
Report Date: 07/13/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1020570-3 QC Sample: L1722656-01 Client ID: B-9 (OW)												
Mercury, Total	ND	0.005	0.00497	100		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1020951-3 QC Sample: L1722688-01 Client ID: MS Sample												
Antimony, Total	ND	0.5	0.534	107		-	-		70-130	-		20
Arsenic, Total	ND	0.12	0.132	110		-	-		70-130	-		20
Cadmium, Total	0.0005	0.051	0.06061	118		-	-		70-130	-		20
Chromium, Total	ND	0.2	0.222	111		-	-		70-130	-		20
Copper, Total	0.106	0.25	0.368	105		-	-		70-130	-		20
Lead, Total	ND	0.51	0.566	111		-	-		70-130	-		20
Nickel, Total	ND	0.5	0.553	111		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.127	106		-	-		70-130	-		20
Silver, Total	ND	0.05	0.0529	106		-	-		70-130	-		20
Zinc, Total	0.442	0.5	1.02	116		-	-		70-130	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: 3694 WASHINGTON ST.
Project Number: 6130.2.11

Lab Number: L1722656
Report Date: 07/13/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery		MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1020951-5 QC Sample: L1722903-01 Client ID: MS Sample										
Antimony, Total	0.03043	0.5	0.3029	**54**	Q	-	-	70-130	-	20
Arsenic, Total	0.1131	0.12	0.2412	107		-	-	70-130	-	20
Cadmium, Total	0.00656	0.051	0.06229	109		-	-	70-130	-	20
Chromium, Total	0.1014	0.2	0.3692	**134**	Q	-	-	70-130	-	20
Copper, Total	0.5527	0.25	0.9019	**140**	Q	-	-	70-130	-	20
Lead, Total	0.9419	0.51	1.611	**131**	Q	-	-	70-130	-	20
Nickel, Total	0.08601	0.5	0.6110	105		-	-	70-130	-	20
Selenium, Total	0.06692	0.12	0.2020	112		-	-	70-130	-	20
Silver, Total	0.00694	0.05	0.05199	90		-	-	70-130	-	20
Zinc, Total	1.387	0.5	2.003	123		-	-	70-130	-	20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1020954-3 QC Sample: L1722903-01 Client ID: MS Sample										
Iron, Total	78.3	1	76.8	**0**	Q	-	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1021385-3 QC Sample: L1722656-02 Client ID: B-8 (OW)										
Mercury, Total	ND	0.005	0.00609	122		-	-	70-130	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 3694 WASHINGTON ST.
Project Number: 6130.2.11

Lab Number: L1722656
Report Date: 07/13/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1020570-4 QC Sample: L1722656-01 Client ID: B-9 (OW)						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1020951-4 QC Sample: L1722688-01 Client ID: DUP Sample						
Copper, Total	0.106	0.108	mg/l	2		20
Lead, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1020951-6 QC Sample: L1722903-01 Client ID: DUP Sample						
Antimony, Total	0.03043	0.03180	mg/l	4		20
Arsenic, Total	0.1131	0.1116	mg/l	1		20
Cadmium, Total	0.00656	0.00675	mg/l	3		20
Chromium, Total	0.1014	0.09839	mg/l	3		20
Copper, Total	0.5527	0.5413	mg/l	2		20
Lead, Total	0.9419	0.9216	mg/l	2		20
Nickel, Total	0.08601	0.08628	mg/l	0		20
Selenium, Total	0.06692	0.06789	mg/l	1		20
Silver, Total	0.00694	0.00660	mg/l	5		20
Zinc, Total	1.387	1.354	mg/l	2		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1020954-4 QC Sample: L1722903-01 Client ID: DUP Sample						
Iron, Total	78.3	76.9	mg/l	2		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 3694 WASHINGTON ST.
Project Number: 6130.2.11

Lab Number: L1722656
Report Date: 07/13/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 02 QC Batch ID: WG1021385-4 QC Sample: L1722656-02 Client ID: B-8 (OW)					
Mercury, Total	ND	ND	mg/l	NC	20

INORGANICS
&
MISCELLANEOUS

Project Name: 3694 WASHINGTON ST.
Project Number: 6130.2.11
Lab Number: L1722656
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722656-01
Client ID: B-9 (OW)
Sample Location: JAMAICA PLAIN, BOSTON, MA
Matrix: Water

Date Collected: 07/03/17 10:30
Date Received: 07/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry - Westborough Lab										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	07/04/17 00:07	07/04/17 00:57	97,7196A	KA
General Chemistry - Westborough Lab										
Solids, Total Suspended	8.3		mg/l	5.0	NA	1	-	07/04/17 03:00	121,2540D	VB
Cyanide, Total	0.009		mg/l	0.005	--	1	07/06/17 09:45	07/10/17 15:06	121,4500CN-CE	LK
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	07/04/17 01:59	121,4500CL-D	KA
Nitrogen, Ammonia	0.164		mg/l	0.075	--	1	07/05/17 14:20	07/05/17 17:02	121,4500NH3-BH	JO
TPH, SGT-HEM	ND		mg/l	4.00	--	1	07/05/17 16:30	07/05/17 21:30	74,1664A	ML
Anions by Ion Chromatography - Westborough Lab										
Chloride	1080		mg/l	50.0	--	100	-	07/08/17 23:09	44,300.0	JC

Project Name: 3694 WASHINGTON ST.
Project Number: 6130.2.11
Lab Number: L1722656
Report Date: 07/13/17

SAMPLE RESULTS

Lab ID: L1722656-02
Client ID: B-8 (OW)
Sample Location: JAMAICA PLAIN, BOSTON, MA
Matrix: Water

Date Collected: 07/03/17 13:00
Date Received: 07/03/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry - Westborough Lab										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	07/04/17 00:07	07/04/17 00:57	97,7196A	KA
General Chemistry - Westborough Lab										
Solids, Total Suspended	7.4		mg/l	5.0	NA	1	-	07/04/17 03:00	121,2540D	VB
Cyanide, Total	ND		mg/l	0.005	--	1	07/06/17 09:45	07/10/17 15:07	121,4500CN-CE	LK
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	07/04/17 01:59	121,4500CL-D	KA
Nitrogen, Ammonia	0.231		mg/l	0.075	--	1	07/05/17 14:20	07/05/17 17:03	121,4500NH3-BH	JO
TPH, SGT-HEM	ND		mg/l	4.00	--	1	07/05/17 16:30	07/05/17 21:30	74,1664A	ML
Anions by Ion Chromatography - Westborough Lab										
Chloride	432.		mg/l	5.00	--	10	-	07/08/17 18:03	44,300.0	JC

Project Name: 3694 WASHINGTON ST.
Lab Number: L1722656
Project Number: 6130.2.11
Report Date: 07/13/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1019560-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	07/04/17 00:07	07/04/17 00:54	97,7196A	KA
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1019566-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	07/04/17 03:00	121,2540D	VB
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1019570-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	07/04/17 01:59	121,4500CL-D	KA
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1019782-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	07/05/17 14:20	07/05/17 16:41	121,4500NH3-BH	JO
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1019806-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	07/05/17 16:30	07/05/17 21:30	74,1664A	ML
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1020008-1										
Cyanide, Total	ND		mg/l	0.005	--	1	07/06/17 09:45	07/10/17 15:01	121,4500CN-CE	LK
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-02 Batch: WG1020880-1										
Chloride	ND		mg/l	0.500	--	1	-	07/08/17 17:27	44,300.0	JC

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3694 WASHINGTON ST.

Project Number: 6130.2.11

Lab Number: L1722656

Report Date: 07/13/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1019560-2 WG1019560-3								
Chromium, Hexavalent	100		101		49-151	1		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1019570-2								
Chlorine, Total Residual	93		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1019782-2								
Nitrogen, Ammonia	94		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1019806-2								
TPH	86		-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1020008-2								
Cyanide, Total	104		-		90-110	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 Batch: WG1020880-2								
Chloride	95		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 3694 WASHINGTON ST.
Project Number: 6130.2.11

Lab Number: L1722656
Report Date: 07/13/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1019570-4 QC Sample: L1722656-02 Client ID: B-8 (OW)												
Chlorine, Total Residual	ND	0.248	0.24	97		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1019782-4 QC Sample: L1722269-02 Client ID: MS Sample												
Nitrogen, Ammonia	1.20	8	8.71	94		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1019806-4 QC Sample: L1722656-02 Client ID: B-8 (OW)												
TPH	ND	20	16.9	84		-	-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1020008-4 QC Sample: L1722439-06 Client ID: MS Sample												
Cyanide, Total	ND	0.2	0.208	104		-	-		90-110	-		30
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1020880-3 QC Sample: L1722692-01 Client ID: MS Sample												
Chloride	10.6	4	14.0	**87**	Q	-	-		90-110	-		18

Lab Duplicate Analysis
Batch Quality Control

Project Name: 3694 WASHINGTON ST.
Project Number: 6130.2.11

Lab Number: L1722656
Report Date: 07/13/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1019566-2 QC Sample: L1722604-01 Client ID: DUP Sample						
Solids, Total Suspended	75	79	mg/l	5		29
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1019570-3 QC Sample: L1722656-02 Client ID: B-8 (OW)						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1019782-3 QC Sample: L1722269-02 Client ID: DUP Sample						
Nitrogen, Ammonia	1.20	1.16	mg/l	3		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1019806-3 QC Sample: L1722656-01 Client ID: B-9 (OW)						
TPH, SGT-HEM	ND	ND	mg/l	NC		34
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1020008-3 QC Sample: L1722439-05 Client ID: DUP Sample						
Cyanide, Total	ND	ND	mg/l	NC		30
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1020880-4 QC Sample: L1722692-01 Client ID: DUP Sample						
Chloride	10.6	10.6	mg/l	0		18

Project Name: 3694 WASHINGTON ST.
Project Number: 6130.2.11

Lab Number: L1722656
Report Date: 07/13/17

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1722656-01A	Plastic 250ml HNO3 preserved	A	<2	<2	2.7	Y	Absent		CD-2008T(180),MCP-CR-6010T-10(180),NI-2008T(180),MCP-7470T-10(28),MCP-AS-6010T-10(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),MCP-CD-6010T-10(180),AG-2008T(180),AS-2008T(180),HG-U(28),MCP-AG-6010T-10(180),SE-2008T(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),TRICR-CALC(1),CR-2008T(180),MCP-PB-6010T-10(180),PB-2008T(180),SB-2008T(180)
L1722656-01B	Plastic 250ml NaOH preserved	A	>12	>12	2.7	Y	Absent		TCN-4500(14)
L1722656-01C	Plastic 500ml H2SO4 preserved	A	<2	<2	2.7	Y	Absent		NH3-4500(28)
L1722656-01D	Plastic 950ml unpreserved	A	7	7	2.7	Y	Absent		CL-300(28),TRC-4500(1),MCP-HEXCR7196-10(1)
L1722656-01E	Plastic 950ml unpreserved	A	7	7	2.7	Y	Absent		TSS-2540(7)
L1722656-01F	Amber 1000ml HCl preserved	A	NA		2.7	Y	Absent		TPH-1664(28)
L1722656-01G	Amber 1000ml HCl preserved	A	NA		2.7	Y	Absent		TPH-1664(28)
L1722656-01H	Amber 1000ml unpreserved	A	7	7	2.7	Y	Absent		MCP-PAHSIM-10(7)
L1722656-01I	Amber 1000ml unpreserved	A	7	7	2.7	Y	Absent		MCP-PAHSIM-10(7)
L1722656-02A	Plastic 250ml HNO3 preserved	A	<2	<2	2.7	Y	Absent		CD-2008T(180),MCP-CR-6010T-10(180),NI-2008T(180),MCP-7470T-10(28),MCP-AS-6010T-10(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),MCP-CD-6010T-10(180),AG-2008T(180),AS-2008T(180),HG-U(28),MCP-AG-6010T-10(180),SE-2008T(180),MCP-SE-6010T-10(180),MCP-BA-6010T-10(180),TRICR-CALC(1),CR-2008T(180),MCP-PB-6010T-10(180),PB-2008T(180),SB-2008T(180)
L1722656-02B	Plastic 250ml NaOH preserved	A	>12	>12	2.7	Y	Absent		TCN-4500(14)
L1722656-02C	Plastic 500ml H2SO4 preserved	A	<2	<2	2.7	Y	Absent		NH3-4500(28)
L1722656-02D	Plastic 950ml unpreserved	A	7	7	2.7	Y	Absent		CL-300(28),TRC-4500(1),MCP-HEXCR7196-10(1)

*Values in parentheses indicate holding time in days

Project Name: 3694 WASHINGTON ST.
Project Number: 6130.2.11

Lab Number: L1722656
Report Date: 07/13/17

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1722656-02E	Plastic 950ml unpreserved	A	7	7	2.7	Y	Absent		TSS-2540(7)
L1722656-02F	Amber 1000ml HCl preserved	A	NA		2.7	Y	Absent		TPH-1664(28)
L1722656-02G	Amber 1000ml HCl preserved	A	NA		2.7	Y	Absent		TPH-1664(28)
L1722656-02H	Amber 1000ml unpreserved	A	7	7	2.7	Y	Absent		MCP-PAHSIM-10(7)
L1722656-02I	Amber 1000ml unpreserved	A	7	7	2.7	Y	Absent		MCP-PAHSIM-10(7)

*Values in parentheses indicate holding time in days

Project Name:	3694 WASHINGTON ST.	**Lab Number:**	L1722656
Project Number:	6130.2.11	**Report Date:**	07/13/17

GLOSSARY

Acronyms

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

Footnotes

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

Terms

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

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

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

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

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

Data Qualifiers

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

Report Format: Data Usability Report

Project Name:	3694 WASHINGTON ST.	**Lab Number:**	L1722656
Project Number:	6130.2.11	**Report Date:**	07/13/17

Data Qualifiers

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

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

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

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

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

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

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

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

Report Format: Data Usability Report

Project Name:	3694 WASHINGTON ST.	**Lab Number:**	L1722656
Project Number:	6130.2.11	**Report Date:**	07/13/17

REFERENCES

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

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

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

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

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

107 Alpha Analytical - In-house calculation method.

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: NPW and SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
EPA 9012B: NPW: Total Cyanide
EPA 9050A: NPW: Specific Conductance
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
SM 2540D: TSS
EPA 3005A NPW
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

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

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E.**

Mansfield Facility:

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

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

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

CHAIN OF CUSTODY

PAGE 1 OF 2

Date Rec'd in Lab: 7/3/17

ALPHA Job #: L1722656

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

Client Information

Client: Mcphail Associates
Address: 2269 Massachusetts Avenue, Cambridge, MA
Phone: 617-868-1420
Email: ggarten@mcphailgeo.com

Project Information

Project Name: 3694 Washington St
Project Location: Jamica Plain, Boston, MA
Project #: G1330.2.11
Project Manager: GMG
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☑ ADEx ☐ EMAIL

Billing Information

☑ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

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

Additional Project Information:

Metals list:Sb,As,Cd,Cu,Fe,Pb,Hg,Ni,Se,Ag, Zn- also needs Trichrome-Calc

ANALYSIS

VOC: ☐ 8260 ☐ 624 ☐ 524.2
SVOC: ☐ ABN ☐ PAH
METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15
METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
EPH: ☐ Ranges & Targets ☐ Ranges Only
VPH: ☐ Ranges & Targets ☐ Ranges Only
☐ PCB ☐ PEST
TRH: ☐ Quant Only ☐ Fingerprint
PAH TCL-SIM
TPH-1664
Total Metals 6010C
TSS-2540
Hex Cr TRC-4500, Cl
NH3

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Sample Comments	TOTAL # BOTTLES
22656.01	B-9 (OW)	7/3/17	8:45	GW	PJH		2
.02	B-9 (OW)	7/3/17	9:15	GW	PJH		2
.03	B-9 (OW)	7/3/17	9:30	GW	PJH		1
.04	B-9 (OW)	7/3/17	10:00	GW	PJH		1
.05	B-9 (OW)	7/3/17	10:15	GW	PJH		1
.06	B-9 (OW)	7/3/17	10:15	GW	PJH		1
.07	B-9 (OW)	7/3/17	10:30	GW	PJH		1
.08	B-8 (OW)	7/3/17	11:30	GW	PJH		2
.09	B-8 (OW)	7/3/17	12:00	GW	PJH		2

Container Type	P	A	A	P	P	P	P
Preservative	E	A	B	C	A	A	D

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
Patrick Hoar AAL	7/3/17 16:56	AAL	7/3/17 1657
	7/3/17 1657		7/3/17 1657

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

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

CHAIN OF CUSTODY

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Date Rec'd in Lab: 7/3/17

ALPHA Job #: L1722658

ALPHA ANALYTICAL — Mid Class Chemistry

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

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

Client Information

Client: McPhail Associates

Address: 2269 Massachusetts Avenue, Cambridge, MA

Phone: 617-868-1420

Email: ggarten@mcphailgeo.com

Project Information

Project Name: 3694 Washington St

Project Location: Jamaica Plain, Boston, MA

Project #: 6130.2.11

Project Manager: GMG

ALPHA Quote #:

Turn-Around Time

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

Date Due:

Report Information - Data Deliverables

☑ ADEx ☐ EMAIL

Billing Information

☑ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☑ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☑ No CT RCP Analytical Methods

☐ Yes ☑ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)

☐ Yes ☑ No GW1 Standards (Info Required for Metals & EPH with Targets)

☐ Yes ☑ No NPDES RGP

☐ Other State /Fed Program _____ Criteria _____

Additional Project Information:

Metals same list as pg. 1

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☐ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☐ PAH	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☐ PCB ☐ PEST	TPH: ☐ Quant Only ☐ Fingerprint	TCN	Total Metals 6010C	TSS-2540	Hex Cr, TRC-4500, CL	NH3	Sample Comments	TOTAL # BOTTLES
22656.02	B-8 (OW)	7/3/17	12:15	GW	PJH										X					1
.02	B-8	7/3/17	12:30	GW	PJH											X				1
.02	B-8	7/3/17	12:45	GW	PJH												X			1
.02	B-8	7/3/17	12:45	GW	PJH							X								1
.02	B-8	7/3/17	1:00	GW	PJH										X					1

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

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

Container Type								P		P	P	P	P
Preservative								E		C	A	A	D

Relinquished By:	Date/Time	Received By:	Date/Time
Patrick Hourn	15:50 7/3/17	AAL	7/3/17 1754
AAL	7/3/17 1601		7/3/17 1601

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

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

CHAIN OF CUSTODY

PAGE 1 OF 2

Date Rec'd in Lab: 7/3/17

ALPHA Job #: L1722656

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

Project Information

Project Name: 3694 Washington St

Project Location: Jamica Plain, Boston, MA

Project #: 6130.2.11

Project Manager: GMG

ALPHA Quote #:

Report Information - Data Deliverables

☑ ADEx ☐ EMAIL

Billing Information

☑ Same as Client info PO #:

Client Information

Client: Mcphail Associates

Address: 224 Massachusetts Avenue
Cambridge, MA

Phone: 617-868-1420

Email: ggarten@mcphailgeo.com

Regulatory Requirements & Project Information Requirements

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

Turn-Around Time

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

Date Due:

Additional Project Information:

ANALYSIS

VOC: ☐ 8260 ☐ 624 ☐ 524.2
SVOC: ☐ ABN ☐ PAH
METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15
METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
EPH: ☐ Ranges & Targets ☐ Ranges Only
VPH: ☐ Ranges & Targets ☐ Ranges Only
☐ PCB ☐ PEST
TPH: ☐ Quant Only ☐ Fingerprint
PAH TCL-SIM
TPH-1664
Total Metals 6010C
TSS-2540
Hex Cr TRC-4500, CL
NH3

SAMPLE INFO

Filtration
☐ Field
☐ Lab to do

Preservation
☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Sample Comments	TOTAL # BOTTLES
22656.01	B-9 (OW)	7/3/17	8:45	GW	PJH		2
.02	B-9 (OW)	7/3/17	9:15	GW	PJH		2
.03	B-9 (OW)	7/3/17	9:30	GW	PJH		1
.04	B-9 (OW)	7/3/17	10:00	GW	PJH		1
.05	B-9 (OW)	7/3/17	10:15	GW	PJH		1
.06	B-9 (OW)	7/3/17	10:15	GW	PJH		1
.07	B-9 (OW)	7/3/17	10:30	GW	PJH		1
.08	B-8 (OW)	7/3/17	11:30	GW	PJH		2
.09	B-8 (OW)	7/3/17	12:00	GW	PJH		2

Container Type	P	A	A	P	P	P	P
Preservative	E	A	B	C	A	A	D

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
Patrick Hoar AAL	7/3/17 16:56	AAL	7/3/17 1657

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

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

CHAIN OF CUSTODY

PAGE 2 OF 2

Date Rec'd in Lab: 7/3/17

ALPHA Job #: L1722658

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

Client Information

Client: McPhail Associates
Address: 2269 Massachusetts Avenue, Cambridge, MA
Phone: 617-868-1420
Email: ggarten@mcphailgeo.com

Additional Project Information:

Project Information

Project Name: 3694 Washington St
Project Location: Jamaica Plain, Boston, MA
Project #: 6130.2.11
Project Manager: GMG
ALPHA Quote #:

Turn-Around Time

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

Report Information - Data Deliverables

☑ ADEx ☐ EMAIL

Billing Information

☑ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☐ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☐ PAH	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☐ PCB ☐ PEST	TPH: ☐ Quant Only ☐ Fingerprint	TCN	Total Metals 6010C	TSS-2540	Hex Cr, TRC-4500, CL	NH3	Sample Comments	TOTAL # BOTTLES
22656.02	B-8	7/3/17	12:15	GW	PJH										X					1
.02	B-8	7/3/17	12:30	GW	PJH											X				1
.02	B-8	7/3/17	12:45	GW	PJH												X			1
.02	B-8	7/3/17	12:45	GW	PJH							X								1
.02	B-8	7/3/17	1:00	GW	PJH										X					1

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

Container Type												P		P	P	P	P			
Preservative												E		C	A	A	D			

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
Patrick Hoare	15:50 7/3/17	AAL	7/3/17 1754
AAL	7/3/17 1601		7/3/17 1601

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

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

APPENDIX E:

LABORATORY ANALYTICAL DATA – SURFACE WATER

ANALYTICAL REPORT

Lab Number:	L1715658
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	WIT
Project Number:	U222.9.T4
Report Date:	05/18/17

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

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

Project Name: WIT
Project Number: U222.9.T4

Lab Number: L1715658
Report Date: 05/18/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1715658-01	CHARLES RIVER	WATER	CHARLES RIVER	05/12/17 11:00	05/12/17

Project Name: WIT
Project Number: U222.9.T4

Lab Number: L1715658
Report Date: 05/18/17

Case Narrative

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

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

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

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

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

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

Project Name:	WIT	**Lab Number:**	L1715658
Project Number:	U222.9.T4	**Report Date:**	05/18/17

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Chromium, Hexavalent

L1715658-01 was analyzed with the method required holding time exceeded.

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

Authorized Signature: Cristin Walker

Title: Technical Director/Representative Date: 05/18/17

METALS

Project Name: WIT
Project Number: U222.9.T4

Lab Number: L1715658
Report Date: 05/18/17

SAMPLE RESULTS

Lab ID: L1715658-01
Client ID: CHARLES RIVER
Sample Location: CHARLES RIVER
Matrix: Water

Date Collected: 05/12/17 11:00
Date Received: 05/12/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	0.00202	J	mg/l	0.00400	0.00042	1	05/15/17 12:04	05/17/17 12:04	EPA 3005A	3,200.8	BV
Arsenic, Total	0.00105		mg/l	0.00100	0.00016	1	05/15/17 12:04	05/17/17 12:04	EPA 3005A	3,200.8	BV
Cadmium, Total	ND		mg/l	0.00100	0.00005	1	05/15/17 12:04	05/17/17 12:04	EPA 3005A	3,200.8	BV
Chromium, Total	0.00124		mg/l	0.00100	0.00017	1	05/15/17 12:04	05/17/17 12:04	EPA 3005A	3,200.8	BV
Copper, Total	0.00366		mg/l	0.00100	0.00038	1	05/15/17 12:04	05/17/17 12:04	EPA 3005A	3,200.8	BV
Iron, Total	1.01		mg/l	0.050	0.009	1	05/15/17 12:04	05/16/17 21:15	EPA 3005A	19,200.7	PS
Lead, Total	0.00413		mg/l	0.00100	0.00034	1	05/15/17 12:04	05/17/17 12:04	EPA 3005A	3,200.8	BV
Mercury, Total	ND		mg/l	0.00020	0.00006	1	05/17/17 11:50	05/17/17 21:28	EPA 245.1	3,245.1	EA
Nickel, Total	0.00320		mg/l	0.00200	0.00055	1	05/15/17 12:04	05/17/17 12:04	EPA 3005A	3,200.8	BV
Selenium, Total	ND		mg/l	0.00500	0.00173	1	05/15/17 12:04	05/17/17 12:04	EPA 3005A	3,200.8	BV
Silver, Total	ND		mg/l	0.00100	0.00026	1	05/15/17 12:04	05/17/17 12:04	EPA 3005A	3,200.8	BV
Zinc, Total	0.01111		mg/l	0.01000	0.00341	1	05/15/17 12:04	05/17/17 12:04	EPA 3005A	3,200.8	BV
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	96.5		mg/l	0.660	NA	1	05/15/17 12:04	05/16/17 21:15	EPA 3005A	19,200.7	PS
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.010	1		05/17/17 12:04	NA	107,-	

Project Name: WIT
Project Number: U222.9.T4

Lab Number: L1715658
Report Date: 05/18/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1003491-1										
Iron, Total	0.045	J	mg/l	0.050	0.009	1	05/15/17 12:04	05/16/17 17:21	19,200.7	PS

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: WG1003491-1										
Hardness	ND		mg/l	0.660	NA	1	05/15/17 12:04	05/16/17 17:21	19,200.7	PS

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: WG1003796-1										
Antimony, Total	ND		mg/l	0.00400	0.00042	1	05/15/17 12:04	05/17/17 11:02	3,200.8	BV
Arsenic, Total	0.00041	J	mg/l	0.00100	0.00016	1	05/15/17 12:04	05/17/17 11:02	3,200.8	BV
Cadmium, Total	ND		mg/l	0.00100	0.00005	1	05/15/17 12:04	05/17/17 11:02	3,200.8	BV
Chromium, Total	ND		mg/l	0.00100	0.00017	1	05/15/17 12:04	05/17/17 11:02	3,200.8	BV
Copper, Total	ND		mg/l	0.00100	0.00038	1	05/15/17 12:04	05/17/17 11:02	3,200.8	BV
Lead, Total	ND		mg/l	0.00100	0.00034	1	05/15/17 12:04	05/17/17 11:02	3,200.8	BV
Nickel, Total	ND		mg/l	0.00200	0.00055	1	05/15/17 12:04	05/17/17 11:02	3,200.8	BV
Selenium, Total	ND		mg/l	0.00500	0.00173	1	05/15/17 12:04	05/17/17 11:02	3,200.8	BV
Silver, Total	ND		mg/l	0.00100	0.00026	1	05/15/17 12:04	05/17/17 11:02	3,200.8	BV
Zinc, Total	ND		mg/l	0.01000	0.00341	1	05/15/17 12:04	05/17/17 11:02	3,200.8	BV

Prep Information

Digestion Method: EPA 3005A

Project Name: WIT
Project Number: U222.9.T4

Lab Number: L1715658
Report Date: 05/18/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1004335-1										
Mercury, Total	ND		mg/l	0.00020	0.00006	1	05/17/17 11:50	05/17/17 21:25	3,245.1	EA

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: WIT

Project Number: U222.9.T4

Lab Number: L1715658

Report Date: 05/18/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1003491-2								
Iron, Total	105		-		85-115	-		
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 Batch: WG1003491-2								
Hardness	106		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1003796-2								
Antimony, Total	92		-		85-115	-		
Arsenic, Total	96		-		85-115	-		
Cadmium, Total	102		-		85-115	-		
Chromium, Total	99		-		85-115	-		
Copper, Total	95		-		85-115	-		
Lead, Total	99		-		85-115	-		
Nickel, Total	97		-		85-115	-		
Selenium, Total	99		-		85-115	-		
Silver, Total	96		-		85-115	-		
Zinc, Total	96		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1004335-2								
Mercury, Total	111		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: WIT
Project Number: U222.9.T4

Lab Number: L1715658
Report Date: 05/18/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1003491-3 QC Sample: L1715432-09 Client ID: MS Sample												
Iron, Total	ND	1	1.04	104		-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1003491-3 QC Sample: L1715432-09 Client ID: MS Sample												
Hardness	104.	66.2	164	91		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1003491-7 QC Sample: L1715699-01 Client ID: MS Sample												
Iron, Total	0.146	1	1.13	98		-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1003491-7 QC Sample: L1715699-01 Client ID: MS Sample												
Hardness	1600	66.2	1610	**15**	Q	-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1003796-3 QC Sample: L1700005-89 Client ID: MS Sample												
Antimony, Total	ND	0.5	0.474	95		-	-		70-130	-		20
Arsenic, Total	ND	0.12	0.122	102		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.0492	96		-	-		70-130	-		20
Chromium, Total	0.0268	0.2	0.221	97		-	-		70-130	-		20
Copper, Total	0.00397J	0.25	0.240	96		-	-		70-130	-		20
Lead, Total	ND	0.51	0.500	98		-	-		70-130	-		20
Nickel, Total	0.00777J	0.5	0.492	98		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.119	99		-	-		70-130	-		20
Silver, Total	ND	0.05	0.0471	94		-	-		70-130	-		20
Zinc, Total	ND	0.5	0.490	98		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1004335-3 QC Sample: L1715658-01 Client ID: CHARLES RIVER												
Mercury, Total	ND	0.005	0.00539	108		-	-		70-130	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: WIT
Project Number: U222.9.T4

Lab Number: L1715658
Report Date: 05/18/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1004335-5 QC Sample: L1715733-01 Client ID: MS Sample									
Mercury, Total	0.00008J	0.005	0.00532	106	-	-	70-130	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: WIT
Project Number: U222.9.T4

Lab Number: L1715658
Report Date: 05/18/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1003491-4 QC Sample: L1715432-09 Client ID: DUP Sample						
Iron, Total	ND	0.030J	mg/l	NC		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1003491-8 QC Sample: L1715699-01 Client ID: DUP Sample						
Hardness	1600	1650	mg/l	3		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1003796-4 QC Sample: L1700005-89 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	0.0268	0.0282	mg/l	5		20
Copper, Total	0.00397J	0.00429J	mg/l	NC		20
Lead, Total	ND	ND	mg/l	NC		20
Nickel, Total	0.00777J	0.00790J	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: WG1004335-4 QC Sample: L1715658-01 Client ID: CHARLES RIVER						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1004335-6 QC Sample: L1715733-01 Client ID: DUP Sample						
Mercury, Total	0.00008J	0.00008J	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: WIT
Project Number: U222.9.T4

Lab Number: L1715658
Report Date: 05/18/17

SAMPLE RESULTS

Lab ID: L1715658-01
Client ID: CHARLES RIVER
Sample Location: CHARLES RIVER
Matrix: Water

Date Collected: 05/12/17 11:00
Date Received: 05/12/17
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	0.304		mg/l	0.075	0.022	1	05/15/17 23:00	05/16/17 21:39	121,4500NH3-BH	AT
Chromium, Hexavalent	0.003	J	mg/l	0.010	0.003	1	05/16/17 06:10	05/16/17 06:32	1,7196A	KA

Project Name: WIT
Project Number: U222.9.T4

Lab Number: L1715658
Report Date: 05/18/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1003684-1										
Nitrogen, Ammonia	ND		mg/l	0.075	0.022	1	05/15/17 23:00	05/16/17 21:28	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1003753-1										
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	05/16/17 06:10	05/16/17 06:31	1,7196A	KA

Lab Control Sample Analysis

Batch Quality Control

Project Name: WIT

Project Number: U222.9.T4

Lab Number: L1715658

Report Date: 05/18/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1003684-2								
Nitrogen, Ammonia	98		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1003753-2								
Chromium, Hexavalent	92		-		85-115	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: WIT
Project Number: U222.9.T4

Lab Number: L1715658
Report Date: 05/18/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003684-4 QC Sample: L1715808-02 Client ID: MS Sample												
Nitrogen, Ammonia	1.20	4	4.95	94		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003753-4 QC Sample: L1715658-01 Client ID: CHARLES RIVER												
Chromium, Hexavalent	0.003J	0.1	0.100	100		-	-		85-115	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: WIT
Project Number: U222.9.T4

Lab Number: L1715658
Report Date: 05/18/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003684-3 QC Sample: L1715808-02 Client ID: DUP Sample						
Nitrogen, Ammonia	1.20	1.21	mg/l	1		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1003753-3 QC Sample: L1715658-01 Client ID: CHARLES RIVER						
Chromium, Hexavalent	0.003J	0.003J	mg/l	NC		20

Project Name: WIT
Project Number: U222.9.T4

Lab Number: L1715658
Report Date: 05/18/17

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1715658-01A	Plastic 250ml HNO3 preserved	A	<2	5.1	Y	Absent	CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),HARDU(180),AG-2008T(180),AS-2008T(180),HG-U(28),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L1715658-01B	Amber 500ml unpreserved	A	7	5.1	Y	Absent	HEXCR-7196(1),TRICR-CALC(1)
L1715658-01C	Plastic 250ml H2SO4 preserved	A	<2	5.1	Y	Absent	NH3-4500(28)

*Values in parentheses indicate holding time in days

Project Name:	WIT	**Lab Number:**	L1715658
Project Number:	U222.9.T4	**Report Date:**	05/18/17

GLOSSARY

Acronyms

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

Footnotes

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

Terms

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

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

Data Qualifiers

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

Report Format: DU Report with 'J' Qualifiers

Project Name:	WIT	**Lab Number:**	L1715658
Project Number:	U222.9.T4	**Report Date:**	05/18/17

Data Qualifiers

reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).

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

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

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

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

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	WIT	**Lab Number:**	L1715658
Project Number:	U222.9.T4	**Report Date:**	05/18/17

REFERENCES

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

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

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

107 Alpha Analytical - In-house calculation method.

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

Westborough Facility
EPA 624: m/p-xylene, o-xylene
EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), Methyl methacrylate, 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.
EPA 8270D: NPW: Dimethylnaphthalene,1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene,1,4-Diphenylhydrazine.
EPA 300: DW: Bromide
EPA 6860: NPW and SCM: Perchlorate
EPA 9010: NPW and SCM: Amenable Cyanide Distillation
EPA 9012B: NPW: Total Cyanide
EPA 9050A: NPW: Specific Conductance
SM3500: NPW: Ferrous Iron
SM4500: NPW: Amenable Cyanide, Dissolved Oxygen; SCM: Total Phosphorus, TKN, NO2, NO3.
SM5310C: DW: Dissolved Organic Carbon

Mansfield Facility
SM 2540D: TSS
EPA 3005A NPW
EPA 8082A: NPW: PCB: 1, 5, 31, 87,101, 110, 141, 151, 153, 180, 183, 187.
EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene, 3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.
Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:

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

Non-Potable Water
SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH, **EPA 350.1**: Ammonia-N, **LACHAT 10-107-06-1-B**: Ammonia-N, **SM4500NO3-F, EPA 353.2**: Nitrate-N**, EPA 351.1, SM4500P-E, SM4500P-B, E, SM4500SO4-E, SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D.**
EPA 624: Volatile Halocarbons & Aromatics,
EPA 608: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs
EPA 625: SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045**: PCB-Oil.
Microbiology: **SM9223B-Colilert-QT; Enterolert-QT, SM9221E.**

Mansfield Facility:

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

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

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

CHAIN OF CUSTODY

PAGE 1 OF 1

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

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

Date Rec'd in Lab: 5/12/17

ALPHA Job #: L1715658

Client Information

Client: McPhail Associates

Address: 2269 Mass Ave
Cambridge MA

Phone: 617 868 1420

Email:

Project Information

Project Name: WIT

Project Location: Charles River

Project #: 0222.0219.T4

Project Manager: KWS

ALPHA Quote #:

Report Information - Data Deliverables

☒ ADEx ☐ EMAIL

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

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

Turn-Around Time

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

Date Due:

Additional Project Information:

Metals: RGP13: Sb,As,Cd,Cr,Cu,Fe,Pb,Hg,Ni,Se,Ag,Zn, CRIII, CRVI

ANALYSIS

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

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Hardness	Ammonia	Recoverable Metals	Sample Comments	TOTAL # BOTTLES
15658-01	Charles River	5/12/17	1100	SW	LDP		X			1
01	Charles River	5/12/17	1100	SW	LDP	X				1
01	Charles River	5/12/17	1100	SW	LDP			X		1

Container Type						A	P	P		
Preservative						A	D	O		

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
	5/12/17 1200		
	5/12/17 1720		5/12/17 1600 5/12/17 1720

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

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

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 5/12/17

ALPHA Job #: L1715688

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

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

Client Information

Client: McPhail Associates

Address: 2269 Mass Ave
Cambridge MA

Phone: 617 868 1420

Email:

Additional Project Information:

Project Information

Project Name: WIT

Project Location: Mill Charles River

Project #: 0222.0219.T4

Project Manager: KWS

ALPHA Quote #:

Turn-Around Time

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

Date Due:

Report Information - Data Deliverables

☒ ADEx ☐ EMAIL

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

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

ANALYSIS

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

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Sample Comments	TOTAL # BOTTLES
15688-01	Charles River	5/12/17	1100	SW	LDP		1
01	Charles River	5/12/17	1100	SW	LDP		1
01	Charles River	5/12/17	1100	SW	LDP		1

Container Type		A	P	P
Preservative		A	D	O

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
	5/12/17 1200		5/12/17 1600
	5/12/17 1720		5/12/17 1720

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

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

APPENDIX F:

BEST MANAGEMENT PRACTICE PLAN

A Notice of Intent for a Remediation General Permit (RGP) under the National Pollutant Discharge Elimination System (NPDES) has been submitted to the US Environmental Protection Agency (EPA) in anticipation of temporary construction dewatering that will occur during redevelopment of the property located at 3686, 3688 and 3690 in Boston, Massachusetts. This Best Management Practices Plan (BMPP) has been prepared as an Appendix to the RGP and will be posted at the site during the time period that temporary construction dewatering is occurring at the site.

Water Treatment and Management

During construction of the proposed building foundation, dewatering effluent is anticipated to be pumped from localized sumps and trenches within the excavation directly into a settling tank. The effluent will then flow through the necessary treatment systems and discharge through hoses or piping connected into the storm water drains and enter the outfall following one of two pathways. Records supplied by BWSC indicate that the dedicated stormwater drain systems connect to the north of the subject site as one discharge flow path with one primary and one secondary outfall locations. The discharge flow path continues north away from the subject site on the Stony Brook Conduit then flows north-northeast along the MBTA line and under Park Street. The flow path then flows west under Forsyth Way towards the Back Bay Fens. The secondary discharge location is an emergency outfall at a gate house that, per BWSC, is only used in high discharge flow emergency events. The flow path follows along the Back Bay Fens under I-90, Commonwealth Avenue, and Storrow Drive out to the Charles River. The primary discharge location is an outfall pipe listed as CSO 023.

Dewatering effluent treatment will consist of a settling tank, bag filters to remove suspended soil particulates and an ion resin media vessel to lower concentrations of metals to meet the applicable WQBELs. In the case that a sheen is observed, effluent discharge may need to be passed through GAC filtration systems prior to off-site discharge to lower concentrations of petroleum hydrocarbons below applicable WQBELs and/or TBELs.

Discharge Monitoring and Compliance

Sampling and testing will be conducted at the influent to the system and the treated effluent as required by the RGP. During the first week of discharge, the operator will sample the untreated influent and treated effluent two times: one (1) sample of untreated influent and one (1) sample of the treated effluent will be collected on the first day of discharge, and one (1) sample of untreated influent and one (1) sample of treated effluent must be collected on one additional non-consecutive day within the first week of discharge. Samples will be analyzed in accordance with 40 CFR §136 unless otherwise specified by the RGP, with a maximum 5-day turnaround time and results will be reviewed no more than 48

hours from receipt of the results of each sampling event. After the first week, samples will be analyzed with up to a ten (10)-day turnaround time and results must be reviewed no more than 72 hours from receipt of the results. If the treatment system is operating as designed and achieving the effluent limitations outlined in the RGP, on-going sampling shall be conducted weekly for three (3) additional weeks beginning no earlier than 24 hours following initial sampling, and monthly as described below. Any adjustments/reductions in monitoring frequency must be approved by EPA in writing.

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

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

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

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

System Maintenance

Regular maintenance and periodic cleaning of the treatment system will be conducted to verify proper operation and shall be conducted in accordance with Section 1.14 of the project earthwork specifications. Regular maintenance will include checking the condition of the treatment system equipment such as the settling tanks, bag filters, hoses, pumps, and flow meters. Equipment will be monitored daily for potential issues and unscheduled maintenance requirements.

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

Miscellaneous Items

It is anticipated that the erosion control measures and the nature of the site will minimize potential runoff to or from the site. The project specifications also include requirements for

erosion control. Site security for the treatment system will be addressed within the overall site security plan.

No adverse effects on designated uses of surrounding surface water bodies is anticipated. There are no water bodies within 1,000 feet of the subject site. Dewatering effluent will be pumped into a settling tank. Water within the settling tank will pumped through bag filters and, if necessary, ion exchange chambers and/or GAC filters prior to discharge into the storm drains.

Management of Treatment System Materials

Dewatering effluent will be pumped directly into the treatment system from the excavation with use of hoses and localized sumps to minimize handling. The Contractor will establish staging areas for equipment or materials storage that may be possible sources of pollution away from any dewatering activities, to the extent practicable.

Sediment from the tank used in the treatment system will be characterized and removed from the site to an appropriate receiving facility, in accordance with applicable laws and regulations. Bags and media will be replaced/disposed of as necessary.