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

PARCEL K – 301 NORTHERN AVENUE

SOUTH BOSTON, MASSACHUSETTS

JULY 10, 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:

PPC Land Ventures, Inc
c/o Lincoln Property Company
53 State Street 8th Floor
Boston, MA 02109

PROJECT NO. 5876

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

July 10, 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: Parcel K- 301 Northern Avenue, South Boston, Massachusetts
Notice of Intent for Construction Dewatering Discharge Under
Massachusetts Remediation General Permit MAG910000

Ladies and Gentlemen:

On behalf of the PPC Land Ventures, 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 Boston Inner Harbor via the City of Boston storm drainage system. The temporary construction dewatering discharge will occur during construction of the proposed development of Parcel K located at 301 Northern Avenue in South 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 May 2, 2017, and the subsequent authorization of PPC Land Ventures, Inc. 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:

Suffolk Construction
Address: 65 Allerton St, Boston, MA 02119

Attention: Frank Craemer
Title: Vice President/Project Executive
Phone: (617) 517-5236
Email: FCraemer@suffolk.com

Site Location and Existing Conditions

Parcel K occupies an approximate 103,500 square-foot, nearly square plan area which fronts onto Northern Avenue to the north and is bounded by Massport Haul Road to the east, Silver Line Way and Starboard Way to the south, and Congress Street to the west. The Interstate 90 Ted Williams Tunnel begins near the southeast corner of the site. The property is owned by Massport. Currently, the site is utilized as a paved parking area. Existing ground surface across the site is relatively level, varying from about Elevation +13.5 to +19.0. Elevations referenced herein are in feet and refer to the Boston City Base (BCB) Datum. The limits of the subject site are depicted on **Figure 2**.

Proposed Scope of Site Development

It is understood that the proposed development of Parcel K includes the construction of two (2), 11-story towers. The proposed residential tower to be located adjacent to Congress Street will occupy an approximate 23,500 square-foot plan area, and the proposed hotel tower to be located adjacent to Massport Haul Road will occupy an approximate 24,000 square-foot plan area. The proposed development also consists of one-level of below-grade parking which will occupy the majority of the site footprint, corresponding to an approximate 86,600 square-foot plan area. The lowest level slab within the garage will be at about Elevation +1.

Site History

Prior to the early 1890's, the site was a tidal flat of Boston Harbor. In the 1890's the land was reclaimed utilizing dredged fill material obtained from the adjacent tidal flats, Fort Point Channel and Boston Harbor. The dredged fill material typically consisted of organic silt and marine clay. In addition, "city ashes, refuse, earth and waste" materials were also reportedly utilized as fill material. The top of the site was capped with approximately 5 to 10 feet of granular fill material.

Based on historic maps, the site was utilized as railroad freight terminal during the first half of the 1900's. Later, the site was occupied by a large fish processing plant. The fish processing plant was demolished in the early 2000's, but below-grade remains of the former structure may be present within the footprint of the proposed development.

Site Environmental Setting and Surrounding Historical Places

Based on an on-line edition of the Massachusetts Geographic Information Systems DEP Priority Resources Map (GIS Map) viewed on June 15, 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 identified the presence of one (1) endangered species at or in the vicinity of the discharge location and/or discharge outfall. IPaC indicates the Red Knot is a threatened species with respect to the proposed discharge, however, the report did not identify the presence of a critical habitat in the vicinity of the discharge outfall and/or discharge location. Furthermore, information obtained from an ornithology database, the Red Knot has not been observed in the vicinity of the discharge outfall and/or discharge location in approximately 100 years of data collection. Based upon the above, the site is considered NMFS criterion pursuant to Appendix IV of the RGP. A copy of the IPaC Trust Resource Report and supporting data are included in **Appendix C**.

The GIS Map indicates that there are no water bodies or wetland areas on the subject site. The map also indicates that the closest Protected Open Space to the subject site is located approximately 1,000 feet to the west. The closest water body is the Boston Inner Harbor is located approximately 75 feet to the north of the subject site. 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. A copy of the MACRIS Report is included in **Appendix C**.

MCP Regulatory Status

Following the completion of a soil characterization program in June 2015, the presence of arsenic, lead, SVOCs, naphthalene, and TPH were identified at concentrations above the RCS-1 reporting standards within samples of the fill material. A Release Notification Form (RNF) was filed with the DEP on December 11, 2015 due to the detected concentrations. Release Tracking Number (RTN) 3-33317 was assigned to the disposal site.
A Phase I Initial Site Investigation and Tier Classification Report was filed with the DEP on December 16, 2016.

A RAM Plan is being prepared to address the contaminants of concern (COCs) discovered during the 2015 soil characterization program. In the event that a Permanent Solution Statement is not ready to be filed with the DEP by December 11, 2019, a Phase II Comprehensive Site Assessment will need to be filed instead

Summary of Groundwater Analysis

In 2015, three (3) groundwater observation wells were installed at the subject site. One groundwater sample was collected from well K-1(OW) and submitted for laboratory analysis on February 24, 2017. Laboratory results indicate detectable concentrations of arsenic,

chromium, copper, iron, lead, nickel, zinc, cyanide, polycyclic aromatic hydrocarbons (PAHs), and naphthalene.

The laboratory results indicated levels of lead above the MCP RCGW-2 reporting threshold, but subsequent testing for dissolved leas was found to be below RCGW-2 Standards. Copper, iron, and total cyanide were detected above EPA RGP Limits. A summary of the groundwater results is shown in the enclosed **Table 1**.

In conjunction with the updated 2017 NPDES RGP, a sample of water from the Boston Inner Harbor was obtained and analyzed for recoverable metals, ammonia, pH, and salinity summarized in **Table 2**.

Full laboratory reports are included in **Appendix D & E.**

Construction Dewatering

Effective temporary groundwater cut-off will be achieved by the sheet pile cofferdam and dewatering by sumping out from the excavation. In addition, trapped surface water and groundwater runoff may accumulate on the surface of the subgrade soils at localized areas within the cofferdam after periods of heavy precipitation that may also necessitate localized sumping.

It is anticipated that dewatering by means of strategically located sumps and trenches should suffice during foundation construction operations.

A review of available subgrade sanitary and storm sewer system plans accessed from the BWSC indicates the presence of a dedicated stormwater drain system located within Massport Haul Road, Northern Avenue, and Congress Street. Records supplied by BWSC indicate multiple discharge flow paths adjacent to the site flow to a primary discharge outfall location. The discharge flow paths are dependent on which stormwater access point is utilized. The flow paths, in general, run north to northwest towards the harbor under Northern Avenue. The primary discharge location is an outfall pipe listed as #747 according to the BWSC. Multiple discharge locations and discharge flow paths are shown on the enclosed **Figure 3.**

Groundwater Treatment

The groundwater testing completed indicates that elevated levels of metals are prevalent at the site. In summary, arsenic, chromium, copper, iron, lead, zinc, and cyanide were detected at the subject site after one sampling event. Concentrations were utilized in Appendix V of the 2017 RGP, to determine if Water Quality-Based Effluent Limitations (WQBELs) for specific inorganics apply. For discharging to saltwater with a dilution factor of 0, WQBELs apply for copper. It is noted that a Compliance Level for cyanide is applicable to the discharge. The Appendix V calculations also indicate Technology-Based Effluent Limitations (TBELs) apply for other Inorganics. A copy of the TBEL and WQBEL calculations is attached in **Appendix C**.

Based on the results of the above referenced groundwater analyses, it is our opinion that a two 20,000-gallon capacity settling tank and bag filter in series will be required to settle and filter out suspended and dissolved inorganic metals in the discharge during construction dewatering to meet applicable effluent limits established by the US EPA prior to off-site discharge. If necessary, an Ion Exchange Resin Filter will be utilized to further treat levels of metals in the effluent to meet the WQBELs that are considered applicable. A schematic of the treatment system is shown on **Figure 4**.

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 of Parcel K located at 301 Northern Avenue in South Boston, Massachusetts

Based on the results of the above referenced groundwater analyses, treatment of construction dewatering will be necessary to meet allowable WQBELs for copper, Compliance Level for Cyanide, as well as allowable TBELs for other inorganics established by the US EPA prior to off-site discharge. The proposed construction dewatering effluent treatment system will consist of two settling tank 20,000-gallons in capacity and bag filter in series to filter out sediment containing elevated levels of metals. However, should the effluent monitoring results indicate levels of copper or other inorganics in excess of the applicable TBELs and/or WQBEL established in the Massachusetts RGP, additional mitigative measures in the form of Ion Exchange Resin Filtration will be implemented to meet the allowable discharge limits.

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

Sincerely,

McPHAIL ASSOCIATES, LLC

Kirk W. Seaman

Ambrose J, Donovan, P.E. L.S.P.

N:\Working Documents\Reports\5876_RGP_071017.docx
KWS/bed/ajd

FIGURE 1

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

N

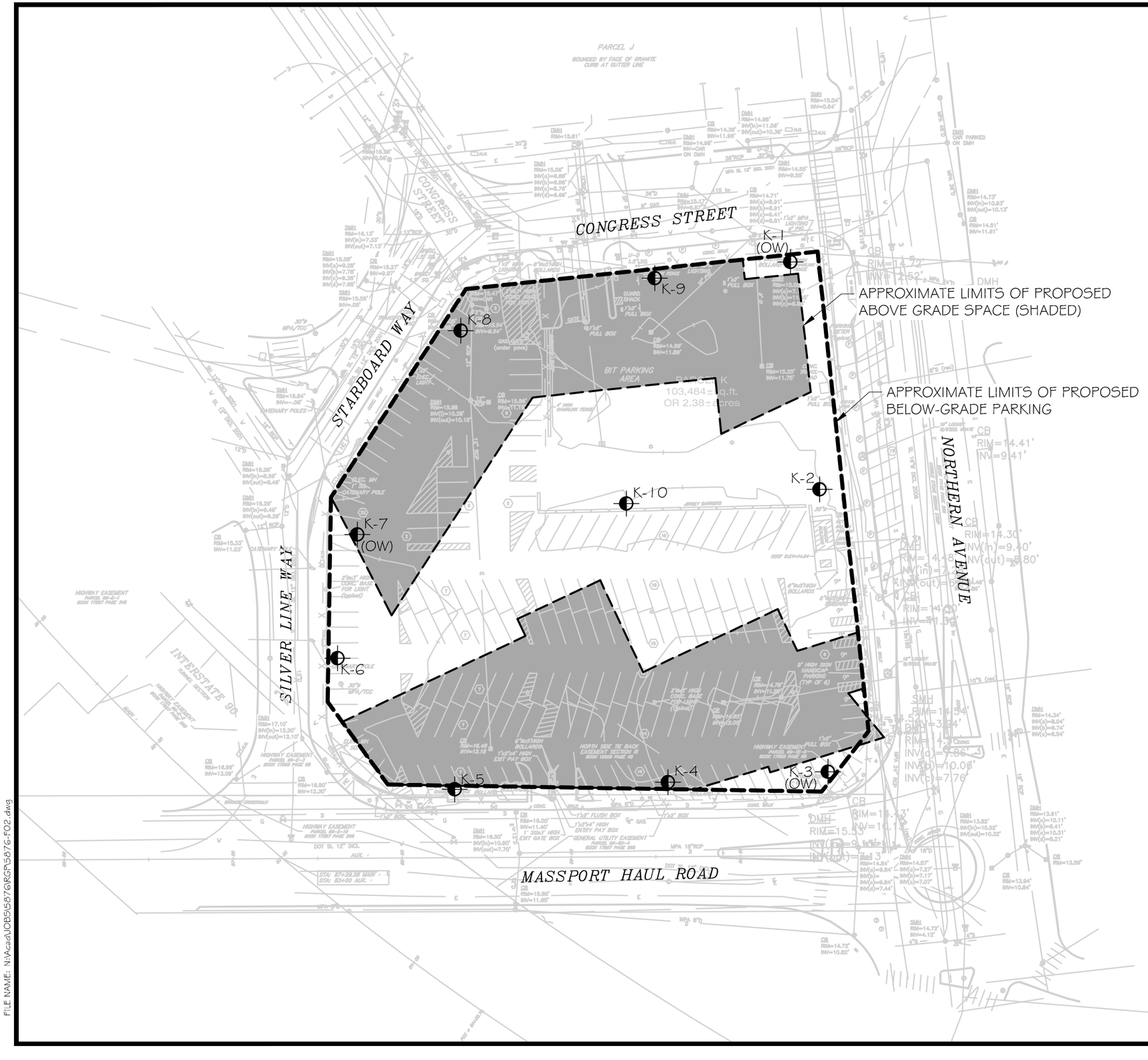
SCALE 1:25,000

PROJECT LOCATION PLAN

SEAPORT PARCEL K

SOUTH BOSTON MASSACHUSETTS

FIGURE 2



LEGEND

— APPROXIMATE LOCATION OF BORING PERFORMED BY CARR-DEE CORP. DURING THE PERIOD OF JUNE 17 TO JUNE 23, 2015 FOR McPHAIL ASSOCIATES, LLC

(OW) — INDICATES OBSERVATION WELL INSTALLED WITHIN COMPLETED BOREHOLE

REFERENCE: THIS PLAN WAS PREPARED FROM A 20-SCALE DRAWING ENTITLED, "EXISTING CONDITIONS PLAN" DATED JULY 26, 2012 PREPARED BY BAY COLONY GROUP, INC.

GRAPHIC SCALE

60 0 60 120

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PARCEL K - 301 NORTHERN AVENUE
BOSTON MASSACHUSETTS

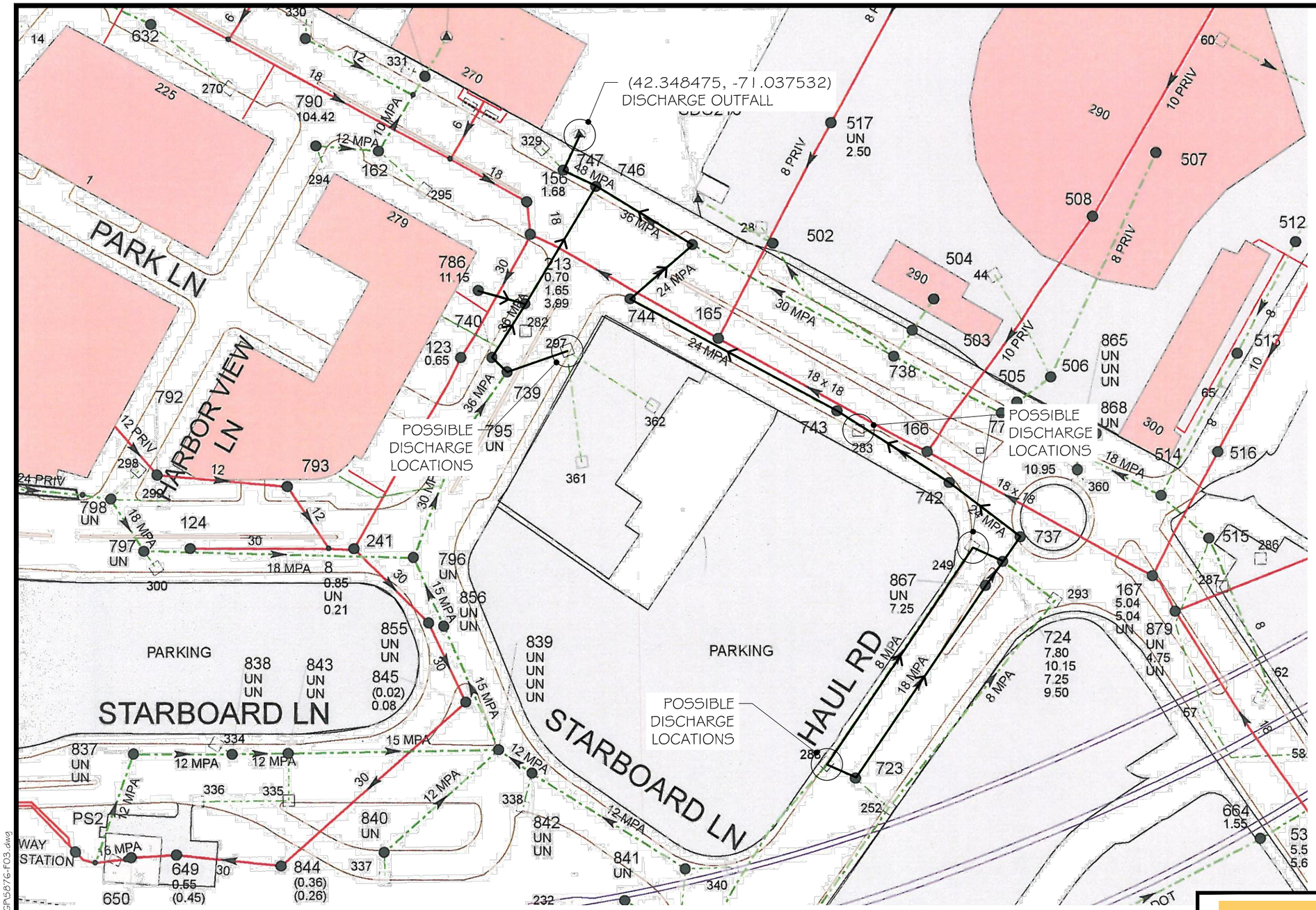
SUBSURFACE EXPLORATION PLAN

FOR
PPC LAND VENTURES LLC
BY
McPHAIL ASSOCIATES, LLC

Date: JULY 2017	Dwn: F.G.P.	Chkd: K.W.S.	Scale: 1" = 60'
Project No: 5876			

FILE NAME: N:\Acad\JOBS\5876\RGP\5876-F02.dwg

FIGURE 3



REFERENCE: THIS PLAN WAS PREPARED FROM A 100-SCALE DRAWING GENERATED FROM THE BOSTON WATER AND SEWER DATABASE ON MAY 24, 2017

GRAPHIC SCALE

80 0 80 160

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PARCEL K - 301 NORTHERN AVENUE
BOSTON MASSACHUSETTS

DISCHARGE LOCATION PLAN

FOR
PPC LAND VENTURES LLC
BY
McPHAIL ASSOCIATES, LLC

Date: JULY 2017	Dwn: M.B.S.	Chkd: K.W.S.	Scale: 1" = 80'
Project No: 5876			

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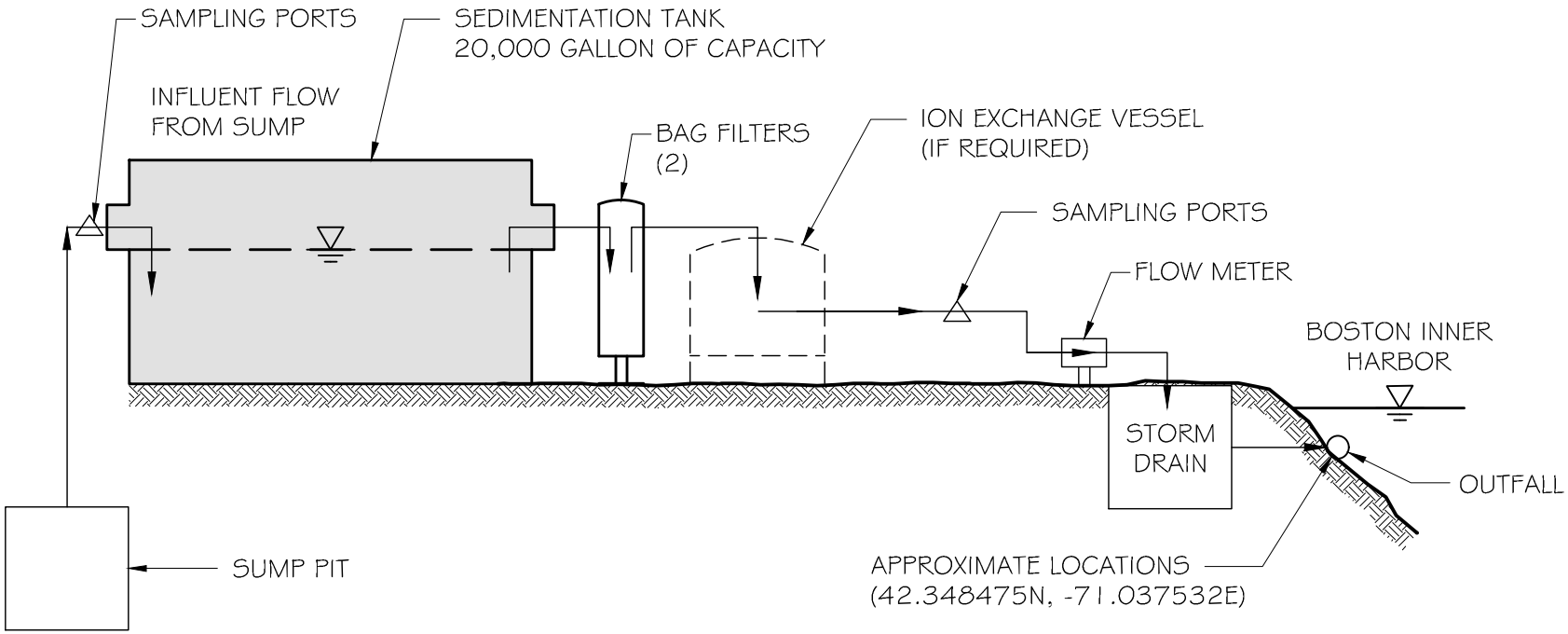
FILE NAME: N:\Acad\JOBS\5876\RGP\5876-F04.dwg

FIGURE 4



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PARCEL K - 301 NORTHERN AVENUE
BOSTON MASSACHUSETTS

SCHEMATIC OF TREATMENT SYSTEM

FOR
PPC LAND VENTURES LLC
BY
McPHAIL ASSOCIATES, LLC
CONSULTING GEOTECHNICAL ENGINEERS

Date: JUNE 2017	Dwn: F.G.P.	Chkd: K.W.S.	Scale: N.T.S.
Project No: 5876			

TABLE 1

ANALYTICAL TEST RESULTS--GROUNDWATER

Parcel K - 301 Northern Avenue;
Boston, Massachusetts
Project Number 5876

LOCATION	RGP Limits (Saltwater)		**K-1 (OW)**
SAMPLING DATE			**2/24/2017**
SAMPLE TYPE			**GW**
LAB SAMPLE ID		**Units**	**L1705905-01**
General			
pH (H)	6.5-8.3	SU	7
Temperature	Monitor Only	degrees	
Hardness	Monitor Only	mg/l	
A. Inorganics			
Nitrogen, Ammonia	Monitor Only	mg/l	0.406
Chloride	Monitor Only	ug/l	3,270,000
Total Residual Chlorine	7.5	ug/l	ND(20)
Solids, Total Suspended	30	mg/l	5.8
Antimony, Total	640	ug/l	ND(4)
Arsenic, Total	36	ug/l	1.2
Cadmium, Total	8.8	ug/l	ND(0.2)
Chromium, Trivalent	100	ug/l	1
Chromium, Hexavalent	50	ug/l	ND(10)
Copper, Total	3.1	ug/l	53
Iron, Total	5000	ug/l	604
Lead, Total	8.1	ug/l	15.4
Mercury, Total	0.94	ug/l	ND(0.2)
Nickel, Total	8.2	ug/l	ND(2)
Selenium, Total	71	ug/l	ND(5)
Silver, Total	1.9	ug/l	ND(0.5)
Zinc, Total	81	ug/l	78.8
Total Cyanide	1	ug/l	12
D. Non-Halogentated Semi-Volatile Organic Compounds			
Total Group I PAHs	1	ug/l	ND
Benzo(a)anthracene	0.0038	ug/l	ND(0.2)
Benzo(a)pyrene	0.0038	ug/l	ND(0.2)
Benzo(b)fluoranthene	0.0038	ug/l	ND(0.2)
Benzo(k)fluoranthene	0.0038	ug/l	ND(0.2)
Chrysene	0.0038	ug/l	ND(0.2)
Dibenzo(a,h)anthracene	0.0038	ug/l	ND(0.2)
Indeno(1,2,3-cd)Pyrene	0.0038	ug/l	ND(0.2)
Total Group II PAHs	100	ug/l	0.37
Acenaphthene	Total Group II PAH	ug/l	ND(0.2)
Acenaphthylene	Total Group II PAH	ug/l	ND(0.2)
Anthracene	Total Group II PAH	ug/l	ND(0.2)
Benzo(ghi)perylene	Total Group II PAH	ug/l	ND(0.2)
Fluoranthene	Total Group II PAH	ug/l	ND(0.2)
Fluorene	Total Group II PAH	ug/l	ND(0.2)
Naphthalene	20	ug/l	0.37
Phenanthrene	Total Group II PAH	ug/l	ND(0.2)
Pyrene	Total Group II PAH	ug/l	ND(0.2)

Shading indicates an exceedence of the RGP Standards
ND--not detected above laboratory detection limit

TABLE 2

ANALYTICAL TEST RESULTS--SURFACE WATER

Parcel K - 301 Northern Avenue;
Boston, Massachusetts
Project Number 5876

LOCATION		**PAVILION OUTFALL**
SAMPLING DATE		**5/30/2017**
LAB SAMPLE ID		**L1717710-01**
SAMPLE TYPE	**Units**	**Surface Water**
General		
SALINITY	SU	7.2
pH (H)	SU	7.5
Nitrogen, Ammonia	mg/l	0.18
MCP General Chemistry		
Chromium, Hexavalent	ug/l	ND(10)
Total Metals		
Antimony, Total	ug/l	ND(20)
Arsenic, Total	ug/l	1.38
Cadmium, Total	ug/l	ND(1)
Chromium, Total	ug/l	ND(1)
Copper, Total	ug/l	1.89
Iron, Total	ug/l	126
Lead, Total	ug/l	ND(5)
Mercury, Total	ug/l	ND(0.2)
Nickel, Total	ug/l	ND(2)
Selenium, Total	ug/l	ND(5)
Silver, Total	ug/l	ND(5)
Zinc, Total	ug/l	ND(10)

Shading indicates an exceedence of the RGP Standards
ND--not detected above laboratory detection limit

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 301 Northern Avenue in South 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 PPC Land Ventures. 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:
Parcel K</td><td colspan="3">Site address:
Street: 301 Northern Avenue</td></tr>
<tr><td>City: Boston</td><td>State: MA</td><td>Zip: 02210</td></tr>
<tr><td rowspan="4">2. Site owner
Massachusetts Port Authority

Owner is (check one): ☐ Federal ■ State/Tribal ☐ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: Juan Loveluck</td></tr>
<tr><td colspan="2">Telephone: 617-568-3109</td><td>Email: jloveluck@massport.com</td></tr>
<tr><td colspan="3">Mailing address: One Harborside Drive, Suite 2005
Street:</td></tr>
<tr><td>City: East Boston</td><td>State: MA</td><td>Zip: 02128-2909</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
Suffolk Construction</td><td colspan="3">Contact Person: Frank Craemer</td></tr>
<tr><td colspan="2">Telephone: 617-445-3500</td><td>Email: fcraemer@suffolk.com</td></tr>
<tr><td colspan="3">Mailing address:
Street: 65 Allerton Street</td></tr>
<tr><td>City: Boston</td><td>State: MA</td><td>Zip: 02119</td></tr>
<tr><td>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): 3-33317

☐ 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):
Boston Inner Harbor	MA70-02	SB

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

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

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

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

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.	0
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.	0

6. Has the operator received confirmation from the appropriate State for the 7Q10and dilution factor indicated? (check one): ■ Yes ☐ No
If yes, indicate date confirmation received: 0

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: Ammonia, TSS, Arsenic, Chromium, Copper, Iron, Lead, Zinc, Cyanide, and 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): #747	Outfall location(s): (Latitude, Longitude) 42.348475, -71.037532
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 Boston Inner Harbor ☐ 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): August 2017 - July 2018 Indicate if the discharge is expected to occur over a duration of: ■ less than 12 months ☐ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ■ Yes ☐ No	

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

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

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

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✔	1	44350.1	75	0.406	0.406	Report mg/L	---
Chloride		✔	1	443000	500	3,270,000	3,270,000	Report µg/l	---
Total Residual Chlorine	✔		1	121,4500C	20	<DL	<DL	0.2 mg/L	
Total Suspended Solids		✔	1	1212540D	5000	5.8	5.8	30 mg/L	
Antimony	✔		1	1,6020A	4	<DL	<DL	206 µg/L	
Arsenic		✔	1	1,6020A	0.5	1.2	1.2	104 µg/L	
Cadmium	✔		1	1,6020A	2	<DL	<DL	10.2 µg/L	
Chromium III		✔	1	1,6020A	1	1.0	1.0	323 µg/L	
Chromium VI		✔	1	1,6020A	1	<DL	<DL	323 µg/L	
Copper		✔	1	1,6020A	1	53	53	242 µg/L	
Iron		✔	1	19200.7	500	604	604	5,000 µg/L	
Lead		✔	1	1,6020A	0.5	15.2	15.2	160 µg/L	
Mercury	✔		1	3,245.1	0.2	<DL	<DL	0.739 µg/L	
Nickel	✔		1	1,6020A	0.5	<DL	<DL	1,450 µg/L	
Selenium	✔		1	1,6020A	5	<DL	<DL	235.8 µg/L	
Silver	✔		1	1,6020A	0.4	<DL	<DL	35.1 µg/L	
Zinc		✔	1	1,6020A	10	78.8	78.8	420 µg/L	
Cyanide		✔	1	121,4500C	5	12	12	178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX	✔		0			<DL	<DL	100 µg/L	---
Benzene	✔		0			<DL	<DL	5.0 µg/L	---
1,4 Dioxane	✔		0			<DL	<DL	200 µg/L	---
Acetone	✔		0			<DL	<DL	7.97 mg/L	---
Phenol	✔		0			<DL	<DL	1,080 µg/L	

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✔		1	18260C	0.5	<DL	<DL	4.4 µg/L	
1,2 Dichlorobenzene	✔		1	18260C	2.5	<DL	<DL	600 µg/L	---
1,3 Dichlorobenzene	✔		1	18260C	2.5	<DL	<DL	320 µg/L	---
1,4 Dichlorobenzene	✔		1	18260C	2.5	<DL	<DL	5.0 µg/L	---
Total dichlorobenzene	✔		1	18260C	2.5	<DL	<DL	763 µg/L in NH	---
1,1 Dichloroethane	✔		1	18260C	0.5	<DL	<DL	70 µg/L	---
1,2 Dichloroethane	✔		1	18260C	0.5	<DL	<DL	5.0 µg/L	---
1,1 Dichloroethylene	✔		0					3.2 µg/L	---
Ethylene Dibromide	✔		0					0.05 µg/L	---
Methylene Chloride	✔		1	18260C	3.0	<DL	<DL	4.6 µg/L	---
1,1,1 Trichloroethane	✔		1	18260C	0.75	<DL	<DL	200 µg/L	---
1,1,2 Trichloroethane	✔		1	18260C	0.75	<DL	<DL	5.0 µg/L	---
Trichloroethylene	✔		0					5.0 µg/L	---
Tetrachloroethylene	✔		1	18260C	0.5	<DL	<DL	5.0 µg/L	
cis-1,2 Dichloroethylene	✔		0					70 µg/L	---
Vinyl Chloride	✔		1	18260C	1.0	<DL	<DL	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✔		1	18270D-SI	5.0	<DL	<DL	190 µg/L	
Diethylhexyl phthalate	✔		1	18270D-SI	5.0	<DL	<DL	101 µg/L	
Total Group I PAHs	✔		1	18270D-SI	0.20	<DL	<DL	1.0 µg/L	---
Benzo(a)anthracene	✔		1	18270D-SI	0.20	<DL	<DL	As Total PAHs	
Benzo(a)pyrene	✔		1	18270D-SI	0.20	<DL	<DL		
Benzo(b)fluoranthene	✔		1	18270D-SI	0.20	<DL	<DL		
Benzo(k)fluoranthene	✔		1	18270D-SI	0.20	<DL	<DL		
Chrysene	✔		1	18270D-SI	0.20	<DL	<DL		
Dibenzo(a,h)anthracene	✔		1	18270D-SI	0.20	<DL	<DL		
Indeno(1,2,3-cd)pyrene	✔		1	18270D-SI	0.20	<DL	<DL		

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs		✔	1	18270D-SI	0.20	0.37	0.37	100 µg/L	---
Naphthalene		✔	1	18270D-SI	2.5	0.37	0.37	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✔		1	5,608	0.250	<DL	<DL	0.000064 µg/L	---
Pentachlorophenol	✔		1	18270D-SI	0.80	<DL	<DL	1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons	✔		1	74,1664A	400	<DL	<DL	5.0 mg/L	---
Ethanol	✔		0					Report mg/L	---
Methyl-tert-Butyl Ether	✔		1	1,8260C	1.0	<DL	<DL	70 µg/L	
tert-Butyl Alcohol	✔		1	1,8260C	10	<DL	<DL	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✔		1	1,8260C	2.0	<DL	<DL	90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									
pH - Influent		✔	1	121,4500H		7			
Salinity - Influent		✔	1	YSI	660	14.46			
Temp - Influent		✔	1	YSI		12.84 C			
pH - Receiving Water		✔	1	121,4500H		7.5			
Salinity - Receiving Water		✔	1	YSI		18.22			
Temp - Receiving Water		✔	1	YSI		14.04 C			

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 and bag filters, if necessary, Ion exchange resin filter

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 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:	100
Provide the proposed maximum effluent flow in gpm.	100
Provide the average effluent flow in gpm.	50
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	

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.

NMFS Supporting Information

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

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

J. Certification requirement

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

BMPP certification statement: A BMPP Statement has been accordance with accordance with good engineering practices following Part 2.5 of the RGP and shall be implemented upon initiation of discharge.	
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ■ No ☐
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested. Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.	Check one: Yes ■ No ☐ NA ☐ Submission of documentation to and approval from BWSC in tandem with this NOI Check one: Yes ☐ No ■ NA ☐
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Check one: Yes ■ No ☐ NA ☐
Signature:	Date: 7-6-17
Print Name and Title: FRANK D. CRAEMER VP/PROJECT EXECUTIVE	

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

DEWATERING DISCHARGE PERMIT APPLICATION

OWNER / AUTHORIZED APPLICANT PROVIDE INFORMATION HERE:

Company Name: Suffolk Constructon Address: 65 Allerton Street

Phone Number: (617) 517 5236 Fax number: _____

Contact person name: Frank Craemer Title: Vice President/Project Executive

Cell number: _____ Email address: FCraemer@suffolk.com

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

Owner's Information (if different from above):

Owner of property being dewatered: Massachusetts Port Authority

Owner's mailing address: One Harborside Drive, Suite 2005 Phone number: 617 568 3109

Location of Discharge & Proposed Treatment System(s):

Street number and name: 301 Northern Avenue Neighborhood Seaport District

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

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

BWSC Outfall No. 747 Receiving Waters Boston Inner Harbor

Temporary Discharges (Provide Anticipated Dates of Discharge): From 08/2017 To 07/2018

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

Permanent Discharges

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

---

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

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

Signature of Authorized Representative for Property Owner: _____ Date: 7/20/17

APPENDIX C:

DEP PRIORITY RESOURCES MAP

USGS STREAMFLOW STATISTICS REPORT

DILUTION FACTOR AND WQBEL CALCULATIONS

ADDITIONAL NOI SUPPORT INFORMATION

United States Department of the Interior

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

In Reply Refer To: May 31, 2017
Consultation Code: 05E1NE00-2017-SLI-1706
Event Code: 05E1NE00-2017-E-03432
Project Name: Parcel K

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 05E1NE00-2017-SLI-1706

Event Code: 05E1NE00-2017-E-03432

Project Name: Parcel K

Project Type: DEVELOPMENT

Project Description: >2 acre

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.34754681743222N71.0371929969878W

Counties: Suffolk, MA

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area. Please contact the designated FWS office if you have questions.

Birds

NAME	STATUS
Red Knot *(Calidris canutus rufa)*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/1864

Critical habitats

There are no critical habitats within your project area.

MassDEP - Bureau of Waste Site Cleanup

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

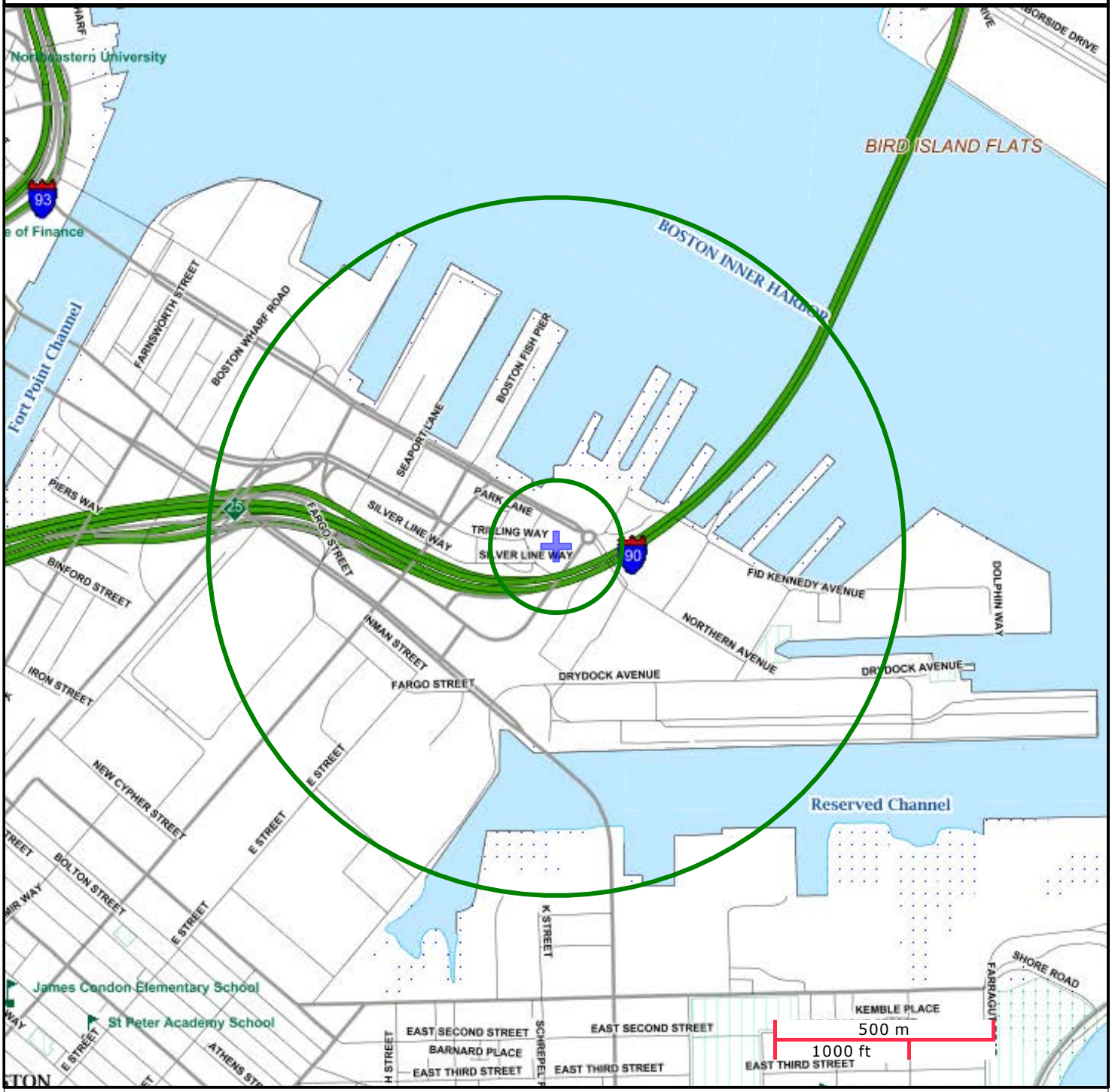
Site Information:

301 NORTHERN AVENUE BOSTON, MA

NAD83 UTM Meters:
4690369mN , 332208mE (Zone: 19)
June 15, 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; Place: South Boston East; Street No: 301; Street Name: Northern Ave; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

APPENDIX D:

LABORATORY ANALYTIC DATA - GROUNDWATER

ANALYTICAL REPORT

Lab Number:	L1705905
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	PARCEL K
Project Number:	5876.9.07
Report Date:	03/03/17

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: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1705905-01	K-1 (OW)	WATER	BOSTON, MA	02/24/17 07:45	02/24/17
L1705905-02	TRIP BLANK	WATER	BOSTON, MA	02/24/17 00:00	02/24/17

Project Name: PARCEL K
Project Number: 5876.9.07
Lab Number: L1705905
Report Date: 03/03/17

MADEP MCP Response Action Analytical Report Certification

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

An affirmative response to questions A through F is required for "Presumptive Certainty" status		
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	YES
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	NO
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)?	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)?	NO

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

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

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

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: PARCEL K **Lab Number:** L1705905
Project Number: 5876.9.07 **Report Date:** 03/03/17

Case Narrative (continued)

MCP Related Narratives

Sample Receipt

A Trip Blank was received in the laboratory, but not listed on the Chain of Custody, and was not analyzed.

Volatile Organics

In reference to question H:

The initial calibration, associated with L1705905-01, did not meet the method required minimum response factor on the lowest calibration standard for 2-butanone (0.0732) and tert-butyl alcohol (0.0129), as well as the average response factor for 2-butanone and tert-butyl alcohol.

The continuing calibration standard, associated with L1705905-01, 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.

Volatile Organics by SIM

The continuing calibration standard, associated with L1705905-01, is included as an addendum to this report.

PCBs

In reference to question B:

At the client's request, the analytical method specified in the CAM protocol was not followed.

In reference to question I:

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

Metals

In reference to question G:

L1705905-01: One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question I:

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

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Project Number: 5876.9.07

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Case Narrative (continued)

Non-MCP Related Narratives

Phenolics, Total

The WG981527-4 MS recovery (144%), performed on L1705905-01, is outside the acceptance criteria; however, the associated LCS recovery is within criteria. No further action was taken.

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

Authorized Signature: Michelle M. Morris

Title: Technical Director/Representative Date: 03/03/17

ORGANICS

VOLATILES

Project Name: PARCEL K
Lab Number: L1705905
Project Number: 5876.9.07
Report Date: 03/03/17

SAMPLE RESULTS

Lab ID: L1705905-01
Client ID: K-1 (OW)
Sample Location: BOSTON, MA
Matrix: Water
Analytical Method: 1,8015D
Analytical Date: 03/01/17 16:09
Analyst: DP

Date Collected: 02/24/17 07:45
Date Received: 02/24/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Alcohol Analysis by GC/FID - Mansfield Lab						
Ethyl Alcohol	ND		mg/l	2.00	--	1

Project Name: PARCEL K
Lab Number: L1705905
Project Number: 5876.9.07
Report Date: 03/03/17

SAMPLE RESULTS

Lab ID: L1705905-01
Client ID: K-1 (OW)
Sample Location: BOSTON, MA
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 03/01/17 14:34
Analyst: NS

Date Collected: 02/24/17 07:45
Date Received: 02/24/17
Field Prep: Not Specified
Extraction Method: EPA 504.1
Extraction Date: 03/01/17 11:47

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

Project Name: PARCEL K
Project Number: 5876.9.07
Lab Number: L1705905
Report Date: 03/03/17

SAMPLE RESULTS

Lab ID: L1705905-01
Client ID: K-1 (OW)
Sample Location: BOSTON, MA
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 02/27/17 10:50
Analyst: MM

Date Collected: 02/24/17 07:45
Date Received: 02/24/17
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: PARCEL K **Lab Number:** L1705905

Project Number: 5876.9.07 **Report Date:** 03/03/17

SAMPLE RESULTS

Lab ID: L1705905-01 Date Collected: 02/24/17 07:45

Client ID: K-1 (OW) Date Received: 02/24/17

Sample Location: BOSTON, MA 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
Xylenes, 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
Methyl ethyl ketone	ND		ug/l	5.0	--	1
Methyl isobutyl ketone	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: PARCEL K
Lab Number: L1705905
Project Number: 5876.9.07
Report Date: 03/03/17

SAMPLE RESULTS

Lab ID: L1705905-01
Client ID: K-1 (OW)
Sample Location: BOSTON, MA
Date Collected: 02/24/17 07:45
Date Received: 02/24/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Diethyl ether	ND		ug/l	2.0	--	1
Diisopropyl 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
Tert-Butyl Alcohol	ND		ug/l	10	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	123		70-130
Toluene-d8	86		70-130
4-Bromofluorobenzene	93		70-130
Dibromofluoromethane	127		70-130

Project Name: PARCEL K
Lab Number: L1705905
Project Number: 5876.9.07
Report Date: 03/03/17

SAMPLE RESULTS

Lab ID: L1705905-01
Client ID: K-1 (OW)
Sample Location: BOSTON, MA
Matrix: Water
Analytical Method: 97,8260C-SIM
Analytical Date: 02/27/17 10:50
Analyst: MM

Date Collected: 02/24/17 07:45
Date Received: 02/24/17
Field Prep: Not Specified

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

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 02/27/17 07:54
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01 Batch: WG981460-5					
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: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 02/27/17 07:54
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01 Batch: WG981460-5					
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	--
Xylenes, 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	--
Methyl ethyl ketone	ND		ug/l	5.0	--
Methyl isobutyl ketone	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: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 02/27/17 07:54
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01 Batch: WG981460-5					
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	--
Diethyl ether	ND		ug/l	2.0	--
Diisopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
Tert-Butyl Alcohol	ND		ug/l	10	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	89		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	117		70-130

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C-SIM
Analytical Date: 02/27/17 07:54
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics by SIM - Westborough Lab for sample(s): 01 Batch: WG981462-5					
1,4-Dioxane	ND		ug/l	3.0	--

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 03/01/17 12:33
Analyst: NS

Extraction Method: EPA 504.1
Extraction Date: 03/01/17 11:47

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westborough Lab for sample(s): 01 Batch: WG981912-1						
1,2-Dibromoethane	ND		ug/l	0.010	--	A

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8015D
Analytical Date: 03/01/17 14:02
Analyst: DP

Parameter	Result	Qualifier	Units	RL	MDL
Alcohol Analysis by GC/FID - Mansfield Lab for sample(s): 01 Batch: WG981919-1					
Ethyl Alcohol	ND		mg/l	2.00	--

Lab Control Sample Analysis

Batch Quality Control

Project Name: PARCEL K

Project Number: 5876.9.07

Lab Number: L1705905

Report Date: 03/03/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG981460-3 WG981460-4								
Methylene chloride	100		100		70-130	0		20
1,1-Dichloroethane	100		99		70-130	1		20
Chloroform	110		110		70-130	0		20
Carbon tetrachloride	130		120		70-130	8		20
1,2-Dichloropropane	96		94		70-130	2		20
Dibromochloromethane	110		110		70-130	0		20
1,1,2-Trichloroethane	100		100		70-130	0		20
Tetrachloroethene	110		100		70-130	10		20
Chlorobenzene	100		100		70-130	0		20
Trichlorofluoromethane	130		120		70-130	8		20
1,2-Dichloroethane	120		110		70-130	9		20
1,1,1-Trichloroethane	120		120		70-130	0		20
Bromodichloromethane	110		110		70-130	0		20
trans-1,3-Dichloropropene	95		95		70-130	0		20
cis-1,3-Dichloropropene	100		100		70-130	0		20
1,1-Dichloropropene	100		98		70-130	2		20
Bromoform	94		95		70-130	1		20
1,1,2,2-Tetrachloroethane	87		87		70-130	0		20
Benzene	100		98		70-130	2		20
Toluene	94		95		70-130	1		20
Ethylbenzene	98		98		70-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: PARCEL K

Project Number: 5876.9.07

Lab Number: L1705905

Report Date: 03/03/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG981460-3 WG981460-4								
Chloromethane	92		90		70-130	2		20
Bromomethane	92		95		70-130	3		20
Vinyl chloride	98		98		70-130	0		20
Chloroethane	85		86		70-130	1		20
1,1-Dichloroethene	100		100		70-130	0		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Trichloroethene	110		110		70-130	0		20
1,2-Dichlorobenzene	96		95		70-130	1		20
1,3-Dichlorobenzene	97		98		70-130	1		20
1,4-Dichlorobenzene	95		96		70-130	1		20
Methyl tert butyl ether	96		99		70-130	3		20
p/m-Xylene	100		100		70-130	0		20
o-Xylene	95		95		70-130	0		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Dibromomethane	110		110		70-130	0		20
1,2,3-Trichloropropane	90		91		70-130	1		20
Styrene	90		90		70-130	0		20
Dichlorodifluoromethane	110		110		70-130	0		20
Acetone	93		99		70-130	6		20
Carbon disulfide	100		100		70-130	0		20
Methyl ethyl ketone	96		96		70-130	0		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG981460-3 WG981460-4								
Methyl isobutyl ketone	84		79		70-130	6		20
2-Hexanone	72		**68**	Q	70-130	6		20
Bromochloromethane	120		110		70-130	9		20
Tetrahydrofuran	83		87		70-130	5		20
2,2-Dichloropropane	110		110		70-130	0		20
1,2-Dibromoethane	100		99		70-130	1		20
1,3-Dichloropropane	97		94		70-130	3		20
1,1,1,2-Tetrachloroethane	110		110		70-130	0		20
Bromobenzene	94		95		70-130	1		20
n-Butylbenzene	89		89		70-130	0		20
sec-Butylbenzene	110		110		70-130	0		20
tert-Butylbenzene	83		85		70-130	2		20
o-Chlorotoluene	93		94		70-130	1		20
p-Chlorotoluene	91		92		70-130	1		20
1,2-Dibromo-3-chloropropane	97		94		70-130	3		20
Hexachlorobutadiene	110		110		70-130	0		20
Isopropylbenzene	80		83		70-130	4		20
p-Isopropyltoluene	85		86		70-130	1		20
Naphthalene	73		73		70-130	0		20
n-Propylbenzene	89		89		70-130	0		20
1,2,3-Trichlorobenzene	95		98		70-130	3		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: PARCEL K

Project Number: 5876.9.07

Lab Number: L1705905

Report Date: 03/03/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG981460-3 WG981460-4								
1,2,4-Trichlorobenzene	82		83		70-130	1		20
1,3,5-Trimethylbenzene	90		91		70-130	1		20
1,2,4-Trimethylbenzene	87		87		70-130	0		20
Diethyl ether	88		78		70-130	12		20
Diisopropyl Ether	80		81		70-130	1		20
Ethyl-Tert-Butyl-Ether	94		93		70-130	1		20
Tertiary-Amyl Methyl Ether	92		91		70-130	1		20
Tert-Butyl Alcohol	94		92		70-130	2		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	103		98		70-130
Toluene-d8	89		91		70-130
4-Bromofluorobenzene	91		94		70-130
Dibromofluoromethane	105		103		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: PARCEL K

Project Number: 5876.9.07

Lab Number: L1705905

Report Date: 03/03/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics by SIM - Westborough Lab Associated sample(s): 01 Batch: WG981462-3 WG981462-4								
1,4-Dioxane	100		110		70-130	10		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: PARCEL K

Project Number: 5876.9.07

Lab Number: L1705905

Report Date: 03/03/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab	Associated sample(s): 01		Batch: WG981912-2						
1,2-Dibromoethane	99		-		70-130	-			A

Lab Control Sample Analysis

Batch Quality Control

Project Name: PARCEL K

Project Number: 5876.9.07

Lab Number: L1705905

Report Date: 03/03/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Alcohol Analysis by GC/FID - Mansfield Lab	Associated sample(s): 01		Batch: WG981919-2 WG981919-3					
Ethyl Alcohol	97		97		70-130	0		30

Matrix Spike Analysis
Batch Quality Control

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG981912-3 QC Sample: L1705655-01 Client ID: MS Sample													
1,2-Dibromoethane	ND	0.258	0.250	97		-	-		65-135	-		20	A
1,2-Dibromo-3-chloropropane	ND	0.258	0.242	94		-	-		65-135	-		20	A

Lab Duplicate Analysis
Batch Quality Control

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Alcohol Analysis by GC/FID - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG981919-4 QC Sample: L1705905-01 Client ID: K-1 (OW)						
Ethyl Alcohol	ND	ND	mg/l	NC		20

SEMIVOLATILES

Project Name: PARCEL K
Project Number: 5876.9.07
Lab Number: L1705905
Report Date: 03/03/17

SAMPLE RESULTS

Lab ID: L1705905-01
Client ID: K-1 (OW)
Sample Location: BOSTON, MA
Matrix: Water
Analytical Method: 97,8270D
Analytical Date: 02/27/17 19:12
Analyst: CB

Date Collected: 02/24/17 07:45
Date Received: 02/24/17
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 02/26/17 21:53

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
1,2,4-Trichlorobenzene	ND		ug/l	5.0	--	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	--	1
1,2-Dichlorobenzene	ND		ug/l	2.0	--	1
1,3-Dichlorobenzene	ND		ug/l	2.0	--	1
1,4-Dichlorobenzene	ND		ug/l	2.0	--	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	--	1
2,4-Dinitrotoluene	ND		ug/l	5.0	--	1
2,6-Dinitrotoluene	ND		ug/l	5.0	--	1
Azobenzene	ND		ug/l	2.0	--	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	--	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	--	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	--	1
Isophorone	ND		ug/l	5.0	--	1
Nitrobenzene	ND		ug/l	2.0	--	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	--	1
Butyl benzyl phthalate	ND		ug/l	5.0	--	1
Di-n-butylphthalate	ND		ug/l	5.0	--	1
Di-n-octylphthalate	ND		ug/l	5.0	--	1
Diethyl phthalate	ND		ug/l	5.0	--	1
Dimethyl phthalate	ND		ug/l	5.0	--	1
Aniline	ND		ug/l	2.0	--	1
4-Chloroaniline	ND		ug/l	5.0	--	1
Dibenzofuran	ND		ug/l	2.0	--	1
Acetophenone	ND		ug/l	5.0	--	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	--	1
2-Chlorophenol	ND		ug/l	2.0	--	1
2,4-Dichlorophenol	ND		ug/l	5.0	--	1
2,4-Dimethylphenol	ND		ug/l	5.0	--	1
2-Nitrophenol	ND		ug/l	10	--	1
4-Nitrophenol	ND		ug/l	10	--	1

Project Name: PARCEL K
Project Number: 5876.9.07
Lab Number: L1705905
Report Date: 03/03/17

SAMPLE RESULTS

Lab ID: L1705905-01
Client ID: K-1 (OW)
Sample Location: BOSTON, MA
Date Collected: 02/24/17 07:45
Date Received: 02/24/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics - Westborough Lab						
2,4-Dinitrophenol	ND		ug/l	20	--	1
Phenol	ND		ug/l	5.0	--	1
2-Methylphenol	ND		ug/l	5.0	--	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	--	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	36		15-110
Phenol-d6	27		15-110
Nitrobenzene-d5	64		30-130
2-Fluorobiphenyl	55		30-130
2,4,6-Tribromophenol	50		15-110
4-Terphenyl-d14	54		30-130

Project Name: PARCEL K
Project Number: 5876.9.07
Lab Number: L1705905
Report Date: 03/03/17

SAMPLE RESULTS

Lab ID: L1705905-01
Client ID: K-1 (OW)
Sample Location: BOSTON, MA
Matrix: Water
Analytical Method: 97,8270D-SIM
Analytical Date: 02/27/17 17:31
Analyst: KV

Date Collected: 02/24/17 07:45
Date Received: 02/24/17
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 02/26/17 21:55

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Semivolatile Organics by SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.20	--	1
2-Chloronaphthalene	ND		ug/l	0.20	--	1
Fluoranthene	ND		ug/l	0.20	--	1
Hexachlorobutadiene	ND		ug/l	0.50	--	1
Naphthalene	0.37		ug/l	0.20	--	1
Benzo(a)anthracene	ND		ug/l	0.20	--	1
Benzo(a)pyrene	ND		ug/l	0.20	--	1
Benzo(b)fluoranthene	ND		ug/l	0.20	--	1
Benzo(k)fluoranthene	ND		ug/l	0.20	--	1
Chrysene	ND		ug/l	0.20	--	1
Acenaphthylene	ND		ug/l	0.20	--	1
Anthracene	ND		ug/l	0.20	--	1
Benzo(ghi)perylene	ND		ug/l	0.20	--	1
Fluorene	ND		ug/l	0.20	--	1
Phenanthrene	ND		ug/l	0.20	--	1
Dibenzo(a,h)anthracene	ND		ug/l	0.20	--	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.20	--	1
Pyrene	ND		ug/l	0.20	--	1
2-Methylnaphthalene	ND		ug/l	0.20	--	1
Pentachlorophenol	ND		ug/l	0.80	--	1
Hexachlorobenzene	ND		ug/l	0.80	--	1
Hexachloroethane	ND		ug/l	0.80	--	1

Project Name: PARCEL K **Lab Number:** L1705905

Project Number: 5876.9.07 **Report Date:** 03/03/17

SAMPLE RESULTS

Lab ID: L1705905-01 Date Collected: 02/24/17 07:45

Client ID: K-1 (OW) Date Received: 02/24/17

Sample Location: BOSTON, MA Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

MCP Semivolatile Organics by SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	32		15-110
Phenol-d6	29		15-110
Nitrobenzene-d5	65		30-130
2-Fluorobiphenyl	58		30-130
2,4,6-Tribromophenol	56		15-110
4-Terphenyl-d14	57		30-130

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 02/27/17 17:31
Analyst: CB

Extraction Method: EPA 3510C
Extraction Date: 02/26/17 21:53

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01 Batch: WG981151-1					
Acenaphthene	ND		ug/l	2.0	--
1,2,4-Trichlorobenzene	ND		ug/l	5.0	--
Hexachlorobenzene	ND		ug/l	2.0	--
Bis(2-chloroethyl)ether	ND		ug/l	2.0	--
2-Chloronaphthalene	ND		ug/l	2.0	--
1,2-Dichlorobenzene	ND		ug/l	2.0	--
1,3-Dichlorobenzene	ND		ug/l	2.0	--
1,4-Dichlorobenzene	ND		ug/l	2.0	--
3,3'-Dichlorobenzidine	ND		ug/l	5.0	--
2,4-Dinitrotoluene	ND		ug/l	5.0	--
2,6-Dinitrotoluene	ND		ug/l	5.0	--
Azobenzene	ND		ug/l	2.0	--
Fluoranthene	ND		ug/l	2.0	--
4-Bromophenyl phenyl ether	ND		ug/l	2.0	--
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	--
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	--
Hexachlorobutadiene	ND		ug/l	2.0	--
Hexachloroethane	ND		ug/l	2.0	--
Isophorone	ND		ug/l	5.0	--
Naphthalene	ND		ug/l	2.0	--
Nitrobenzene	ND		ug/l	2.0	--
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	--
Butyl benzyl phthalate	ND		ug/l	5.0	--
Di-n-butylphthalate	ND		ug/l	5.0	--
Di-n-octylphthalate	ND		ug/l	5.0	--
Diethyl phthalate	ND		ug/l	5.0	--
Dimethyl phthalate	ND		ug/l	5.0	--
Benzo(a)anthracene	ND		ug/l	2.0	--
Benzo(a)pyrene	ND		ug/l	2.0	--

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 02/27/17 17:31
Analyst: CB

Extraction Method: EPA 3510C
Extraction Date: 02/26/17 21:53

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01 Batch: WG981151-1					
Benzo(b)fluoranthene	ND		ug/l	2.0	--
Benzo(k)fluoranthene	ND		ug/l	2.0	--
Chrysene	ND		ug/l	2.0	--
Acenaphthylene	ND		ug/l	2.0	--
Anthracene	ND		ug/l	2.0	--
Benzo(ghi)perylene	ND		ug/l	2.0	--
Fluorene	ND		ug/l	2.0	--
Phenanthrene	ND		ug/l	2.0	--
Dibenzo(a,h)anthracene	ND		ug/l	2.0	--
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	--
Pyrene	ND		ug/l	2.0	--
Aniline	ND		ug/l	2.0	--
4-Chloroaniline	ND		ug/l	5.0	--
Dibenzofuran	ND		ug/l	2.0	--
2-Methylnaphthalene	ND		ug/l	2.0	--
Acetophenone	ND		ug/l	5.0	--
2,4,6-Trichlorophenol	ND		ug/l	5.0	--
2-Chlorophenol	ND		ug/l	2.0	--
2,4-Dichlorophenol	ND		ug/l	5.0	--
2,4-Dimethylphenol	ND		ug/l	5.0	--
2-Nitrophenol	ND		ug/l	10	--
4-Nitrophenol	ND		ug/l	10	--
2,4-Dinitrophenol	ND		ug/l	20	--
Pentachlorophenol	ND		ug/l	10	--
Phenol	ND		ug/l	5.0	--
2-Methylphenol	ND		ug/l	5.0	--
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	--
2,4,5-Trichlorophenol	ND		ug/l	5.0	--

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D
Analytical Date: 02/27/17 17:31
Analyst: CB

Extraction Method: EPA 3510C
Extraction Date: 02/26/17 21:53

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics - Westborough Lab for sample(s): 01 Batch: WG981151-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	37		15-110
Phenol-d6	26		15-110
Nitrobenzene-d5	61		30-130
2-Fluorobiphenyl	52		30-130
2,4,6-Tribromophenol	53		15-110
4-Terphenyl-d14	53		30-130

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 02/27/17 15:52
Analyst: KV

Extraction Method: EPA 3510C
Extraction Date: 02/26/17 21:55

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01 Batch: WG981152-1					
Acenaphthene	ND		ug/l	0.20	--
2-Chloronaphthalene	ND		ug/l	0.20	--
Fluoranthene	ND		ug/l	0.20	--
Hexachlorobutadiene	ND		ug/l	0.50	--
Naphthalene	ND		ug/l	0.20	--
Benzo(a)anthracene	ND		ug/l	0.20	--
Benzo(a)pyrene	ND		ug/l	0.20	--
Benzo(b)fluoranthene	ND		ug/l	0.20	--
Benzo(k)fluoranthene	ND		ug/l	0.20	--
Chrysene	ND		ug/l	0.20	--
Acenaphthylene	ND		ug/l	0.20	--
Anthracene	ND		ug/l	0.20	--
Benzo(ghi)perylene	ND		ug/l	0.20	--
Fluorene	ND		ug/l	0.20	--
Phenanthrene	ND		ug/l	0.20	--
Dibenzo(a,h)anthracene	ND		ug/l	0.20	--
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.20	--
Pyrene	ND		ug/l	0.20	--
2-Methylnaphthalene	ND		ug/l	0.20	--
Pentachlorophenol	ND		ug/l	0.80	--
Hexachlorobenzene	ND		ug/l	0.80	--
Hexachloroethane	ND		ug/l	0.80	--

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8270D-SIM
Analytical Date: 02/27/17 15:52
Analyst: KV

Extraction Method: EPA 3510C
Extraction Date: 02/26/17 21:55

Parameter	Result	Qualifier	Units	RL	MDL
MCP Semivolatile Organics by SIM - Westborough Lab for sample(s): 01 Batch: WG981152-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	33		15-110
Phenol-d6	26		15-110
Nitrobenzene-d5	58		30-130
2-Fluorobiphenyl	51		30-130
2,4,6-Tribromophenol	62		15-110
4-Terphenyl-d14	55		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG981151-2 WG981151-3								
Acenaphthene	55		66		40-140	18		20
1,2,4-Trichlorobenzene	53		63		40-140	17		20
Hexachlorobenzene	54		65		40-140	18		20
Bis(2-chloroethyl)ether	58		66		40-140	13		20
2-Chloronaphthalene	55		66		40-140	18		20
1,2-Dichlorobenzene	54		64		40-140	17		20
1,3-Dichlorobenzene	53		62		40-140	16		20
1,4-Dichlorobenzene	54		63		40-140	15		20
3,3'-Dichlorobenzidine	50		59		40-140	17		20
2,4-Dinitrotoluene	61		73		40-140	18		20
2,6-Dinitrotoluene	63		76		40-140	19		20
Azobenzene	60		73		40-140	20		20
Fluoranthene	55		68		40-140	**21**	Q	20
4-Bromophenyl phenyl ether	53		66		40-140	**22**	Q	20
Bis(2-chloroisopropyl)ether	55		66		40-140	18		20
Bis(2-chloroethoxy)methane	63		74		40-140	16		20
Hexachlorobutadiene	51		61		40-140	18		20
Hexachloroethane	58		68		40-140	16		20
Isophorone	66		78		40-140	17		20
Naphthalene	55		65		40-140	17		20
Nitrobenzene	64		77		40-140	18		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: PARCEL K

Project Number: 5876.9.07

Lab Number: L1705905

Report Date: 03/03/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG981151-2 WG981151-3								
Bis(2-ethylhexyl)phthalate	65		79		40-140	19		20
Butyl benzyl phthalate	67		83		40-140	**21**	Q	20
Di-n-butylphthalate	61		75		40-140	**21**	Q	20
Di-n-octylphthalate	64		78		40-140	20		20
Diethyl phthalate	56		68		40-140	19		20
Dimethyl phthalate	59		70		40-140	17		20
Benzo(a)anthracene	53		66		40-140	**22**	Q	20
Benzo(a)pyrene	58		73		40-140	**23**	Q	20
Benzo(b)fluoranthene	56		68		40-140	19		20
Benzo(k)fluoranthene	54		68		40-140	**23**	Q	20
Chrysene	54		64		40-140	17		20
Acenaphthylene	56		68		40-140	19		20
Anthracene	56		68		40-140	19		20
Benzo(ghi)perylene	55		70		40-140	**24**	Q	20
Fluorene	54		65		40-140	18		20
Phenanthrene	54		66		40-140	20		20
Dibenzo(a,h)anthracene	55		70		40-140	**24**	Q	20
Indeno(1,2,3-cd)pyrene	54		69		40-140	**24**	Q	20
Pyrene	54		66		40-140	20		20
Aniline	**23**	Q	**32**	Q	40-140	**33**	Q	20
4-Chloroaniline	46		65		40-140	**34**	Q	20

Lab Control Sample Analysis
Batch Quality Control

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG981151-2 WG981151-3								
Dibenzofuran	54		64		40-140	17		20
2-Methylnaphthalene	56		67		40-140	18		20
Acetophenone	69		80		40-140	15		20
2,4,6-Trichlorophenol	61		72		30-130	17		20
2-Chlorophenol	58		70		30-130	19		20
2,4-Dichlorophenol	62		74		30-130	18		20
2,4-Dimethylphenol	68		81		30-130	17		20
2-Nitrophenol	69		83		30-130	18		20
4-Nitrophenol	35		44		30-130	**23**	Q	20
2,4-Dinitrophenol	52		66		30-130	**24**	Q	20
Pentachlorophenol	51		62		30-130	19		20
Phenol	33		40		30-130	19		20
2-Methylphenol	57		68		30-130	18		20
3-Methylphenol/4-Methylphenol	57		68		30-130	18		20
2,4,5-Trichlorophenol	62		75		30-130	19		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: PARCEL K

Project Number: 5876.9.07

Lab Number: L1705905

Report Date: 03/03/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG981151-2 WG981151-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	43		52		15-110
Phenol-d6	30		37		15-110
Nitrobenzene-d5	68		82		30-130
2-Fluorobiphenyl	57		69		30-130
2,4,6-Tribromophenol	60		73		15-110
4-Terphenyl-d14	54		67		30-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01 Batch: WG981152-2 WG981152-3								
Acenaphthene	58		62		40-140	7		20
2-Chloronaphthalene	58		63		40-140	8		20
Fluoranthene	64		68		40-140	6		20
Hexachlorobutadiene	54		61		40-140	12		20
Naphthalene	55		61		40-140	10		20
Benzo(a)anthracene	67		70		40-140	4		20
Benzo(a)pyrene	68		72		40-140	6		20
Benzo(b)fluoranthene	70		73		40-140	4		20
Benzo(k)fluoranthene	59		63		40-140	7		20
Chrysene	56		60		40-140	7		20
Acenaphthylene	64		68		40-140	6		20
Anthracene	64		67		40-140	5		20
Benzo(ghi)perylene	70		75		40-140	7		20
Fluorene	61		64		40-140	5		20
Phenanthrene	58		61		40-140	5		20
Dibenzo(a,h)anthracene	68		72		40-140	6		20
Indeno(1,2,3-cd)pyrene	69		73		40-140	6		20
Pyrene	63		66		40-140	5		20
2-Methylnaphthalene	62		67		40-140	8		20
Pentachlorophenol	64		67		30-130	5		20
Hexachlorobenzene	63		67		40-140	6		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: PARCEL K

Project Number: 5876.9.07

Lab Number: L1705905

Report Date: 03/03/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Semivolatile Organics by SIM - Westborough Lab Associated sample(s): 01 Batch: WG981152-2 WG981152-3								
Hexachloroethane	54		62		40-140	14		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	38		40		15-110
Phenol-d6	32		33		15-110
Nitrobenzene-d5	58		62		30-130
2-Fluorobiphenyl	56		58		30-130
2,4,6-Tribromophenol	71		71		15-110
4-Terphenyl-d14	59		59		30-130

PCBS

Project Name: PARCEL K
Project Number: 5876.9.07
Lab Number: L1705905
Report Date: 03/03/17

SAMPLE RESULTS

Lab ID: L1705905-01
Client ID: K-1 (OW)
Sample Location: BOSTON, MA
Matrix: Water
Analytical Method: 5,608
Analytical Date: 02/28/17 07:17
Analyst: JW

Date Collected: 02/24/17 07:45
Date Received: 02/24/17
Field Prep: Not Specified
Extraction Method: EPA 608
Extraction Date: 02/27/17 12:15
Cleanup Method: EPA 3665A
Cleanup Date: 02/27/17
Cleanup Method: EPA 3660B
Cleanup Date: 02/27/17

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	95		30-150	A
Decachlorobiphenyl	65		30-150	A

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 5,608
Analytical Date: 02/28/17 07:29
Analyst: JW

Extraction Method: EPA 608
Extraction Date: 02/27/17 12:15
Cleanup Method: EPA 3665A
Cleanup Date: 02/27/17
Cleanup Method: EPA 3660B
Cleanup Date: 02/27/17

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG981292-1						
Aroclor 1016	ND		ug/l	0.250	--	A
Aroclor 1221	ND		ug/l	0.250	--	A
Aroclor 1232	ND		ug/l	0.250	--	A
Aroclor 1242	ND		ug/l	0.250	--	A
Aroclor 1248	ND		ug/l	0.250	--	A
Aroclor 1254	ND		ug/l	0.250	--	A
Aroclor 1260	ND		ug/l	0.200	--	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	93		30-150	A
Decachlorobiphenyl	90		30-150	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: PARCEL K

Project Number: 5876.9.07

Lab Number: L1705905

Report Date: 03/03/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG981292-2									
Aroclor 1016	83		-		40-140	-		50	A
Aroclor 1260	87		-		40-140	-		50	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	90				30-150	A
Decachlorobiphenyl	95				30-150	A

Matrix Spike Analysis
Batch Quality Control

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG981292-3 QC Sample: L1705889-01 Client ID: MS Sample													
Aroclor 1016	ND	1	0.904	90		-	-		40-140	-		50	A
Aroclor 1260	ND	1	0.670	67		-	-		40-140	-		50	A

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	93				30-150	A
Decachlorobiphenyl	65				30-150	A

Lab Duplicate Analysis
Batch Quality Control

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits	
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG981292-4 QC Sample: L1705844-01 Client ID: DUP Sample							
Aroclor 1016	ND	ND	ug/l	NC		50	A
Aroclor 1221	ND	ND	ug/l	NC		50	A
Aroclor 1232	ND	ND	ug/l	NC		50	A
Aroclor 1242	ND	ND	ug/l	NC		50	A
Aroclor 1248	ND	ND	ug/l	NC		50	A
Aroclor 1254	ND	ND	ug/l	NC		50	A
Aroclor 1260	ND	ND	ug/l	NC		50	A

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	96		100		30-150	A
Decachlorobiphenyl	66		69		30-150	A

METALS

Project Name: PARCEL K
Project Number: 5876.9.07
Lab Number: L1705905
Report Date: 03/03/17

SAMPLE RESULTS

Lab ID: L1705905-01
Client ID: K-1 (OW)
Sample Location: BOSTON, MA
Matrix: Water
Date Collected: 02/24/17 07:45
Date Received: 02/24/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.0040	--	1	02/28/17 11:40	03/01/17 10:09	EPA 3005A	97,6020A	AM
Arsenic, Total	0.0012		mg/l	0.0005	--	1	02/28/17 11:40	03/01/17 10:09	EPA 3005A	97,6020A	AM
Cadmium, Total	ND		mg/l	0.0002	--	1	02/28/17 11:40	03/01/17 10:09	EPA 3005A	97,6020A	AM
Chromium, Total	0.0010		mg/l	0.0010	--	1	02/28/17 11:40	03/01/17 10:09	EPA 3005A	97,6020A	AM
Copper, Total	0.0530		mg/l	0.0010	--	1	02/28/17 11:40	03/01/17 10:09	EPA 3005A	97,6020A	AM
Iron, Total	0.604		mg/l	0.050	--	1	02/28/17 11:40	03/01/17 10:09	EPA 3005A	97,6020A	AM
Lead, Total	0.0154		mg/l	0.0050	--	10	02/28/17 11:40	03/01/17 12:00	EPA 3005A	97,6020A	AM
Mercury, Total	ND		mg/l	0.0002	--	1	02/27/17 10:26	02/27/17 20:01	EPA 7470A	97,7470A	EA
Nickel, Total	ND		mg/l	0.0020	--	1	02/28/17 11:40	03/01/17 10:09	EPA 3005A	97,6020A	AM
Selenium, Total	ND		mg/l	0.005	--	1	02/28/17 11:40	03/01/17 10:09	EPA 3005A	97,6020A	AM
Silver, Total	ND		mg/l	0.0005	--	1	02/28/17 11:40	03/01/17 10:09	EPA 3005A	97,6020A	AM
Zinc, Total	0.0788		mg/l	0.0100	--	1	02/28/17 11:40	03/01/17 10:09	EPA 3005A	97,6020A	AM

Project Name: PARCEL K
Project Number: 5876.9.07
Lab Number: L1705905
Report Date: 03/03/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab for sample(s): 01 Batch: WG981242-1										
Mercury, Total	ND		mg/l	0.0002	--	1	02/27/17 10:26	02/27/17 19:54	97,7470A	EA

Prep Information

Digestion Method: EPA 7470A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Total Metals - Mansfield Lab for sample(s): 01 Batch: WG981566-1										
Antimony, Total	ND		mg/l	0.0040	--	1	02/28/17 11:40	03/01/17 11:45	97,6020A	AM
Arsenic, Total	ND		mg/l	0.0005	--	1	02/28/17 11:40	03/01/17 11:45	97,6020A	AM
Cadmium, Total	ND		mg/l	0.0002	--	1	02/28/17 11:40	03/01/17 11:45	97,6020A	AM
Chromium, Total	ND		mg/l	0.0010	--	1	02/28/17 11:40	03/01/17 11:45	97,6020A	AM
Copper, Total	ND		mg/l	0.0010	--	1	02/28/17 11:40	03/01/17 11:45	97,6020A	AM
Iron, Total	ND		mg/l	0.050	--	1	02/28/17 11:40	03/01/17 11:45	97,6020A	AM
Lead, Total	ND		mg/l	0.0005	--	1	02/28/17 11:40	03/01/17 11:45	97,6020A	AM
Nickel, Total	ND		mg/l	0.0020	--	1	02/28/17 11:40	03/01/17 11:45	97,6020A	AM
Selenium, Total	ND		mg/l	0.005	--	1	02/28/17 11:40	03/01/17 11:45	97,6020A	AM
Silver, Total	ND		mg/l	0.0005	--	1	02/28/17 11:40	03/01/17 11:45	97,6020A	AM
Zinc, Total	ND		mg/l	0.0100	--	1	02/28/17 11:40	03/01/17 11:45	97,6020A	AM

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: PARCEL K

Project Number: 5876.9.07

Lab Number: L1705905

Report Date: 03/03/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG981242-2 WG981242-3								
Mercury, Total	95		113		80-120	17		20
MCP Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG981566-2 WG981566-3								
Antimony, Total	98		109		80-120	11		20
Arsenic, Total	105		114		80-120	8		20
Cadmium, Total	107		115		80-120	7		20
Chromium, Total	101		108		80-120	7		20
Copper, Total	109		107		80-120	2		20
Iron, Total	104		111		80-120	7		20
Lead, Total	102		113		80-120	10		20
Nickel, Total	106		106		80-120	0		20
Selenium, Total	109		117		80-120	7		20
Silver, Total	100		106		80-120	6		20
Zinc, Total	108		111		80-120	3		20

INORGANICS
&
MISCELLANEOUS

Project Name: PARCEL K
Project Number: 5876.9.07
Lab Number: L1705905
Report Date: 03/03/17

SAMPLE RESULTS

Lab ID: L1705905-01
Client ID: K-1 (OW)
Sample Location: BOSTON, MA
Matrix: Water
Date Collected: 02/24/17 07:45
Date Received: 02/24/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP General Chemistry - Westborough Lab										
Cyanide, Total	0.012		mg/l	0.005	--	1	02/27/17 10:00	02/27/17 13:47	97,9014	JO
Chromium, Hexavalent	ND		mg/l	0.010	--	1	02/24/17 23:11	02/24/17 23:48	97,7196A	JC
General Chemistry - Westborough Lab										
Solids, Total Suspended	5.8		mg/l	5.0	NA	1	-	02/27/17 14:00	121,2540D	SG
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	02/24/17 20:50	121,4500CL-D	AS
pH (H)	7.0		SU	-	NA	1	-	02/28/17 18:26	121,4500H+-B	AS
Nitrogen, Ammonia	0.406		mg/l	0.075	--	1	02/25/17 07:10	02/27/17 22:13	44,350.1	AT
TPH, SGT-HEM	ND		mg/l	4.00	--	1	02/27/17 17:00	02/27/17 21:50	74,1664A	ML
Phenolics, Total	ND		mg/l	0.030	--	1	02/27/17 13:00	02/28/17 11:16	4,420.1	AW
Anions by Ion Chromatography - Westborough Lab										
Chloride	14200		mg/l	250	--	500	-	02/26/17 16:40	44,300.0	JC

Project Name: PARCEL K
Project Number: 5876.9.07
Lab Number: L1705905
Report Date: 03/03/17

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: WG980897-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	02/24/17 20:50	121,4500CL-D	AS
MCP General Chemistry - Westborough Lab for sample(s): 01 Batch: WG980919-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	02/24/17 23:11	02/24/17 23:46	97,7196A	JC
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG980974-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	02/25/17 07:10	02/27/17 22:01	44,350.1	AT
Anions by Ion Chromatography - Westborough Lab for sample(s): 01 Batch: WG981147-1										
Chloride	ND		mg/l	0.500	--	1	-	02/26/17 16:04	44,300.0	JC
MCP General Chemistry - Westborough Lab for sample(s): 01 Batch: WG981227-1										
Cyanide, Total	ND		mg/l	0.005	--	1	02/27/17 10:00	02/27/17 13:43	97,9014	JO
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG981233-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	02/27/17 14:00	121,2540D	SG
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG981366-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	02/27/17 17:00	02/27/17 21:50	74,1664A	ML
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG981527-1										
Phenolics, Total	ND		mg/l	0.030	--	1	02/27/17 13:00	02/28/17 12:14	4,420.1	AW

Lab Control Sample Analysis

Batch Quality Control

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG980897-2								
Chlorine, Total Residual	105		-		90-110	-		
MCP General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG980919-2 WG980919-3								
Chromium, Hexavalent	95		95		49-151	0		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG980974-2								
Nitrogen, Ammonia	90		-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 Batch: WG981147-2								
Chloride	102		-		90-110	-		
MCP General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG981227-2 WG981227-3								
Cyanide, Total	104		106		80-120	2		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG981366-2								
TPH	85		-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG981527-2								
Phenolics, Total	98		-		70-130	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: PARCEL K

Project Number: 5876.9.07

Lab Number: L1705905

Report Date: 03/03/17

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG981718-1					
pH	100	-	99-101	-	5

Matrix Spike Analysis
Batch Quality Control

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

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: WG980974-4 QC Sample: L1705905-01 Client ID: K-1 (OW)												
Nitrogen, Ammonia	0.406	4	4.14	93		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG981366-4 QC Sample: L1705905-01 Client ID: K-1 (OW)												
TPH	ND	20.4	16.6	81		-	-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG981527-4 QC Sample: L1705905-01 Client ID: K-1 (OW)												
Phenolics, Total	ND	0.4	0.58	**144**	Q	-	-		70-130	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG980897-3 QC Sample: L1705905-01 Client ID: K-1 (OW)						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG980974-3 QC Sample: L1705905-01 Client ID: K-1 (OW)						
Nitrogen, Ammonia	0.406	0.376	mg/l	8		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG981527-3 QC Sample: L1705905-01 Client ID: K-1 (OW)						
Phenolics, Total	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG981718-2 QC Sample: L1705905-01 Client ID: K-1 (OW)						
pH (H)	7.0	7.0	SU	0		5

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

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(*)
L1705905-01A	Vial HCl preserved	A	N/A	3.5	Y	Absent	MCP-8260SIM-10(14),MCP-8260-10(14)
L1705905-01B	Vial HCl preserved	A	N/A	3.5	Y	Absent	MCP-8260SIM-10(14),MCP-8260-10(14)
L1705905-01C	Vial HCl preserved	A	N/A	3.5	Y	Absent	MCP-8260SIM-10(14),MCP-8260-10(14)
L1705905-01D	Vial Na2S2O3 preserved	A	N/A	3.5	Y	Absent	504(14)
L1705905-01E	Vial Na2S2O3 preserved	A	N/A	3.5	Y	Absent	504(14)
L1705905-01F	Vial unpreserved	A	N/A	3.5	Y	Absent	A2-ALCOHOL(14)
L1705905-01G	Plastic 250ml HNO3 preserved	A	<2	3.5	Y	Absent	MCP-FE-6020T-10(180),MCP-CR-6020T-10(180),MCP-7470T-10(28),MCP-CU-6020T-10(180),MCP-ZN-6020T-10(180),MCP-AS-6020T-10(180),MCP-NI-6020T-10(180),MCP-AG-6020T-10(180),MCP-CD-6020T-10(180),MCP-SE-6020T-10(180),MCP-PB-6020T-10(180),MCP-SB-6020T-10(180)
L1705905-01H	Plastic 250ml NaOH preserved	A	>12	3.5	Y	Absent	MCP-TCN9014-10(14)
L1705905-01I	Plastic 500ml H2SO4 preserved	A	<2	3.5	Y	Absent	NH3-350(28)
L1705905-01J	Plastic 950ml unpreserved	A	7	3.5	Y	Absent	CL-300(28),TRC-4500(1),PH-4500(.01),MCP-HEXCR7196-10(1)
L1705905-01K	Plastic 950ml unpreserved	A	7	3.5	Y	Absent	TSS-2540(7)
L1705905-01L	Amber 950ml H2SO4 preserved	A	<2	3.5	Y	Absent	TPHENOL-420(28)
L1705905-01M	Amber 1000ml HCl preserved	A	N/A	3.5	Y	Absent	TPH-1664(28)
L1705905-01N	Amber 1000ml HCl preserved	A	N/A	3.5	Y	Absent	TPH-1664(28)
L1705905-01O	Amber 1000ml unpreserved	A	7	3.5	Y	Absent	MCP-8270-10(7),MCP-8270SIM-10(7)
L1705905-01P	Amber 1000ml unpreserved	A	7	3.5	Y	Absent	MCP-8270-10(7),MCP-8270SIM-10(7)
L1705905-01Q	Amber 1000ml Na2S2O3	A	7	3.5	Y	Absent	PCB-608(7)
L1705905-01R	Amber 1000ml Na2S2O3	A	7	3.5	Y	Absent	PCB-608(7)
L1705905-01S	Vial unpreserved	A	N/A	3.5	Y	Absent	A2-ALCOHOL(14)
L1705905-02A	Vial HCl preserved	A	N/A	3.5	Y	Absent	HOLD-8260(14)

*Values in parentheses indicate holding time in days

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1705905
Report Date: 03/03/17

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1705905-02B	Vial HCl preserved	A	N/A	3.5	Y	Absent	HOLD-8260(14)
L1705905-02D	Vial Na2S2O3 preserved	A	N/A	3.5	Y	Absent	HOLD-504/8011(14)
L1705905-02E	Vial Na2S2O3 preserved	A	N/A	3.5	Y	Absent	HOLD-504/8011(14)

*Values in parentheses indicate holding time in days

Project Name:	PARCEL K	**Lab Number:**	L1705905
Project Number:	5876.9.07	**Report Date:**	03/03/17

GLOSSARY

Acronyms

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

Footnotes

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

Terms

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

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

Data Qualifiers

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

Report Format: Data Usability Report

Project Name:	PARCEL K	**Lab Number:**	L1705905
Project Number:	5876.9.07	**Report Date:**	03/03/17

Data Qualifiers

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

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

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

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

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

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

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

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

Report Format: Data Usability Report

Project Name:	PARCEL K	**Lab Number:**	L1705905
Project Number:	5876.9.07	**Report Date:**	03/03/17

REFERENCES

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

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

5 Methods for the Organic Chemical Analysis of Municipal and Industrial Wastewater. Appendix A, Part 136, 40 CFR (Code of Federal Regulations).

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

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.

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
World Class Chemistry

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

Date Rec'd in Lab: 2/24/17

ALPHA Job #: L1705905

Project Information

Project Name: Parcel K

Project Location: Boston, MA

Project #: 5876.9.07

Project Manager: BED

ALPHA Quote #:

Client Information

Client: McPhial Associates, LLC

Address: 2269 Massachusetts Avenue

Cambridge, MA 02140

Phone: 617-868-1420

Fax: 617-868-1423

Email: bdowning@mcphailgeo.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☐ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
EPA NPDES RGP	

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

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

Other Project Specific Requirements/Comments/Detection Limits:

SAMPLE HANDLING

Filtration

☐ Done

☐ Not Needed

☐ Lab to do

Preservation

☐ Lab to do

(Please specify below)

Sample Specific Comments: 1 blue cap broke.

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	pH, Cl, TRC, HexCr	8260 w/ 1,4 Dioxane	504 (EDB Only)	TSS	8270	Total HgFeAgAsCdCrCuNiPbSbSeZn	PCB_608	TPH_1664	TPhenol	TCN	NH3	Ethanol	Sample Specific Comments	TOTAL # BOTTLES
05905-01	K-1(OW)	2/24/17	745	GW	UDP	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒		20
Container Type						P	V	V	P	A	P	A	A	A	P	P	V		
Preservative						A	B	H	A	A	C	H	B	D	E	D	A		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	2/24/17 1145	Rob Manto AAL	2/24/17 16:30
Rob Manto	2/24/17 1810	[signature]	2/24/17 1810

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

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

Method Blank Summary
Form 4

Client	: McPhail Associates	**Lab Number**	: L1705905
Project Name	: PARCEL K	**Project Number**	: 5876.9.07
Lab Sample ID	: WG981462-5	**Lab File ID**	: V16170227A08
Instrument ID	: VOA116		
Matrix	: WATER	**Analysis Date**	: 02/27/17 07:54

Client Sample No.	Lab Sample ID	Analysis Date
WG981462-3LCS	WG981462-3	02/27/17 05:23
WG981462-4LCSD	WG981462-4	02/27/17 05:48
K-1 (OW)	L1705905-01	02/27/17 10:50

Continuing Calibration
Form 7

Client	: McPhail Associates	**Lab Number**	: L1705905	
Project Name	: PARCEL K	**Project Number**	: 5876.9.07	
Instrument ID	: VOA116	**Calibration Date**	: 02/27/17 05:23	
Lab File ID	: V16170227A02	**Init. Calib. Date(s)**	: 02/17/17	02/17/17
Sample No	: WG981462-2	**Init. Calib. Times**	: 16:39	19:36
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	74	0
1,4-Dioxane	10	10.42	-	-4.2	20	83	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	97	0

* Value outside of QC limits.

Method Blank Summary
Form 4

Client	: McPhail Associates	**Lab Number**	: L1705905
Project Name	: PARCEL K	**Project Number**	: 5876.9.07
Lab Sample ID	: WG981460-5	**Lab File ID**	: V16170227A08
Instrument ID	: VOA116		
Matrix	: WATER	**Analysis Date**	: 02/27/17 07:54

Client Sample No.	Lab Sample ID	Analysis Date
WG981460-3LCS	WG981460-3	02/27/17 06:13
WG981460-4LCSD	WG981460-4	02/27/17 06:39
K-1 (OW)	L1705905-01	02/27/17 10:50

Continuing Calibration
Form 7

Client	: McPhail Associates	**Lab Number**	: L1705905	
Project Name	: PARCEL K	**Project Number**	: 5876.9.07	
Instrument ID	: VOA116	**Calibration Date**	: 02/27/17 06:13	
Lab File ID	: V16170227A04	**Init. Calib. Date(s)**	: 01/30/17	01/30/17
Sample No	: WG981460-2	**Init. Calib. Times**	: 08:54	11:50
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	64	0
Dichlorodifluoromethane	0.489	0.558	-	-14.1	20	69	0
Chloromethane	0.517	0.477	-	7.7	20	56	0
Vinyl chloride	0.5	0.489	-	2.2	20	61	0
Bromomethane	0.2	0.183	-	8.5	20	58	0
Chloroethane	0.245	0.208	-	15.1	20	51	0
Trichlorofluoromethane	0.574	0.746	-	-30*	20	78	0
Ethyl ether	0.134	0.118	-	11.9	20	55	-.01
1,1-Dichloroethene	0.339	0.357	-	-5.3	20	66	0
Carbon disulfide	1.056	1.094	-	-3.6	20	66	0
Freon-113	0.336	0.393	-	-17	20	69	0
Methylene chloride	0.39	0.4	-	-2.6	20	64	0
Acetone	10	9.284	-	7.2	20	53	0
trans-1,2-Dichloroethene	0.373	0.386	-	-3.5	20	65	0
Methyl tert-butyl ether	0.693	0.668	-	3.6	20	63	0
tert-Butyl alcohol	0.015	0.014*	-	6.7	20	60	0
Diisopropyl ether	1.239	0.996	-	19.6	20	53	0
1,1-Dichloroethane	0.791	0.831	-	-5.1	20	63	-.01
Ethyl tert-butyl ether	1.001	0.937	-	6.4	20	61	0
cis-1,2-Dichloroethene	0.404	0.411	-	-1.7	20	63	0
2,2-Dichloropropane	0.577	0.648	-	-12.3	20	71	0
Bromochloromethane	0.175	0.209	-	-19.4	20	71	0
Chloroform	0.703	0.792	-	-12.7	20	68	0
Carbon tetrachloride	0.575	0.736	-	-28*	20	80	0
Tetrahydrofuran	0.075	0.063	-	16	20	52	0
Dibromofluoromethane	0.44	0.462	-	-5	20	67	0
1,1,1-Trichloroethane	0.626	0.773	-	-23.5*	20	76	-.01
2-Butanone	0.084	0.081*	-	3.6	20	58	-.01
1,1-Dichloropropene	0.501	0.499	-	0.4	20	63	0
Benzene	1.52	1.532	-	-0.8	20	62	0
tert-Amyl methyl ether	0.708	0.651	-	8.1	20	64	-.01
1,2-Dichloroethane-d4	0.474	0.487	-	-2.7	20	67	0
1,2-Dichloroethane	0.475	0.558	-	-17.5	20	72	0
Trichloroethene	0.418	0.466	-	-11.5	20	70	0
Dibromomethane	0.194	0.209	-	-7.7	20	68	0
1,2-Dichloropropane	0.413	0.398	-	3.6	20	60	0
2-Chloroethyl vinyl ether	10	5.222	-	47.8*	20	37	0
Bromodichloromethane	0.517	0.568	-	-9.9	20	71	0
cis-1,3-Dichloropropene	0.438	0.444	-	-1.4	20	64	0
Chlorobenzene-d5	1	1	-	0	20	70	0
Toluene-d8	1.278	1.138	-	11	20	62	0
Toluene	0.81	0.764	-	5.7	20	64	0
4-Methyl-2-pentanone	10	8.452	-	15.5	20	65	0
Tetrachloroethene	0.378	0.409	-	-8.2	20	74	0
trans-1,3-Dichloropropene	0.374	0.354	-	5.3	20	67	0

* Value outside of QC limits.

Continuing Calibration
Form 7

Client	: McPhail Associates	**Lab Number**	: L1705905	
Project Name	: PARCEL K	**Project Number**	: 5876.9.07	
Instrument ID	: VOA116	**Calibration Date**	: 02/27/17 06:13	
Lab File ID	: V16170227A04	**Init. Calib. Date(s)**	: 01/30/17	01/30/17
Sample No	: WG981460-2	**Init. Calib. Times**	: 08:54	11:50
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,1,2-Trichloroethane	0.193	0.198	-	-2.6	20	68	0
Chlorodibromomethane	0.286	0.312	-	-9.1	20	74	0
1,3-Dichloropropane	0.381	0.369	-	3.1	20	66	0
1,2-Dibromoethane	0.209	0.212	-	-1.4	20	68	0
2-Hexanone	10	7.224	-	27.8*	20	57	0
Chlorobenzene	0.874	0.873	-	0.1	20	69	0
Ethylbenzene	1.505	1.481	-	1.6	20	66	0
1,1,1,2-Tetrachloroethane	0.321	0.362	-	-12.8	20	75	0
p/m Xylene	20	19.875	-	0.6	20	68	0
o Xylene	20	18.757	-	6.2	20	67	0
Styrene	20	17.939	-	10.3	20	64	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	81	0
Bromoform	0.329	0.309	-	6.1	20	78	0
Isopropylbenzene	10	7.987	-	20.1*	20	70	0
4-Bromofluorobenzene	0.827	0.755	-	8.7	20	76	0
Bromobenzene	0.667	0.627	-	6	20	74	0
n-Propylbenzene	3.447	3.056	-	11.3	20	69	0
1,1,2,2-Tetrachloroethane	0.477	0.417	-	12.6	20	69	0
2-Chlorotoluene	2.351	2.182	-	7.2	20	71	0
1,3,5-Trimethylbenzene	10	9.008	-	9.9	20	73	0
1,2,3-Trichloropropane	0.376	0.337	-	10.4	20	71	-.01
4-Chlorotoluene	1.991	1.814	-	8.9	20	71	0
tert-Butylbenzene	10	8.345	-	16.5	20	73	0
1,2,4-Trimethylbenzene	10	8.711	-	12.9	20	72	0
sec-Butylbenzene	2.307	2.448	-	-6.1	20	80	-.01
p-Isopropyltoluene	10	8.46	-	15.4	20	72	0
1,3-Dichlorobenzene	1.357	1.319	-	2.8	20	75	0
1,4-Dichlorobenzene	1.333	1.262	-	5.3	20	74	0
n-Butylbenzene	10	8.889	-	11.1	20	72	0
1,2-Dichlorobenzene	1.186	1.145	-	3.5	20	76	0
1,2-Dibromo-3-chloropropan	10	9.689	-	3.1	20	80	0
Hexachlorobutadiene	0.294	0.313	-	-6.5	20	88	0
1,2,4-Trichlorobenzene	10	8.248	-	17.5	20	78	0
Naphthalene	10	7.325	-	26.7*	20	75	0
1,2,3-Trichlorobenzene	0.56	0.534	-	4.6	20	81	0

* Value outside of QC limits.

APPENDIX E:

LABORATORY ANALYTICAL DATA – SURFACE WATER

ANALYTICAL REPORT

Lab Number:	L1717710
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	PARCEL K
Project Number:	5876.9.07
Report Date:	06/05/17

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: PARCEL K
Project Number: 5876.9.07

Lab Number: L1717710
Report Date: 06/05/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1717710-01	PAVILION OUTFALL	WATER	BOSTON, MA	05/30/17 11:30	05/30/17

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1717710
Report Date: 06/05/17

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:	PARCEL K	**Lab Number:**	L1717710
Project Number:	5876.9.07	**Report Date:**	06/05/17

Case Narrative (continued)

Metals

L1717710-01: The sample has elevated detection limits for antimony, cadmium, lead and silver due to the dilution required by the high concentrations of target and non-target elements.

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: 06/05/17

METALS

Project Name: PARCEL K
Project Number: 5876.9.07
Lab Number: L1717710
Report Date: 06/05/17

SAMPLE RESULTS

Lab ID: L1717710-01
Client ID: PAVILION OUTFALL
Sample Location: BOSTON, MA
Matrix: Water
Date Collected: 05/30/17 11:30
Date Received: 05/30/17
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	0.02000	--	5	06/01/17 12:15	06/02/17 09:38	EPA 3005A	3,200.8	AM
Arsenic, Total	0.00138		mg/l	0.00100	--	1	06/01/17 12:15	06/02/17 09:10	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00100	--	5	06/01/17 12:15	06/02/17 09:38	EPA 3005A	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	06/01/17 12:15	06/02/17 09:10	EPA 3005A	3,200.8	AM
Copper, Total	0.00189		mg/l	0.00100	--	1	06/01/17 12:15	06/02/17 09:10	EPA 3005A	3,200.8	AM
Iron, Total	0.126		mg/l	0.050	--	1	06/01/17 12:15	06/05/17 14:54	EPA 3005A	19,200.7	PS
Lead, Total	ND		mg/l	0.00500	--	5	06/01/17 12:15	06/02/17 09:38	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	05/31/17 14:31	06/02/17 18:05	EPA 245.1	3,245.1	EA
Nickel, Total	ND		mg/l	0.00200	--	1	06/01/17 12:15	06/02/17 09:10	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	06/01/17 12:15	06/02/17 09:10	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00500	--	5	06/01/17 12:15	06/02/17 09:38	EPA 3005A	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	06/01/17 12:15	06/02/17 09:10	EPA 3005A	3,200.8	AM

Project Name: PARCEL K
Project Number: 5876.9.07
Lab Number: L1717710
Report Date: 06/05/17

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: WG1008498-1										
Mercury, Total	ND		mg/l	0.00020	--	1	05/31/17 14:31	06/02/17 18:01	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 Batch: WG1008855-1										
Antimony, Total	ND		mg/l	0.00400	--	1	06/01/17 12:15	06/02/17 08:57	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	06/01/17 12:15	06/02/17 08:57	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	06/01/17 12:15	06/02/17 08:57	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	06/01/17 12:15	06/02/17 08:57	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	06/01/17 12:15	06/02/17 08:57	3,200.8	AM
Lead, Total	ND		mg/l	0.00100	--	1	06/01/17 12:15	06/02/17 08:57	3,200.8	AM
Nickel, Total	ND		mg/l	0.00200	--	1	06/01/17 12:15	06/02/17 08:57	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	06/01/17 12:15	06/02/17 08:57	3,200.8	AM
Silver, Total	ND		mg/l	0.00100	--	1	06/01/17 12:15	06/02/17 08:57	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	06/01/17 12:15	06/02/17 08:57	3,200.8	AM

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1008856-1										
Iron, Total	ND		mg/l	0.050	--	1	06/01/17 12:15	06/05/17 14:44	19,200.7	PS

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: PARCEL K

Project Number: 5876.9.07

Lab Number: L1717710

Report Date: 06/05/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1008498-2								
Mercury, Total	103		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1008855-2								
Antimony, Total	88		-		85-115	-		
Arsenic, Total	98		-		85-115	-		
Cadmium, Total	87		-		85-115	-		
Chromium, Total	85		-		85-115	-		
Copper, Total	86		-		85-115	-		
Lead, Total	105		-		85-115	-		
Nickel, Total	87		-		85-115	-		
Selenium, Total	95		-		85-115	-		
Silver, Total	88		-		85-115	-		
Zinc, Total	86		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1008856-2								
Iron, Total	100		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1717710
Report Date: 06/05/17

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: WG1008498-3 QC Sample: L1717710-01 Client ID: PAVILION OUTFALL												
Mercury, Total	ND	0.005	0.00399	80		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1008855-3 QC Sample: L1717710-01 Client ID: PAVILION OUTFALL												
Antimony, Total	ND	0.5	0.4961	99		-	-		70-130	-		20
Arsenic, Total	0.00138	0.12	0.1370	113		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.05066	99		-	-		70-130	-		20
Chromium, Total	ND	0.2	0.1659	83		-	-		70-130	-		20
Copper, Total	0.00189	0.25	0.2012	80		-	-		70-130	-		20
Lead, Total	ND	0.51	0.5429	106		-	-		70-130	-		20
Nickel, Total	ND	0.5	0.3864	77		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1352	113		-	-		70-130	-		20
Silver, Total	ND	0.05	0.04103	82		-	-		70-130	-		20
Zinc, Total	ND	0.5	0.4478	90		-	-		70-130	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1717710
Report Date: 06/05/17

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: WG1008855-5 QC Sample: L1717848-02 Client ID: MS Sample									
Antimony, Total	ND	0.5	0.4320	86	-	-	70-130	-	20
Arsenic, Total	ND	0.12	0.1079	90	-	-	70-130	-	20
Cadmium, Total	ND	0.051	0.04579	90	-	-	70-130	-	20
Chromium, Total	ND	0.2	0.1674	84	-	-	70-130	-	20
Copper, Total	0.0565	0.25	0.2718	86	-	-	70-130	-	20
Lead, Total	ND	0.51	0.5268	103	-	-	70-130	-	20
Nickel, Total	0.0040	0.5	0.4325	86	-	-	70-130	-	20
Selenium, Total	ND	0.12	0.1063	88	-	-	70-130	-	20
Silver, Total	0.0011	0.05	0.04253	83	-	-	70-130	-	20
Zinc, Total	0.0314	0.5	0.4644	87	-	-	70-130	-	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1008856-3 QC Sample: L1717848-02 Client ID: MS Sample									
Iron, Total	0.111	1	0.922	81	-	-	75-125	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1717710
Report Date: 06/05/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1008498-4 QC Sample: L1717710-01 Client ID: PAVILION OUTFALL						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1008855-4 QC Sample: L1717710-01 Client ID: PAVILION OUTFALL						
Arsenic, Total	0.00138	0.00119	mg/l	15		20
Chromium, Total	ND	ND	mg/l	NC		20
Copper, Total	0.00189	0.00168	mg/l	12		20
Nickel, Total	ND	ND	mg/l	NC		20
Selenium, 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: WG1008855-4 QC Sample: L1717710-01 Client ID: PAVILION OUTFALL						
Antimony, Total	ND	ND	mg/l	NC		20
Cadmium, Total	ND	ND	mg/l	NC		20
Lead, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1008855-6 QC Sample: L1717848-02 Client ID: DUP Sample						
Cadmium, Total	ND	ND	mg/l	NC		20
Lead, Total	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1717710
Report Date: 06/05/17

SAMPLE RESULTS

Lab ID: L1717710-01
Client ID: PAVILION OUTFALL
Sample Location: BOSTON, MA
Matrix: Water

Date Collected: 05/30/17 11:30
Date Received: 05/30/17
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	05/31/17 01:40	05/31/17 02:04	97,7196A	KA
General Chemistry - Westborough Lab										
SALINITY	7.2		SU	2.0	--	1	-	06/01/17 20:50	121,2520B	AS
pH (H)	7.5		SU	-	NA	1	-	05/31/17 07:22	121,4500H+-B	KA
Nitrogen, Ammonia	0.180		mg/l	0.075	--	1	06/01/17 23:30	06/02/17 23:40	121,4500NH3-BH	AT

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1717710
Report Date: 06/05/17

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 Batch: WG1008249-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	05/31/17 01:40	05/31/17 02:02	97,7196A	KA
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1009075-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	06/01/17 23:30	06/02/17 23:35	121,4500NH3-BH	AT

Lab Control Sample Analysis

Batch Quality Control

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1717710
Report Date: 06/05/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1008249-2 WG1008249-3								
Chromium, Hexavalent	95		95		49-151	0		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1008304-1								
pH	100		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1009022-1								
SALINITY	100		-			-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1009075-2								
Nitrogen, Ammonia	99		-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1717710
Report Date: 06/05/17

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: WG1009075-4 QC Sample: L1718080-01 Client ID: MS Sample												
Nitrogen, Ammonia	0.413	4	3.91	87		-	-		80-120	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1717710
Report Date: 06/05/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1008304-2 QC Sample: L1717710-01 Client ID: PAVILION OUTFALL						
pH (H)	7.5	7.6	SU	1		5
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1009022-2 QC Sample: L1717150-01 Client ID: DUP Sample						
SALINITY	ND	ND	SU	NC		
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1009075-3 QC Sample: L1718080-01 Client ID: DUP Sample						
Nitrogen, Ammonia	0.413	0.213	mg/l	**64**	Q	20

Project Name: PARCEL K
Project Number: 5876.9.07

Lab Number: L1717710
Report Date: 06/05/17

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(*)
L1717710-01A	Plastic 250ml HNO3 preserved	A	<2	5.2	Y	Absent	CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),AG-2008T(180),AS-2008T(180),HG-U(28),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L1717710-01B	Plastic 500ml H2SO4 preserved	A	<2	5.2	Y	Absent	NH3-4500(28)
L1717710-01C	Plastic 950ml unpreserved	A	7	5.2	Y	Absent	SALINITY(28),PH-4500(.01),MCP-HEXCR7196-10(1)

*Values in parentheses indicate holding time in days

Project Name:	PARCEL K	**Lab Number:**	L1717710
Project Number:	5876.9.07	**Report Date:**	06/05/17

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.

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

Report Format: Data Usability Report

Project Name:	PARCEL K	**Lab Number:**	L1717710
Project Number:	5876.9.07	**Report Date:**	06/05/17

Data Qualifiers

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

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

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

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

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

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

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

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

Report Format: Data Usability Report

Project Name:	PARCEL K	**Lab Number:**	L1717710
Project Number:	5876.9.07	**Report Date:**	06/05/17

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

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

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

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

Westborough Facility:

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

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

Mansfield Facility:

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

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

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

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL — World Class Chemistry

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

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

Date Rec'd in Lab: 5/30/17

ALPHA Job #: L1717710

Project Information

Project Name: Parcel K

Project Location: Boston, MA

Project #: 5876.9.07

Project Manager: BED

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Client Information

Client: McPhial Associates, LLC

Address: 2269 Massachusetts Avenue

Cambridge, MA 02140

Phone: 617-868-1420

Fax: 617-868-1423

Email: bdowning@mcphailgeo.com

☐ These samples have been Previously analyzed by Alpha

Other Project Specific Requirements/Comments/Detection Limits:

Report Information Data Deliverables

☐ FAX ☐ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
EPA NPDES RGP	

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☒ Yes ☐ No Are MCP Analytical Methods Required?

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

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	pH, Salinity, HexCr	8260 w/ 1,4 Dioxane	504 (EDB Only)	TSS	naphthalene (8270D)	Total HgFeAgAsCdCrCuNiPbSbSeZn	PCB_608	TPH_1664	TPhenol	TCN	NH3	Ethanol	Sample Specific Comments	TOTAL # BOTTLES
17710-01	Pavilion Outfall	5/30/17	1130	GW	TMC	☒	☐	☐	☐	☐	☒	☐	☐	☐	☐	☒	☐		3
Container Type						P	V	V	P	A	P	A	A	A	P	P	V		
Preservative						A	B	H	A	A	C	H	B	D	E	D	A		

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	5/30/17 13:00	[signature] AAL	5/30/17 1600
[signature] MCM	5/30/17 1745	[signature]	5/30/17 1745

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

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

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 301 Northern Avenue located in South 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. The primary discharge location is an outfall pipe listed as #747 according to the BWSC. BWSC also indicates the presence of a dedicated stormwater drains located within Massport Haul Road, Northern Avenue, and Congress Street. Multiple discharge flow paths adjacent to the site flow to a primary discharge outfall location. The discharge flow paths are dependent on which stormwater access point is utilized. The flow paths, in general, run north to northwest towards the harbor under Northern Avenue. The multiple discharge locations and discharge flow paths are shown on the enclosed **Figure 3 and Figures 4.**

Dewatering effluent treatment will consist of a settling tank, bag filters to remove suspended soil particulates. If further treatment is necessary, effluent discharge will be passed through ion resin media vessels prior to off-site discharge to lower concentrations of metals 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 1.11 of the project earthwork specifications. Regular maintenance will include checking the condition of the treatment system equipment such as the settling tanks, bag filters, hoses, pumps, and flow meters. Equipment will be monitored daily for potential issues and unscheduled maintenance requirements.

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

Miscellaneous Items

It is anticipated that the erosion control measures and the nature of the site will minimize potential runoff to or from the site. The project specifications also include requirements for erosion control. Site security for the treatment system will be addressed within the overall site security plan.

No adverse effects on designated uses of surrounding surface water bodies is anticipated. The closest water body is the Boston Inner Harbor, which is located approximately 75 feet

to the north 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 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 will be replaced/disposed of as necessary.