NOTICE OF INTENT FOR DISCHARGE PURSUANT TO MASSACHUSETTS DEWATERING GENERAL PERMIT MAG070000

KENMORE SQUARE NORTH
BEACON BUILDING

BOSTON, MASSACHUSETTS

MAY 7, 2019

Prepared For:
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
DEWATERING GP PROCESSING
INDUSTRIAL PERMIT UNIT (OEP 06-4)
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912

On Behalf Of:
Related Beal Construction, LLC
117 Milk Street
Boston, MA 02109

PROJECT NO. 6216

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

May 7, 2019

United States Environmental Protection Agency
Dewatering GP Processing
Industrial Permit Unit (OEP 06-4)
5 Post Office Square, Suite 100
Boston, MA 02109-3912

Attention: To Whom It May Concern

Reference: Kenmore Square North – Beacon Building; Boston, Massachusetts
Notice of Intent for Temporary Construction Dewatering Discharge;
Massachusetts Dewatering General Permit MAG070000

Ladies and Gentlemen:

In accordance with the provisions of the Dewatering General Permit MAG070000 (DGP) that was issued to the Commonwealth of Massachusetts by the US EPA, the following is a summary of the site and groundwater quality information in support of a Notice of Intent (NOI) for the discharge of construction dewatering into Charles River via the City of Boston storm drain system. The potential for temporary discharge of construction dewatering may occur during redevelopment of the 650-660 Beacon Street properties located in the Kenmore Square neighborhood of Boston, Massachusetts (the "subject site"). Refer to **Figure 1,** Project Location Plan for the general site locus.

These services were performed and this permit application was prepared with the authorization of Related Beal. These services are subject to the limitations contained in **Appendix A**.

The applicable DGP Notice of Intent (NOI) Form and Boston Water and Sewer Commission (BWSC) form are included in **Appendix B**.

Applicant/Operator

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

Related Beal Construction, LLC
177 Milk Street
Boston, MA 02109

Attention: Mr. Max Cassidy

Tel: 617-501-4732

Existing Conditions

The subject site consists of four (4) adjoining parcels of land that are occupied by multi-story commercial buildings located at 660 Beacon Street (Building 5), 656 Beacon Street (Building 6), 654 Beacon Street (Building 7), and 650 Beacon Street (Building 8). The existing buildings front onto Beacon Street to the south and are bounded by an unnamed drive aisle to the west, the 648 Beacon Street building to the east and a parking lot to the north. Each of the buildings currently contain partial basements located towards the northern end of the building footprint.

The existing ground surface across the subject site is at approximate Elevation +17 along Beacon Street to the south, and varies from about Elevation +16 to Elevation +13.5 from east to west at the parking lot to the north. Elevations referenced herein are in feet and refer to the Boston City Base (BCB) Datum.

The limits of the subject site are shown on **Figure 2**, which is based on a plan entitled Subsurface Exploration Plan.

Proposed Scope of Site Development

We understand that the proposed redevelopment of the subject site will include the demolition of Buildings 6 through 8 followed by the construction of a new 6 to 8-story steel-framed structure. The proposed new structure will connect to Building 5, which will be renovated as part of the scope of redevelopment. The new structure in the Building 6 through 8 footprints is planned to have no occupied below-grade space, and the lowest-level slab will be at approximately Elevation +18 to allow access from Beacon Street. Loading docks will be located in the rear of the building. Also, as part of the proposed construction, a stormwater recharge system is planned to be located at the northern end of the subject site, behind the Beacon Building.

Site Environmental Setting, Review of MA DEP-listed Disposal Sites, Endangered Species and Surrounding Historical Places

Based on the current Massachusetts Geographic Information Systems (GIS) DEP Priority Resources Map of Boston, the subject site is not located within the boundaries of a Potentially Productive Aquifer or within a Zone II, Interim Wellhead Protection Area as defined by the Massachusetts Department of Environmental Protection. There are no known public or private drinking water supply wells, no Areas of Critical Environmental Concern, no fish habitats, and no habitats of Species of Special Concern or Threatened or Endangered Species within 500 feet of the subject site. There are no surface water bodies or wetland areas located at the subject site. The nearest surface water body is the Charles River, classified by the DEP as a Class B Surface Water Body, that is located approximately 600

feet to the north of the subject site. No areas designated as solid waste facilities (landfills) are located within 0.5 miles of the subject site. A copy of the DEP Priority Resources Map depicting the location of the subject site is included in **Appendix C**.

Based on our review, the subject site is not listed on the MA DEP on-line database of listed DEP release sites.

A review of the most recent federal listing of threatened and endangered species published by the U.S. Fish and Wildlife Service identified no threatened and/or endangered species at or in the vicinity of the proposed discharge location and/or discharge outfall. In addition, a review of the Massachusetts Division of Fisheries and Wildlife on-line database identified no threatened or endangered species at the point of discharge and/or the discharge outfall. Based upon the above, the site is considered Criterion A pursuant to Appendix IV of the DGP. A document of indicating threatened and endangered species from the U.S. Fish and Wildlife Services and Massachusetts Division of Fisheries on-line databases is included in **Appendix C**.

Three (3) of the four (4) addresses of the subject site are not individually listed on the State and National Register of Historical Places (BOS.7563). The fourth address, 660 Beacon Street, is listed in the Massachusetts Cultural Resource Information System (MACRIS) database as a historical landmark for the Citgo sign located on the roof of the building. However, in November 2018, according to Boston Preservation Alliance, the Mayor of Boston vetoed the Boston Landmark Commission's previously unanimous vote to designate the sign a historic landmark and thus, construction dewatering that is proposed at the subject site meets the Permit Eligibility Criterion A under the Remediation General Permit. A copy of the database search for the subject site's addresses are included in **Appendix C**.

Construction Site Dewatering

Based on the proposed construction, it is anticipated that located dewatering by means of temporary sumping will be necessary to control groundwater, as required. The collected groundwater is anticipated to be recharged on-site to the greatest extent possible. The temporary dewatering will be conducted such that it does not lower the groundwater levels surrounding the site.

It is anticipated that the rate of construction dewatering, if necessary, will be on the order of 25 gallons per minute (gpm). This estimate does not include surface run-off which will be removed from the excavation during periods of precipitation.

Given that the area of the common foundation occupies a majority of the subject site, temporary on-site collection and recharge of groundwater is not feasible. As a result, construction dewatering will require the discharge of collected groundwater into the storm drain system under the requested Dewatering General Permit.

The project has coordinated with the Boston Groundwater Trust (BGwT) and has agreed to protect groundwater levels in the area. Specifically, this will include the monitoring of the groundwater level within the BGwT groundwater observation well located on Bay State Road (Well ID: 23H-2691), as well as on-site groundwater monitoring wells. The wells will be read on a weekly basis from one month prior to commencement of foundation construction through one month after the below-grade foundation construction is substantially complete. The results from the groundwater monitoring program will be submitted to Boston Groundwater Trust. It has been discussed with the GBwT that the proposed construction at 660 Beacon Street is not anticipated to have a negative impact on groundwater levels within the subject site or adjacent buildings before, during, or following construction.

A review of available subgrade utility plans provided by the Boston Water and Sewer Commission indicates that stormwater is collected within catch basins along Beacon Street and Commonwealth Avenue flow northeast. Stormwater drains beneath Beacon Street and Commonwealth Avenue run under Deerfield Street and Storrow Drive and eventually discharge into the Charles River at SDO 042. The locations of the relevant stormwater drains in relation to the subject site are indicated on **Figure 2**. The flow path of the discharge is shown in plans provided by the Boston Water and Sewer Commission which are included in **Figures 3**.

Summary of Groundwater Analysis

On January 31, 2019, McPhail Associates, LLC obtained a sample of groundwater from monitoring well B-6 (OW) which is located within the proposed footprint of the common building foundation at the northern portion of the subject site. The groundwater samples were submitted to a certified laboratory for analysis for the presence of compounds required under the EPA's Dewatering General Permit (DGP) application, including total suspended solids (TSS), total residual chlorine, total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs) including total benzene, toluene, ethylbenzene and xylenes (BTEX), poly-aromatic hydrocarbons (PAHs), total phenols, and total recoverable metals.

The results of the groundwater sample did not exceed the EPA's Freshwater Aquatic Life Criteria for Chronic Discharge and thus discharge at the subject site under the provisions of the DGP was applicable to the dewatering activities. The results of the laboratory analysis are summarized in **Table 1**, and laboratory data is included in **Appendix D**.

Pursuant to Section 4.2.2 of the EPA 2017 DGP, a surface water body sample of the Charles River was obtained for this application and the results of the laboratory analysis are summarized in **Table 2**, as well as the laboratory data is included in **Appendix E**.

Additionally, previous groundwater testing completed at the subject site in connection with an environmental due diligence assessment did not indicate detectable levels of EPH or VPH

in five (5) observation wells in August 2016. The results of the laboratory analysis are summarized in **Table 3**, and laboratory data is included in **Appendix F**.

Groundwater Treatment

Based on the results of the above referenced groundwater analyses, it is recommended that that a 5,000-gallon capacity settling tank be utilized to settle out suspended particulates in the discharge during construction dewatering to meet applicable effluent limits established by the US EPA prior to off-site discharge. 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 Dewatering General Permit (DGP) for off-site discharge of dewatered groundwater which will be encountered during redevelopment of the 650-660 Beacon Street properties located in the Kenmore Square neighborhood of Boston, Massachusetts.

Based on the results of the above referenced groundwater analyses, it is recommended that treatment of construction dewatering consisting of one 5,000-gallon capacity settling tank be utilized to meet the applicable discharge limits of TSS. However, should the effluent monitoring results indicate levels of TSS in excess of the limits established in the Massachusetts DGP, additional mitigative measures will be implemented to meet the allowable discharge limits. Additional mitigative measures will also be implemented if needed to meet the required discharge limits for pH.

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

Very truly yours,

McPHAIL ASSOCIATES, LLC

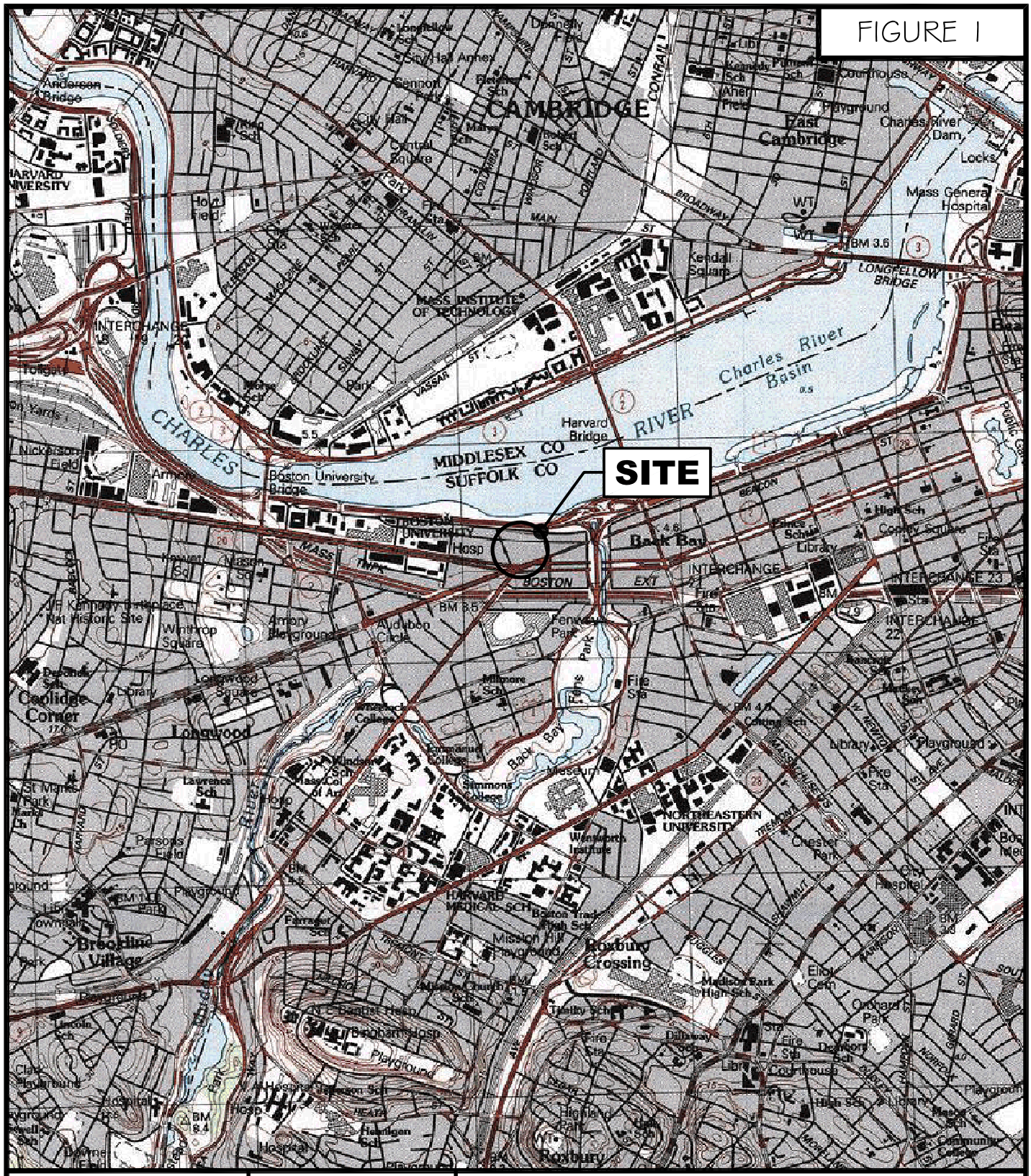
Kirk W. Seaman

William J. Burns, L.S.P.

KWS/wjb

N:\Working Documents\Reports\6216_DGP_041719.docx

FIGURE 1



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N

SCALE 1:25,000

PROJECT LOCATION PLAN

KENMORE SQUARE

BOSTON MASSACHUSETTS

LEGEND

— APPROXIMATE LOCATION OF BORING PERFORMED BY GEOLOGIC EARTH EXPLORATION, INC. DURING THE PERIOD OF AUGUST 4 TO 22, 2016 FOR McPHAIL ASSOCIATES, LLC

— APPROXIMATE LOCATION OF BORING PERFORMED BY DRILLEX ENVIRONMENTAL ON AUGUST 1 AND 2, 2017 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 FEBRUARY 10, 2016 PREPARED BY NITSCH ENGINEERING

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KENMORE SQUARE NORTH - BEACON BUILDING

BOSTON MASSACHUSETTS

SUBSURFACE EXPLORATION PLAN

FOR

RELATED BEAL CONSTRUCTION, LLC

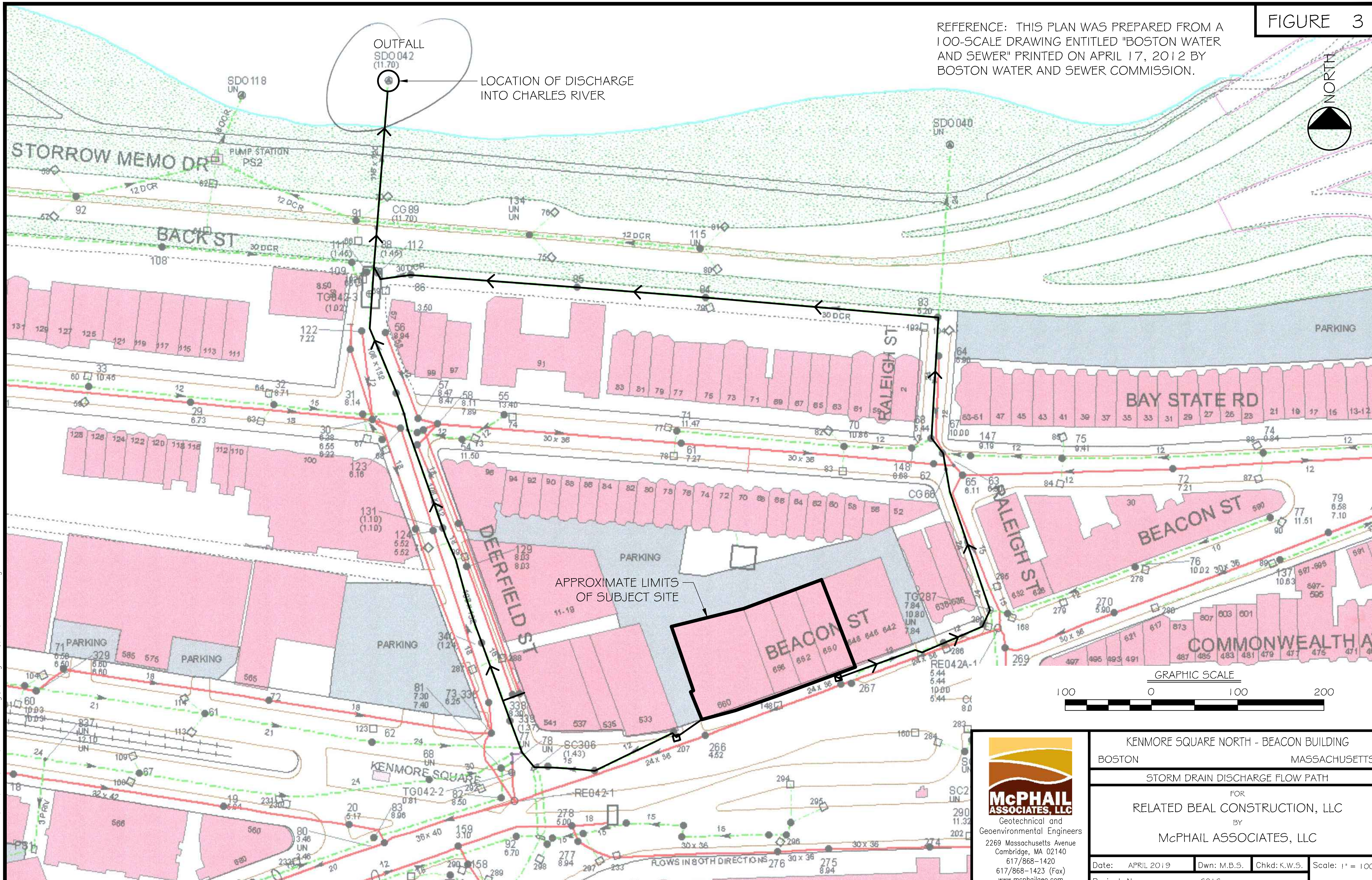
BY

McPHAIL ASSOCIATES, LLC

Date: APRIL 2019	Dwn: M.B.S.	Chkd: K.W.S.	Scale: 1" = 20'
Project No: 6216			FIGURE 2

FILE NAME: N:\Acad\JOBS\6216\Beacon Building (Buildings 5-8)\RGP\6216-F02.dwg

FIGURE 3



REFERENCE: THIS PLAN WAS PREPARED FROM A 100-SCALE DRAWING ENTITLED "BOSTON WATER AND SEWER" PRINTED ON APRIL 17, 2012 BY BOSTON WATER AND SEWER COMMISSION.

KENMORE SQUARE NORTH - BEACON BUILDING

BOSTON MASSACHUSETTS

STORM DRAIN DISCHARGE FLOW PATH

FOR

RELATED BEAL CONSTRUCTION, LLC

BY

McPHAIL ASSOCIATES, LLC

McPHAIL ASSOCIATES, LLC
Geotechnical and Geoenvironmental Engineers
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617/868-1420
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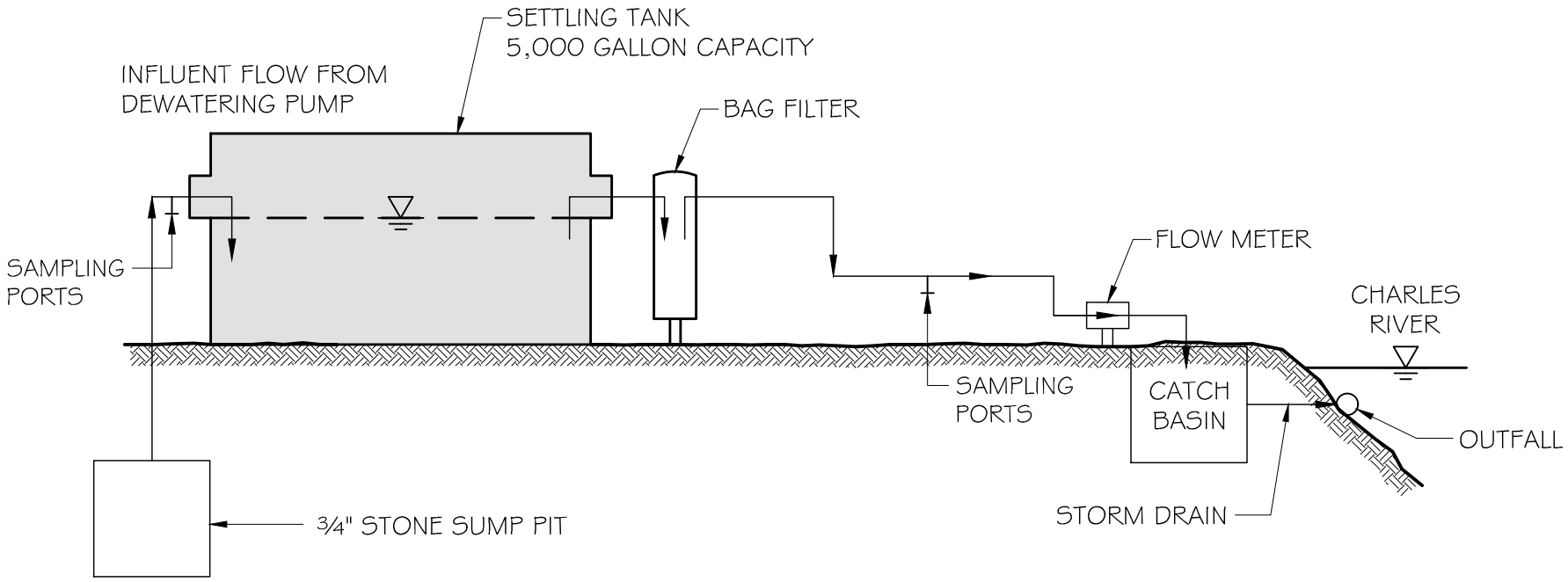
Date: APRIL 2019	Dwn: M.B.S.	Chkd: K.W.S.	Scale: 1" = 100'
Project No: 6216			

FILE NAME: N:\Acad\JOBS\6216\Beacon Building (Buildings 5-8)\RGP6216-F03.dwg

FILE NAME: N:\Acad\JOBS\6216\Beacon Building (Buildings 5-8)\RGP\6216-E04.dwg

FIGURE 4



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KENMORE SQUARE NORTH - BEACON BUILDING
BOSTON MASSACHUSETTS

SCHEMATIC OF TREATMENT SYSTEM

FOR
RELATED BEAL CONSTRUCTION, LLC
BY
McPHAIL ASSOCIATES, LLC
CONSULTING GEOTECHNICAL ENGINEERS

Date: MARCH 2019	Dwn: I.J.M.	Chkd: K.W.S.	Scale: N.T.S.
Project No: 6216			

Table 1
Labratory Analytical Results - Groundwater
B-6 (OW)

Kenmore Square North
Beacon Building
Boston, MA
Project No.6216

LOCATION	EPA - Freshwater Aquatic Life Chronic Criteria	Building B RGP Sample B-6 (OW)
SAMPLING DATE		**1/31/2019**
LAB SAMPLE ID		**L1904083-02**
SAMPLE TYPE		**WATER**
General Chemistry (ug/l)		
Chlorine, Total Residual		ND(20)
Chromium, Hexavalent	11	ND(10)
Chromium, Trivalent	74	ND(10)
Cyanide, Total	5.2	ND(5)
Nitrogen, Ammonia		155
pH (SU)		-
Phenolics, Total		ND(30)
Solids, Total Suspended		ND(5000)
TPH, SGT-HEM		ND(4000)
Chloride	230000	159000
Total Metals (ug/l)		
Antimony, Total		ND(4)
Arsenic, Total	150	ND(1)
Cadmium, Total	0.25	ND(0.2)
Chromium, Total		1.2
Copper, Total		2.26
Iron, Total	1000	619
Lead, Total	2.5	1.31
Mercury, Total	0.77	ND(0.2)
Nickel, Total	52	ND(2)
Selenium, Total	5	ND(5)
Silver, Total		ND(0.4)
Zinc, Total	120	ND(10)
Microextractables (ug/l)		
SUM		ND
Semivolatile Organics (ug/l)		
SUM		ND
Volatile Organics (ug/l)		
SUM		ND

ND - Not detected in excess of
the labratory detection limit in (#)
Tested compounds not shown
did not exceed labratory reporting limits

Table 2
Labratory Analytical Results - Surface Water
Charles River

Kenmore Square North
Beacon Building
Boston, MA
Project No.6216

LOCATION	EPA - Freshwater Aquatic Life Chronic Criteria	SURFACE WATER CHARLES RIVER SAMPLE
SAMPLING DATE		**1/23/2019**
LAB SAMPLE ID		**L1902926-01**
SAMPLE TYPE		**WATER**
General Chemistry (ug/l)		
Cyanide, Total	5.2	ND(5)
Nitrogen, Ammonia		121
pH (SU)		7
Hardness		76900
Total Metals (ug/l)		
Antimony, Total		ND(4)
Arsenic, Total	150	ND(1)
Cadmium, Total	0.25	ND(0.2)
Chromium, Total		ND(1)
Copper, Total		1.77
Iron, Total	1000	410
Lead, Total	2.5	ND(1)
Mercury, Total	0.77	0.2
Nickel, Total	52	ND(2)
Selenium, Total	5	ND(5)
Silver, Total		ND(0.4)
Zinc, Total	120	ND(10)

ND - Not detected in excess of
the labratory detection limit in (#)

TABLE 3
ANALYTICAL RESULTS - Historical Groundwater

Kenmore Square North
Beacon Building
Boston, MA
Project No. 6216

LOCATION	RCGW-2	B-3 (OW)	B-4 (OW)	B-5 (OW)	B-6 (OW)	B-8 (OW)
SAMPLING DATE		8/22/2016	8/19/2016	8/19/2016	8/22/2016	8/18/2016
LAB SAMPLE ID		L1626224-02	L1626120-01	L1626120-02	L1626224-03	L1625933-02
Extractable Petroleum Hydrocarbons (ug/l)						
C9-C18 Aliphatics	5000	ND(100)	-	ND(100)	ND(100)	ND(100)
C19-C36 Aliphatics	50000	ND(100)	-	ND(100)	ND(100)	ND(100)
C11-C22 Aromatics, Adjusted	5000	ND(100)	-	ND(100)	ND(100)	ND(100)
Naphthalene	700	ND(10)	-	-	ND(10)	ND(10)
2-Methylnaphthalene	2000	ND(10)	-	-	ND(10)	ND(10)
Acenaphthylene	40	ND(10)	-	-	ND(10)	ND(10)
Acenaphthene	10000	ND(10)	-	-	ND(10)	ND(10)
Fluorene	40	ND(10)	-	-	ND(10)	ND(10)
Phenanthrene	10000	ND(10)	-	-	ND(10)	ND(10)
Anthracene	30	ND(10)	-	-	ND(10)	ND(10)
Fluoranthene	200	ND(10)	-	-	ND(10)	ND(10)
Pyrene	20	ND(10)	-	-	ND(10)	ND(10)
Benzo(a)anthracene	1000	ND(10)	-	-	ND(10)	ND(10)
Chrysene	70	ND(10)	-	-	ND(10)	ND(10)
Benzo(b)fluoranthene	400	ND(10)	-	-	ND(10)	ND(10)
Benzo(k)fluoranthene	100	ND(10)	-	-	ND(10)	ND(10)
Benzo(a)pyrene	500	ND(10)	-	-	ND(10)	ND(10)
Indeno(1,2,3-cd)Pyrene	100	ND(10)	-	-	ND(10)	ND(10)
Dibenzo(a,h)anthracene	40	ND(10)	-	-	ND(10)	ND(10)
Benzo(ghi)perylene	20	ND(10)	-	-	ND(10)	ND(10)
Volatile Petroleum Hydrocarbons (ug/l)						
C9-C10 Aromatics	4000	ND(50)	ND(50)	-	-	ND(250)
C5-C8 Aliphatics, Adjusted	3000	ND(50)	ND(50)	-	-	ND(250)
C9-C12 Aliphatics, Adjusted	5000	76.8	ND(50)	-	-	ND(250)
Benzene	1000	ND(2)	-	-	-	-
Toluene	40000	ND(2)	-	-	-	-
Ethylbenzene	5000	ND(2)	-	-	-	-
p/m-Xylene	3000	ND(2)	-	-	-	-
o-Xylene	3000	ND(2)	-	-	-	-
Methyl tert butyl ether	5000	ND(3)	-	-	-	-
Naphthalene	700	6.02	-	-	-	-
MCP Volatile Organics (ug/l)						
Acetone	50000	-	ND(5)	-	-	7.3
SUM		-	ND	-		7.3
MCP Dissolved Metals (ug/l)						
Lead, Dissolved	10	ND(10)	-	-	-	

ND-not detected in excess of the laboratory method detection limits in ()
Bold-exceeds RCGW-2 reporting threshold.
Tested compounds not shown do not exceed laboratory detection limits.

APPENDIX A:

LIMITATIONS

LIMITATIONS

The purpose of this report is to present a summary of environmental conditions, including the results of testing of a groundwater sample obtained from a observation well on the 650-660 Beacon Street properties located in Boston, Massachusetts in support of an application for approval of temporary construction dewatering discharge of groundwater into surface waters of the Commonwealth of Massachusetts under EPA's Massachusetts Dewatering General Permit MAG070000.

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

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

Laboratory analyses have been performed for specific constituents during 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 Related Beal. This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, other than submission to relevant governmental agencies, nor used in whole or in part by any other party without the prior written consent of McPhail Associates, LLC.

APPENDIX B:

NOTICE OF INTENT TRANSMITTAL FORMS

NPDES DEWATERING GENERAL PERMIT
&
BOSTON WATER AND SEWER COMMISSION FORM

APPENDIX V

NOTICE OF INTENT INSTRUCTIONS
AND SUGGESTED FORMATS AND MAILING ADDRESSES

I. Notice of Intent (NOI) Instructions

In order to be covered by the Dewatering General Permit (DGP) applicants must submit a written NOI to EPA and the appropriate state agency. The NOI consists of either the suggested NOI format included in Part II of this Appendix or another format of official correspondence that contains all of the required information listed in the General Permit and the NOI instructions.

A. Instructions for the NOI - At a minimum, the NOI must include the following information for each individual facility. Additional information may be attached as needed.

1. General facility information.

a) Provide the name and mailing address of the facility.

b) Provide the facility location address, including the latitude and longitude, if different from the mailing address. Provide the SIC code(s) and type of business.

c) Provide the legal name, address, telephone and fax number of the owner and operator (if not the owner) if different from the facility information. Indicate whether the owner is a Federal, State, Tribal, private or other entity.

d) Provide a topographic map indicating the location(s) of the facility and receiving water, and discharge point(s).

e) Provide the answer to the following questions:
   i. Has a prior NPDES permit been granted for this discharge? If yes, provide the permit number:
   ii. Is the discharge a "new discharger" as defined by 40 CFR Section 122.2?
   iii. Is the facility covered by an individual NPDES permit? If yes, provide the permit number.
   iv. Is there a pending application on file for any other permit with EPA for this discharge?

2. Discharge information.

a) Provide the name of the receiving water(s) into which each outfall will discharge and identify if it is freshwater or marine water and its state water quality classification.

b) Describe the activity (construction dewatering, dewatering of foundation sumps etc.) that

generates the discharge(s) to be covered by the permit. If available, please provide a facility water flow diagram. Also, if known, identify and describe any and all treatment methods and provide a technology diagram depicting the treatment of discharge at the facility.

c) Provide the number of outfalls; and for each outfall, provide the following information:

i. Please estimate the flow in GPD – both the maximum daily and average flow rate of the discharge in gallons per day;

ii. Provide the maximum and minimum monthly pH of discharge (in s.u.);

iii. Identify the source of the water being discharged (i.e. potable water, surface water, groundwater). If the source is groundwater, the facility shall submit effluent test results, as required in Section 4.4.5 of the General Permit. If the source is potable water, EPA will calculate the Total Residual Chlorine effluent limits.

iv. If known, state whether the discharge(s) is continuous, periodic (occurs regularly, for example monthly or seasonally, but is not continuous all year) or intermittent (occurs sometimes but not regularly), or both. If the discharge is periodic, specify the frequency (number of days or months per year) of the discharge and the specific months of discharge. If the discharge is intermittent, specify the number of days per year there is intermittent discharge. If the dewatering is temporary and will occur within a finite period of time, state the approximate start and end dates of dewatering.

v. Provide the latitude and longitude of each discharge point (outfall) with an accuracy of 100 feet (see EPA's siting tool at: http://www.epa.gov/tri/report/siting_tool/) and,

vi. If the source of the discharge is potable water, provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water. Also, please attach any calculation sheets used to support stream flow and dilution calculations. See Appendix VIII for equations and additional information.

vii. For Massachusetts facilities only: Determine if the discharge is into an Area of Critical Environmental Concern (ACEC) and, if yes, provide the name of the ACEC. See Section 3.4 and Appendix 1 of the General Permit for more information on ACECs.

3. Contaminant Information.

a) If the facility uses any pH neutralization and/or dechlorination chemicals, provide the product name and manufacturer; maximum and average daily quantity used as well as the maximum and average daily expected concentrations (mg/l) in the discharge; and the vendor's reported aquatic toxicity (NOAEL and/or LC_{50} in percent for aquatic

organism(s)).

b) Please report any known remediation activities or water-quality issues in the vicinity of the discharge.

c) In order to be eligible for this permit, applicants will need to take a minimum of one sample of the untreated water at the construction site and have it analyzed for the metal parameters listed in Appendix IX. If the levels of contamination for the proposed discharge are equal or less than the metal parameters listed in Appendix IX, the application will be eligible for a DGP. Otherwise, the applicant should apply for the Remediation General Permit (RGP) for contaminated discharges.

4. Determination of Endangered Species Act Eligibility (ESA)

Provide documentation of ESA eligibility and respond to all questions as required in Appendix IV

5. Documentation of National Historic Preservation Act (NHPA) Requirements

Provide documentation and respond to all questions as required in Appendix III:

6. Supplemental Information

Applicants should provide any supplemental information needed to meet the requirements of the permit, including, any analytical data used to support the application (see Section 3.c above), and any certification(s) required by the permit.

7. Signature Requirements

The Notice of Intent must be signed and dated by the operator in accordance with the signatory requirements of 40 CFR Section 122.22 (see below) including the following certification:

I certify under penalty of law that (1) no biocides or other chemical additives except for those used for pH adjustment and/or dechlorination are used in the dewatering system; (2) the discharge consists solely of dewatering and authorized pH adjustment and/or dechlorination chemicals; (3) the discharge does not come in contact with any raw materials, intermediate product, waste product or finished product; (4) if the discharge of dewatering subsequently mixes with other wastewater (i.e. stormwater) prior to discharging to the receiving water, any monitoring provided under this permit will be only for dewatering discharges; (5) where applicable, the facility has complied with the requirements of this permit specific to the Endangered Species Act and the National Historic Preservation Act; and (6) this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate 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, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Federal regulations require this application to be signed as follows:
1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For partnership or sole proprietorship, by a general partner or the proprietor, respectively, or,
3. For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

B. Submission of NOI to EPA

Filing with EPA - All operators located in Massachusetts and New Hampshire that apply for coverage under this General Permit must submit a written NOI to EPA-New England. The completed, signed NOI formats and attachments must be submitted to EPA-NE electronically at: GeneralPermit.Dewatering@epa.gov, or mailed to:

US Environmental Protection Agency
Dewatering GP Processing
Industrial Permit Unit (OEP 06- 4)
5 Post Office Square – Suite 100
Boston, MA 02109-3912

Filing with the states - A copy of the NOI format filed with EPA-NE must also be filed with state agencies. The state agency may elect to develop a state specific form or other additional information requirements.

1. Discharges in Massachusetts

    a. Facilities located in Massachusetts with discharges to Class B or SB waters must: Provide a completed copy of the Notice of Intent to:

Massachusetts Department of Environmental Protection
Division of Watershed Management
8 New Bond Street
Worcester, MA 01606

The State of Massachusetts no longer will take an active participation in approving or certifying DGP discharges to Class B or SB waters. No transmittal form or fees are necessary to Class B & SB waters. The Notice of Intent to the State is for informational purposes only.

b. Facility located in Massachusetts with discharges to Class A or SA waters must: Provide a completed copy of the Notice of Intent. The completed state transmittal form, and a copy of the check for the appropriate State fee to:

Massachusetts Department of Environmental Protection
Division of Watershed Management
8 New Bond Street
Worcester, MA 01606

Submit the appropriate fee and copy of the transmittal form to:

MassDEP
P.O. Box 4062
Boston, MA 02211

The State Transmittal Form & Number for the Permit Application & Payment is found here:

http://www.mass.gov/eea/agencies/massdep/service/approval/transmital-form-for-payment.html

Discharges into Class A or SA waters require approval by the Massachusetts Department of Environmental Protection

2. Discharges in New Hampshire

All applicants must provide a completed copy of their Notice of Intent to:

New Hampshire Department of Environmental Services
Water Division, Wastewater Engineering Bureau
29 Hazen Drive, P.O. Box 95
Concord, New Hampshire 03302-0095

II. Suggested Notice of Intent (NOI) Format

1. General facility information. Please provide the following information about the facility.

a) Name of facility: Kenmore Square North - Beacon Building	**Mailing Address for the Facility:** 650-660 Beacon Street - Boston, MA 02108	
b) Location Address of the Facility (if different from mailing address):	**Facility Location** **longitude:** -71.096032 **latitude:** 42.349330	**Type of Business:** Construction Site **Facility SIC codes:**

c) Name of facility owner: RREF II Kenmore Lessor III, LLC **Owner's email:** mcassidy@relatedbeal.com

Owner's Tel #: (617) 501-4732 **Owner's Fax #:** _____

Address of owner (if different from facility address)

177 Milk Street - Boston MA 02109

Owner is (check one): 1. Federal____ 2. State _____ 3. Private__✔__ 4. Other _____(Describe)_____

Legal name of Operator, if not owner: Related Beal Construction, LLC

Operator Contact Name: Max Cassidy

Operator Tel Number: (617) 501-4732 **Fax Number:** _____

Operator's email: mcassidy@relatedbeal.com

Operator Address (if different from owner)

d) Attach a topographic map indicating the location of the facility and the outfall(s) to the receiving water. Map attached? __✔__

e) Check Yes or No for the following:

1. **Has a prior NPDES permit been granted for the discharge? Yes ____ No__✔__ If Yes, Permit Number: _____**
2. **Is the discharge a "new discharger" as defined by 40 CFR Section 122.2? Yes_____ No__✔___**
3. **Is the facility covered by an individual NPDES permit? Yes_____ No__✔___ If Yes, Permit Number ____**
4. **Is there a pending application on file with EPA for this discharge? Yes _____ No __✔____ If Yes, date of submittal:**

2. Discharge information. Please provide information about the discharge, (attaching additional sheets as needed)

a) Name of receiving water into which discharge will occur: Charles River

State Water Quality Classification: Class B **Freshwater:** Yes **Marine Water:** No

b) Describe the discharge activities for which the owner/applicant is seeking coverage:

✔ **1. Construction dewatering of groundwater intrusion and/or storm water accumulation.**

2. Short-term or long-term dewatering of foundation sumps.

3. Other.

c) Number of outfalls 1

For each outfall:

d) Estimate the maximum daily and average monthly flow of the discharge (in gallons per day – GPD). Max Daily Flow 72,000 **GPD**
Average Monthly Flow 21600 **GPD**

e.) What is the maximum and minimum monthly pH of the discharge (in s.u.)? Max pH 8.3 **Min pH** 6.5

f.) Identify the source of the discharge (i.e. potable water, surface water, or groundwater). If groundwater, the facility shall submit effluent test results, as required in Section 4.4.5 of the General Permit. Groundwater and surface water (see attached report)

g.) What treatment does the wastewater receive prior to discharge? Settling tank and bag filters to remove sediment

h.) Is the discharge continuous? Yes _____ **No** ✔ **If no, is the discharge periodic (P) (occurs regularly, i.e., monthly or seasonally, but is not continuous all year) or intermittent (I) (occurs sometimes but not regularly) or both (B)** (B) Both
If (P), number of days or months per year of the discharge varies **and the specific months of discharge** typically following rainfall events;
If (I), number of days/year there is a discharge _____
Is the discharge temporary? Yes ✔ **No** _____
If yes, approximate start date of dewatering July 2019 **approximate end date of dewatering** June 2020

i.) Latitude and longitude of each discharge within 100 feet (See http://www.epa.gov/tri/report/siting_tool): Outfall 1: long. -71.097637 **lat.** 42.351120**; Outfall 2: long.**_____ **lat.**_____**; Outfall 3: long.**_____ **lat.**_____**.**

j.) If the source of the discharge is potable water, please provide the reported or calculated seven day-ten year low flow (7Q10) of the receiving water and attach any calculation sheets used to support stream flow and dilution calculations_____ **cfs**
(See Appendix VIII for equations and additional information)

MASSACHUSETTS FACILITIES: See Section 3.4 and Appendix 1 of the General Permit for more information on Areas of Critical Environmental Concern (ACEC):

k.) Does the discharge occur in an ACEC? Yes _____ No __✔___
If yes, provide the name of the ACEC: _____

3. Contaminant Information

a) Are any pH neutralization and/or dechlorination chemicals used in the discharge? If so, include the chemical name and manufacturer; maximum and average daily quantity used as well as the maximum and average daily expected concentrations (mg/l) in the discharge, and the vendor's reported aquatic toxicity (NOAEL and/or LC_{50} in percent for aquatic organism(s)). Not planned at this time

b) Please report any known remediation activities or water-quality issues in the vicinity of the discharge.

4. Determination of Endangered Species Act Eligibility: Provide documentation of ESA eligibility as required at Part 3.4 and Appendix IV. In addition, respond to the following questions.

a) Which of the three eligibility criteria listed in Appendix IV, Criterion (A, B, or C) have you met? A_____
b) Please attach documentation with your NOI supporting your response. Please see Appendix IV for acceptable documentation

5. Documentation of National Historic Preservation Act requirements: Please respond to the following questions:

a) See Screening Process in Appendix III and respond to questions regarding your site and any historic properties listed or eligible for listing on the National Register of Historic Places. Question 1: Yes _____ No __✔__ ; Question 2: No __✔___ Yes _____ See attached report.

b) Have any State or Tribal historic preservation officers been consulted in this determination? Yes _____ or No __✔__ If yes, attach the results of the consultation(s).

c) Which of the three National Historic Preservation Act eligibility criterion listed in Appendix III, Criterion (A, B, or C) have you met? B_____

d) Is the project located on property of religious or cultural significance to an Indian Tribe? Yes _____ or No __✔__ If yes, provide that name of the Indian Tribe associated with the property. _____

6. Supplemental Information: Please provide any supplemental information. Attach any analytical data used to support the application. Attach any certification(s) required by the general permit

7. Signature Requirements: The Notice of Intent must be signed by the operator in accordance with the signatory requirements of 40 CFR Section 122.22 (see below) including the following certification:

I certify under penalty of law that (1) no biocides or other chemical additives except for those used for pH adjustment and/or dechlorination are used in the dewatering system; (2) the discharge consists solely of dewatering and authorized pH adjustment and/or dechlorination chemicals; (3) the discharge does not come in contact with any raw materials, intermediate product, water product or finished product; (4) if the discharge of dewatering subsequently mixes with other permitted wastewater (i.e. stormwater) prior to discharging to the receiving water, any monitoring provided under this permit will be only for dewatering discharge; (5) where applicable, the facility has complied with the requirements of this permit specific to the Endangered Species Act and National Historic Preservation Act; and (6) this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate 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, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I certify that I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Facility Name: Kenmore Square North - Beacon Building

Operator signature: Max Cassidy

Digitally signed by Max Cassidy
DN: C=US, E=mcassidy@relatedbeal.com, O="Related Beal, LLC", OU=Project Management, CN=Max Cassidy
Reason: I am approving this document
Date: 2019.05.07 12:22:19-04'00'

Print Full Name and Title: Max Cassidy - Senior Project Manager

Date: 05/07/2019

Federal regulations require this application to be signed as follows:

1. For a corporation, by a principal executive officer of at least the level of vice president;
2. For partnership or sole proprietorship, by a general partner or the proprietor, respectively, or,
3. For a municipality, State, Federal or other public facility, by either a principal executive officer or ranking elected official.

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

DEWATERING DISCHARGE PERMIT APPLICATION

OWNER / AUTHORIZED APPLICANT PROVIDE INFORMATION HERE:

Company Name: Related Beal Construction, LLC Address: 117 Milk Street Boston MA 02109

Phone Number: 617 451 2100 Fax number: _____

Contact person name: Max Cassidy Title: Senior Project Manager

Cell number: 617 265 0815 Email address: mcassidy@relatedbeal.com

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

Owner's Information (if different from above):

Owner of property being dewatered: RREF II Kenmore Lessor III, LLC

Owner's mailing address: 117 Milk Street, Boston, MA 02109 Phone number: 617 265 0815

Location of Discharge & Proposed Treatment System(s):

Street number and name: 650 - 660 Boston Street Neighborhood Kenmore/Fenway

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

Describe Proposed Pre-Treatment System(s): Frac Tank and Bag Filters

BWSC Outfall No. SDO 042 Receiving Waters Charles River

Temporary Discharges (Provide Anticipated Dates of Discharge): From 8/2019 To 7/2020

☐ 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: 5/7/19

APPENDIX C:

MASSACHUSETTS PHASE I SITE ASSESSMENT GIS MAP, IPAC TRUST RESOURCE REPORT, AND MACRIS REPORT

MassDEP - Bureau of Waste Site Cleanup

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

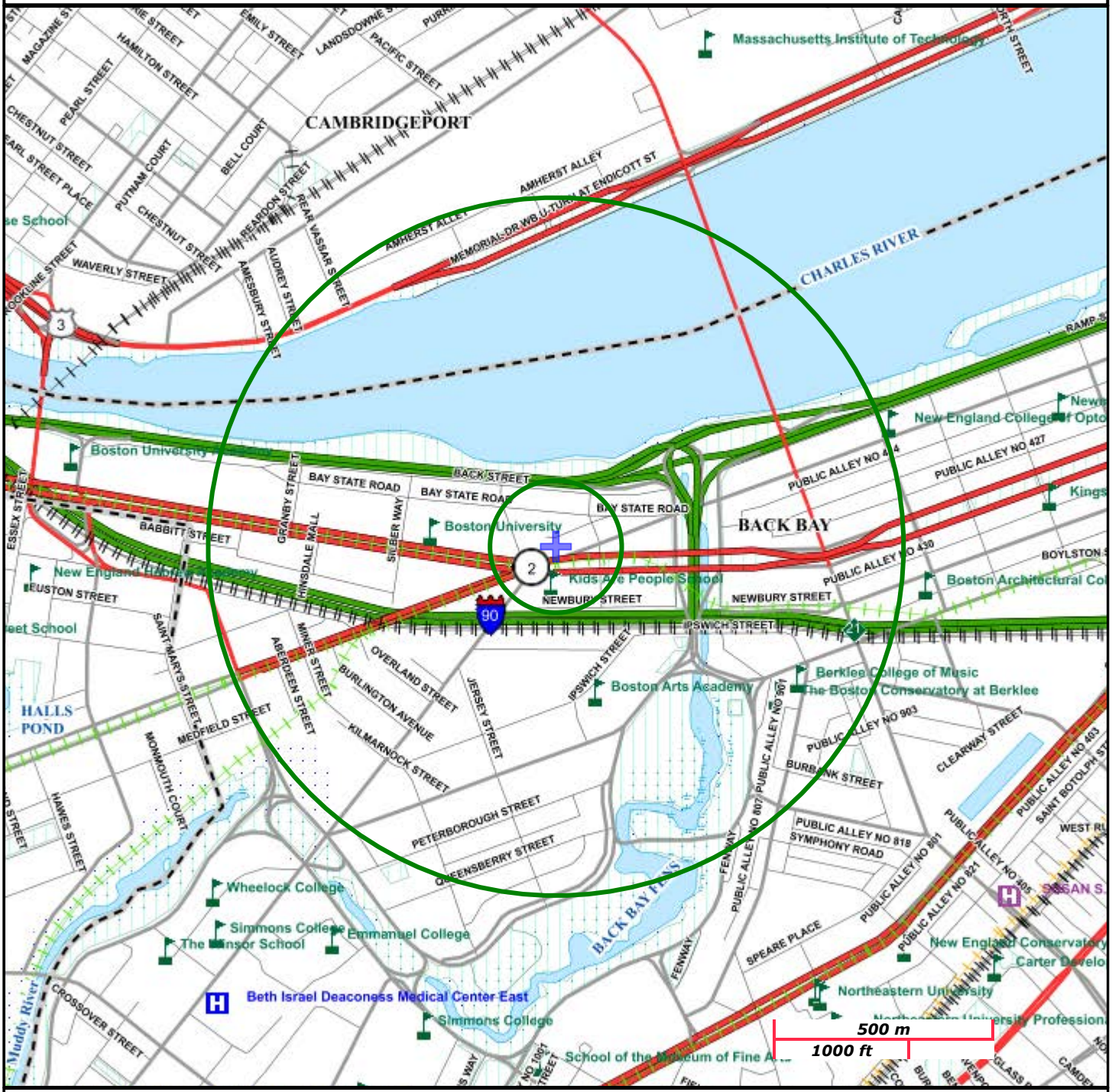
Site Information:

660 BEACON STREET BOSTON, MA

NAD83 UTM Meters:
4690688mN , 327346mE (Zone: 19)
April 16, 2019

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.

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:
Consultation Code: 05E1NE00-2019-SLI-1431
Event Code: 05E1NE00-2019-E-03417
Project Name: Kenmore Square North - Beacon

April 16, 2019

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 05E1NE00-2019-SLI-1431

Event Code: 05E1NE00-2019-E-03417

Project Name: Kenmore Square North - Beacon

Project Type: DEVELOPMENT

Project Description: <1 Acre

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.34932496038084N71.09612106383551W

Counties: Suffolk, MA

Endangered Species Act Species

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

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

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

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

---

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

Critical habitats

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

Massachusetts Cultural Resource Information System

Scanned Record Cover Page

Inventory No:	BOS.9270
Historic Name:	CITGO Sign
Common Name:	
Address:	660 Beacon St
City/Town:	Boston
Village/Neighborhood:	Kenmore Square; Fenway
Local No:	910
Year Constructed:	1965
Architect(s):	
Architectural Style(s):	
Use(s):	Other Commercial; Other Road Related
Significance:	Art; Commerce; Transportation
Area(s):	BOS.XC: Kenmore Square Area
Designation(s):	
Building Materials(s):	

The Massachusetts Historical Commission (MHC) has converted this paper record to digital format as part of ongoing projects to scan records of the Inventory of Historic Assets of the Commonwealth and National Register of Historic Places nominations for Massachusetts. Efforts are ongoing and not all inventory or National Register records related to this resource may be available in digital format at this time.

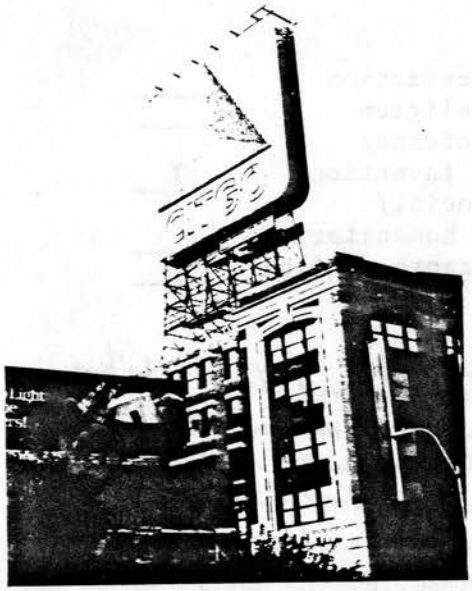
The MACRIS database and scanned files are highly dynamic; new information is added daily and both database records and related scanned files may be updated as new information is incorporated into MHC files. Users should note that there may be a considerable lag time between the receipt of new or updated records by MHC and the appearance of related information in MACRIS. Users should also note that not all source materials for the MACRIS database are made available as scanned images. Users may consult the records, files and maps available in MHC's public research area at its offices at the State Archives Building, 220 Morrissey Boulevard, Boston, open M-F, 9-5.

Users of this digital material acknowledge that they have read and understood the MACRIS Information and Disclaimer (http://mhc-macris.net/macrisdisclaimer.htm)

Commonwealth of Massachusetts
Massachusetts Historical Commission
220 Morrissey Boulevard, Boston, Massachusetts 02125
www.sec.state.ma.us/mhc

BOS.9270

BOSTON LANDMARKS COMMISSION Building Information Form Form No. 910 Area Fenway



ADDRESS on top of 660 Beacon st COR. at Kenmore Square

NAME CITCO SIGN present Same original

MAP No. 23N.9E SUB AREA Kenmore Square

DATE 1965 source USGS Boston Sect C

ARCHITECT source

BUILDER source

OWNER Cities Service Corp. original present

PHOTOGRAPHS FW 12 · 2/4, 1/2

TYPE (residential) single double row 2-fam. 3-deck ten apt.
(non-residential) Commercial sign (Neon)

NO. OF STORIES (1st to cornice) — plus —

ROOF — cupola — dormers —

MATERIALS (Frame) clapboards shingles stucco asphalt asbestos alum/vinyl
(Other) brick stone concrete iron/steel/alum. NEON TUBING Metal enframement

BRIEF DESCRIPTION
Large, Neon sign on top of 660 Commonwealth Ave. characterized by simple, bold graphics (e.g. large triangular form with "CITGO" in large letters.

EXTERIOR ALTERATION [minor] moderate drastic

CONDITION [good–fair] poor LOT AREA sq. feet

NOTEWORTHY SITE CHARACTERISTICS Looms over heavily travelled Kenmore Sq Commercial/Transportation/entertainment area.

(Map)

SIGNIFICANCE (cont'd on reverse) Erected in 1965, Kenmore Square's CITCO Sign has an important place in the history of Boston exterior advertising - going back to 1697/1701 (e.g. Painter's Arms - hand carved wooden guild sign - earliest sign in collection of Bostonian Society). The citgo sign is alledgedly the first to use a computer to direct its light show. It is a highly public example of Pop Art that prevailed in the 1960's, its

#III

Moved; date if known_____

Themes (check as many as applicable)

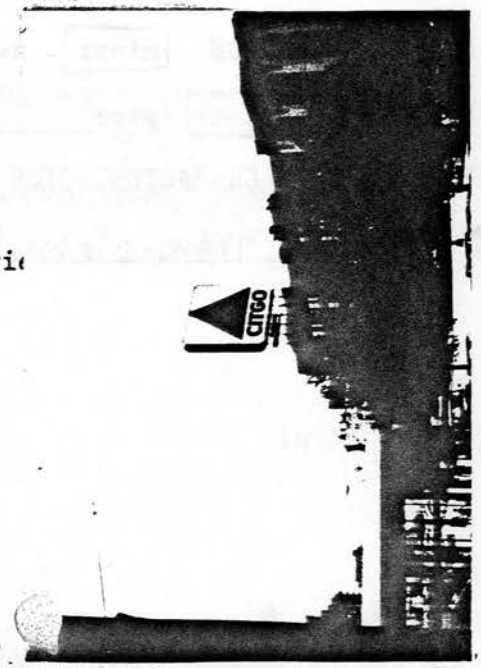
Aboriginal	____	Conservation	____	Recreation	____
Agricultural	____	Education	____	Religion	____
Architectural	____	Exploration/		Science/	
The Arts	X	settlement	____	invention	X
Commerce	X	Industry	____	Social/	
Communication	X	Military	____	humanitarian	____
Community/		Political	____	Transportation	____
development	____				

Significance (include explanation of themes checked above)

Simple, bold graphics are visible by both night and day. Like steeples, clock towers and other visual silouettes on the skyline, the sign visually marks and identifies the place of Kenmore Sq, a fact noted in several reports and publications. Neither Boston nor the Commonwealth have any other comparable design elements. The Boston sign is the only one remaining from four similar signs erected by Cities Services, in various parts of the country, during the mid 1960's. This sign is the last chapter in the history of "spectacular displays" - a history which began with a massive display of electric lights at a London Crystal Palace exhibit of 1892.

Preservation Consideration (accessibility, re-use possibilities, capacity for public use and enjoyment, protection, utilities, context)

Considered by BLC to meet statutory criteria for landmark designation, but as a "temporal advertizing devise" cannot be designated



Bibliography and/or references (such as local historic records, early maps, etc.)

CITGO Sign Publications:

① "View from the Road (1964)"

② "City signs and Lights" (1971) - policy study devoted to Boston's sign and public lighting problems

③ 1976 - urban Design study - prepared and published by Harvard Graduate students - on file at Carpenter Visual Arts Center, Quincy st. Cambridge

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Place: Kenmore Square; Street No: 660; Street Name: Beacon St; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year
BOS.7300	Peerless Motor Car Company Building	660 Beacon St	Boston	1910
BOS.9270	CITGO Sign	660 Beacon St	Boston	1965

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Place: Kenmore Square; Street No: 660; Street Name: Beacon St; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year
BOS.7300	Peerless Motor Car Company Building	660 Beacon St	Boston	1910
BOS.9270	CITGO Sign	660 Beacon St	Boston	1965

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Place: Kenmore Square; Street No: 656; Street Name: Beacon St; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Place: Kenmore Square; Street No: 654; Street Name: Beacon St; Resource Type(s): Area, Burial Ground, Building, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Place: Kenmore Square; Street No: 650; Street Name: Beacon St; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year

APPENDIX D:

GROUNDWATER LABORATORY ANALYTICAL DATA

ANALYTICAL REPORT

Lab Number:	L1904083
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	KENMORE SQUARE NORTH
Project Number:	6216.9.00
Report Date:	02/12/19

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

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

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.00

Lab Number: L1904083
Report Date: 02/12/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1904083-01	BUILDING B RGP SAMPLE B-1A (OW)	WATER	BOSTON, MA	01/31/19 14:00	01/31/19
L1904083-02	BUILDING C RGP SAMPLE B-6 (OW)	WATER	BOSTON, MA	01/31/19 11:00	01/31/19

Project Name:	KENMORE SQUARE NORTH	**Lab Number:**	L1904083
Project Number:	6216.9.00	**Report Date:**	02/12/19

Case Narrative

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

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

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

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

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

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

Project Name:	KENMORE SQUARE NORTH	**Lab Number:**	L1904083
Project Number:	6216.9.00	**Report Date:**	02/12/19

Case Narrative (continued)

Report Submission

The analysis of Ethanol was subcontracted. A copy of the laboratory report is included as an addendum.

Please note: This data is only available in PDF format and is not available on Data Merger.

Chlorine, Total Residual

The WG1202901-4 MS recovery (72%), performed on L1904083-02, 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:  Kelly Stenstrom

Title: Technical Director/Representative Date: 02/12/19

ORGANICS

VOLATILES

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1904083

Project Number: 6216.9.00 **Report Date:** 02/12/19

SAMPLE RESULTS

Lab ID: L1904083-01
Client ID: BUILDING B RGP SAMPLE B-1A (OW)
Sample Location: BOSTON, MA

Date Collected: 01/31/19 14:00
Date Received: 01/31/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 02/01/19 15:15
Analyst: NLK

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

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1904083

Project Number: 6216.9.00 **Report Date:** 02/12/19

SAMPLE RESULTS

Lab ID: L1904083-01 Date Collected: 01/31/19 14:00

Client ID: BUILDING B RGP SAMPLE B-1A (OW) Date Received: 01/31/19

Sample Location: BOSTON, MA Field Prep: Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	99		60-140
Fluorobenzene	104		60-140
4-Bromofluorobenzene	97		60-140

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1904083

Project Number: 6216.9.00 **Report Date:** 02/12/19

SAMPLE RESULTS

Lab ID: L1904083-01
Client ID: BUILDING B RGP SAMPLE B-1A (OW)
Sample Location: BOSTON, MA

Date Collected: 01/31/19 14:00
Date Received: 01/31/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1-SIM
Analytical Date: 02/01/19 15:15
Analyst: NLK

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	112		60-140
4-Bromofluorobenzene	77		60-140

Project Name: KENMORE SQUARE NORTH
Lab Number: L1904083
Project Number: 6216.9.00
Report Date: 02/12/19

SAMPLE RESULTS

Lab ID: L1904083-01
Client ID: BUILDING B RGP SAMPLE B-1A (OW)
Sample Location: BOSTON, MA

Date Collected: 01/31/19 14:00
Date Received: 01/31/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 02/07/19 12:29
Analyst: AWS

Extraction Method: EPA 504.1
Extraction Date: 02/07/19 11:16

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: KENMORE SQUARE NORTH **Lab Number:** L1904083

Project Number: 6216.9.00 **Report Date:** 02/12/19

SAMPLE RESULTS

Lab ID: L1904083-02
Client ID: BUILDING C RGP SAMPLE B-6 (OW)
Sample Location: BOSTON, MA

Date Collected: 01/31/19 11:00
Date Received: 01/31/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 02/01/19 15:52
Analyst: NLK

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

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1904083

Project Number: 6216.9.00 **Report Date:** 02/12/19

SAMPLE RESULTS

Lab ID: L1904083-02 Date Collected: 01/31/19 11:00

Client ID: BUILDING C RGP SAMPLE B-6 (OW) Date Received: 01/31/19

Sample Location: BOSTON, MA Field Prep: Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	95		60-140
Fluorobenzene	92		60-140
4-Bromofluorobenzene	96		60-140

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1904083

Project Number: 6216.9.00 **Report Date:** 02/12/19

SAMPLE RESULTS

Lab ID: L1904083-02
Client ID: BUILDING C RGP SAMPLE B-6 (OW)
Sample Location: BOSTON, MA

Date Collected: 01/31/19 11:00
Date Received: 01/31/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1-SIM
Analytical Date: 02/01/19 15:52
Analyst: NLK

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	98		60-140
4-Bromofluorobenzene	76		60-140

Project Name: KENMORE SQUARE NORTH
Lab Number: L1904083
Project Number: 6216.9.00
Report Date: 02/12/19

SAMPLE RESULTS

Lab ID: L1904083-02
Client ID: BUILDING C RGP SAMPLE B-6 (OW)
Sample Location: BOSTON, MA

Date Collected: 01/31/19 11:00
Date Received: 01/31/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 02/07/19 12:57
Analyst: AWS

Extraction Method: EPA 504.1
Extraction Date: 02/07/19 11:16

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: KENMORE SQUARE NORTH
Project Number: 6216.9.00
Lab Number: L1904083
Report Date: 02/12/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1-SIM
Analytical Date: 02/01/19 14:38
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG1203299-4					
1,4-Dioxane	ND		ug/l	50	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	113		60-140
4-Bromofluorobenzene	77		60-140

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.00
Lab Number: L1904083
Report Date: 02/12/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 02/01/19 14:38
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1203300-4					
Methylene chloride	ND		ug/l	1.0	--
1,1-Dichloroethane	ND		ug/l	1.5	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.5	--
Tetrachloroethene	ND		ug/l	1.0	--
1,2-Dichloroethane	ND		ug/l	1.5	--
1,1,1-Trichloroethane	ND		ug/l	2.0	--
Benzene	ND		ug/l	1.0	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Vinyl chloride	ND		ug/l	1.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--
1,2-Dichlorobenzene	ND		ug/l	5.0	--
1,3-Dichlorobenzene	ND		ug/l	5.0	--
1,4-Dichlorobenzene	ND		ug/l	5.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-xylene	ND		ug/l	1.0	--
Xylenes, Total	ND		ug/l	1.0	--
Acetone	ND		ug/l	10	--
Methyl tert butyl ether	ND		ug/l	10	--
Tert-Butyl Alcohol	ND		ug/l	100	--
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.00
Lab Number: L1904083
Report Date: 02/12/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 02/01/19 14:38
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1203300-4					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	98		60-140
Fluorobenzene	105		60-140
4-Bromofluorobenzene	94		60-140

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.00

Lab Number: L1904083
Report Date: 02/12/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 02/07/19 12:00
Analyst: AWS

Extraction Method: EPA 504.1
Extraction Date: 02/07/19 11:16

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westborough Lab for sample(s): 01-02 Batch: WG1204559-1						
1,2-Dibromoethane	ND		ug/l	0.010	--	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216.9.00

Lab Number: L1904083

Report Date: 02/12/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1203299-3								
1,4-Dioxane	110		-		60-140	-		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Fluorobenzene	113				60-140
4-Bromofluorobenzene	77				60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216.9.00

Lab Number: L1904083

Report Date: 02/12/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1203300-3								
Methylene chloride	90		-		60-140	-		28
1,1-Dichloroethane	90		-		50-150	-		49
Carbon tetrachloride	100		-		70-130	-		41
1,1,2-Trichloroethane	90		-		70-130	-		45
Tetrachloroethene	85		-		70-130	-		39
1,2-Dichloroethane	100		-		70-130	-		49
1,1,1-Trichloroethane	100		-		70-130	-		36
Benzene	100		-		65-135	-		61
Toluene	90		-		70-130	-		41
Ethylbenzene	90		-		60-140	-		63
Vinyl chloride	95		-		5-195	-		66
1,1-Dichloroethene	90		-		50-150	-		32
cis-1,2-Dichloroethene	85		-		60-140	-		30
Trichloroethene	90		-		65-135	-		48
1,2-Dichlorobenzene	85		-		65-135	-		57
1,3-Dichlorobenzene	80		-		70-130	-		43
1,4-Dichlorobenzene	85		-		65-135	-		57
p/m-Xylene	85		-		60-140	-		30
o-xylene	80		-		60-140	-		30
Acetone	112		-		40-160	-		30
Methyl tert butyl ether	100		-		60-140	-		30
Tert-Butyl Alcohol	110		-		60-140	-		30
Tertiary-Amyl Methyl Ether	95		-		60-140	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216.9.00

Lab Number: L1904083

Report Date: 02/12/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1203300-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	98				60-140
Fluorobenzene	104				60-140
4-Bromofluorobenzene	93				60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216.9.00

Lab Number: L1904083

Report Date: 02/12/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab	Associated sample(s): 01-02		Batch: WG1204559-2						
1,2-Dibromoethane	100		-		80-120	-			A

Matrix Spike Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216.9.00

Lab Number: L1904083

Report Date: 02/12/19

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): 01-02 QC Batch ID: WG1204559-3 QC Sample: L1904083-01 Client ID: BUILDING B RGP SAMPLE B-1A (OW)													
1,2-Dibromoethane	ND	0.249	0.242	97		-	-		80-120	-		20	A

SEMIVOLATILES

Project Name: KENMORE SQUARE NORTH
Lab Number: L1904083
Project Number: 6216.9.00
Report Date: 02/12/19

SAMPLE RESULTS

Lab ID: L1904083-01
Client ID: BUILDING B RGP SAMPLE B-1A (OW)
Sample Location: BOSTON, MA

Date Collected: 01/31/19 14:00
Date Received: 01/31/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 02/03/19 00:35
Analyst: ALS

Extraction Method: EPA 625.1
Extraction Date: 02/01/19 08:41

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	59		42-122
2-Fluorobiphenyl	69		46-121
4-Terphenyl-d14	84		47-138

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1904083

Project Number: 6216.9.00 **Report Date:** 02/12/19

SAMPLE RESULTS

Lab ID: L1904083-01
Client ID: BUILDING B RGP SAMPLE B-1A (OW)
Sample Location: BOSTON, MA

Date Collected: 01/31/19 14:00
Date Received: 01/31/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 02/02/19 10:30
Analyst: CB

Extraction Method: EPA 625.1
Extraction Date: 02/01/19 08:41

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	39		25-87
Phenol-d6	29		16-65
Nitrobenzene-d5	71		42-122
2-Fluorobiphenyl	61		46-121
2,4,6-Tribromophenol	93		45-128
4-Terphenyl-d14	66		47-138

Project Name: KENMORE SQUARE NORTH
Lab Number: L1904083
Project Number: 6216.9.00
Report Date: 02/12/19

SAMPLE RESULTS

Lab ID: L1904083-02
Client ID: BUILDING C RGP SAMPLE B-6 (OW)
Sample Location: BOSTON, MA

Date Collected: 01/31/19 11:00
Date Received: 01/31/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 02/03/19 01:03
Analyst: ALS

Extraction Method: EPA 625.1
Extraction Date: 02/01/19 08:41

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	72		42-122
2-Fluorobiphenyl	79		46-121
4-Terphenyl-d14	90		47-138

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1904083

Project Number: 6216.9.00 **Report Date:** 02/12/19

SAMPLE RESULTS

Lab ID: L1904083-02
Client ID: BUILDING C RGP SAMPLE B-6 (OW)
Sample Location: BOSTON, MA

Date Collected: 01/31/19 11:00
Date Received: 01/31/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 02/02/19 10:56
Analyst: CB

Extraction Method: EPA 625.1
Extraction Date: 02/01/19 08:41

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	48		25-87
Phenol-d6	35		16-65
Nitrobenzene-d5	95		42-122
2-Fluorobiphenyl	68		46-121
2,4,6-Tribromophenol	92		45-128
4-Terphenyl-d14	70		47-138

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.00
Lab Number: L1904083
Report Date: 02/12/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1
Analytical Date: 02/02/19 19:55
Analyst: ALS

Extraction Method: EPA 625.1
Extraction Date: 02/01/19 07:51

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-02 Batch: WG1202976-1					
Bis(2-ethylhexyl)phthalate	ND		ug/l	2.2	--
Butyl benzyl phthalate	ND		ug/l	5.0	--
Di-n-butylphthalate	ND		ug/l	5.0	--
Di-n-octylphthalate	ND		ug/l	5.0	--
Diethyl phthalate	ND		ug/l	5.0	--
Dimethyl phthalate	ND		ug/l	5.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Nitrobenzene-d5	46		42-122
2-Fluorobiphenyl	59		46-121
4-Terphenyl-d14	83		47-138

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.00

Lab Number: L1904083
Report Date: 02/12/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1-SIM
Analytical Date: 02/03/19 12:05
Analyst: DV

Extraction Method: EPA 625.1
Extraction Date: 02/01/19 17:07

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01-02 Batch: WG1203179-1					
Acenaphthene	ND		ug/l	0.10	--
Fluoranthene	ND		ug/l	0.10	--
Naphthalene	ND		ug/l	0.10	--
Benzo(a)anthracene	ND		ug/l	0.10	--
Benzo(a)pyrene	ND		ug/l	0.10	--
Benzo(b)fluoranthene	ND		ug/l	0.10	--
Benzo(k)fluoranthene	ND		ug/l	0.10	--
Chrysene	ND		ug/l	0.10	--
Acenaphthylene	ND		ug/l	0.10	--
Anthracene	ND		ug/l	0.10	--
Benzo(ghi)perylene	ND		ug/l	0.10	--
Fluorene	ND		ug/l	0.10	--
Phenanthrene	ND		ug/l	0.10	--
Dibenzo(a,h)anthracene	ND		ug/l	0.10	--
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	--
Pyrene	ND		ug/l	0.10	--
Pentachlorophenol	ND		ug/l	1.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	46		25-87
Phenol-d6	32		16-65
Nitrobenzene-d5	76		42-122
2-Fluorobiphenyl	67		46-121
2,4,6-Tribromophenol	84		45-128
4-Terphenyl-d14	76		47-138

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216.9.00

Lab Number: L1904083

Report Date: 02/12/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-02 Batch: WG1202976-2								
Bis(2-ethylhexyl)phthalate	100		-		29-137	-		30
Butyl benzyl phthalate	106		-		1-140	-		30
Di-n-butylphthalate	99		-		8-120	-		30
Di-n-octylphthalate	111		-		19-132	-		30
Diethyl phthalate	95		-		1-120	-		30
Dimethyl phthalate	91		-		1-120	-		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	75				42-122
2-Fluorobiphenyl	82				46-121
4-Terphenyl-d14	85				47-138

Lab Control Sample Analysis
Batch Quality Control

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.00

Lab Number: L1904083
Report Date: 02/12/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1203179-2								
Acenaphthene	78		-		60-132	-		30
Fluoranthene	86		-		43-121	-		30
Naphthalene	68		-		36-120	-		30
Benzo(a)anthracene	87		-		42-133	-		30
Benzo(a)pyrene	96		-		32-148	-		30
Benzo(b)fluoranthene	92		-		42-140	-		30
Benzo(k)fluoranthene	95		-		25-146	-		30
Chrysene	86		-		44-140	-		30
Acenaphthylene	80		-		54-126	-		30
Anthracene	86		-		43-120	-		30
Benzo(ghi)perylene	95		-		1-195	-		30
Fluorene	83		-		70-120	-		30
Phenanthrene	82		-		65-120	-		30
Dibenzo(a,h)anthracene	97		-		1-200	-		30
Indeno(1,2,3-cd)pyrene	99		-		1-151	-		30
Pyrene	89		-		70-120	-		30
Pentachlorophenol	66		-		38-152	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216.9.00

Lab Number: L1904083

Report Date: 02/12/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01-02 Batch: WG1203179-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	47				25-87
Phenol-d6	34				16-65
Nitrobenzene-d5	78				42-122
2-Fluorobiphenyl	70				46-121
2,4,6-Tribromophenol	101				45-128
4-Terphenyl-d14	76				47-138

PCBS

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1904083

Project Number: 6216.9.00 **Report Date:** 02/12/19

SAMPLE RESULTS

Lab ID: L1904083-01
Client ID: BUILDING B RGP SAMPLE B-1A (OW)
Sample Location: BOSTON, MA

Date Collected: 01/31/19 14:00
Date Received: 01/31/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 02/01/19 15:30
Analyst: WR

Extraction Method: EPA 608.3
Extraction Date: 02/01/19 06:45
Cleanup Method: EPA 3665A
Cleanup Date: 02/01/19
Cleanup Method: EPA 3660B
Cleanup Date: 02/01/19

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	86		37-123	B
Decachlorobiphenyl	80		38-114	B
2,4,5,6-Tetrachloro-m-xylene	89		37-123	A
Decachlorobiphenyl	73		38-114	A

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.00

Lab Number: L1904083
Report Date: 02/12/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 127,608.3
Analytical Date: 01/31/19 21:31
Analyst: WR

Extraction Method: EPA 608.3
Extraction Date: 01/31/19 07:03
Cleanup Method: EPA 3665A
Cleanup Date: 01/31/19
Cleanup Method: EPA 3660B
Cleanup Date: 01/31/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG1202623-1						
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	85		37-123	B
Decachlorobiphenyl	79		38-114	B
2,4,5,6-Tetrachloro-m-xylene	87		37-123	A
Decachlorobiphenyl	77		38-114	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216.9.00

Lab Number: L1904083

Report Date: 02/12/19

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: WG1202623-2									
Aroclor 1016	76		-		50-140	-		36	A
Aroclor 1260	63		-		8-140	-		38	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	87				37-123	B
Decachlorobiphenyl	81				38-114	B
2,4,5,6-Tetrachloro-m-xylene	92				37-123	A
Decachlorobiphenyl	78				38-114	A

METALS

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1904083

Project Number: 6216.9.00 **Report Date:** 02/12/19

SAMPLE RESULTS

Lab ID: L1904083-01 Date Collected: 01/31/19 14:00

Client ID: BUILDING B RGP SAMPLE B-1A (OW) Date Received: 01/31/19

Sample Location: BOSTON, MA Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	02/01/19 12:45	02/04/19 12:44	EPA 3005A	3,200.8	AM
Arsenic, Total	0.00334		mg/l	0.00100	--	1	02/01/19 12:45	02/04/19 12:44	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	02/01/19 12:45	02/04/19 12:44	EPA 3005A	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	02/01/19 12:45	02/04/19 12:44	EPA 3005A	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	02/01/19 12:45	02/04/19 12:44	EPA 3005A	3,200.8	AM
Iron, Total	6.46		mg/l	0.050	--	1	02/01/19 12:45	02/01/19 20:18	EPA 3005A	19,200.7	AB
Lead, Total	ND		mg/l	0.00100	--	1	02/01/19 12:45	02/04/19 12:44	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	02/01/19 11:14	02/01/19 17:14	EPA 245.1	3,245.1	GD
Nickel, Total	ND		mg/l	0.00200	--	1	02/01/19 12:45	02/04/19 12:44	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	02/01/19 12:45	02/04/19 12:44	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	02/01/19 12:45	02/04/19 12:44	EPA 3005A	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	02/01/19 12:45	02/04/19 12:44	EPA 3005A	3,200.8	AM
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		02/04/19 12:44	NA	107,-	

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1904083

Project Number: 6216.9.00 **Report Date:** 02/12/19

SAMPLE RESULTS

Lab ID: L1904083-02 Date Collected: 01/31/19 11:00

Client ID: BUILDING C RGP SAMPLE B-6 (OW) Date Received: 01/31/19

Sample Location: BOSTON, MA Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	02/01/19 12:45	02/04/19 12:48	EPA 3005A	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	02/01/19 12:45	02/04/19 12:48	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	02/01/19 12:45	02/04/19 12:48	EPA 3005A	3,200.8	AM
Chromium, Total	0.00120		mg/l	0.00100	--	1	02/01/19 12:45	02/04/19 12:48	EPA 3005A	3,200.8	AM
Copper, Total	0.00226		mg/l	0.00100	--	1	02/01/19 12:45	02/04/19 12:48	EPA 3005A	3,200.8	AM
Iron, Total	0.619		mg/l	0.050	--	1	02/01/19 12:45	02/01/19 21:16	EPA 3005A	19,200.7	AB
Lead, Total	0.00131		mg/l	0.00100	--	1	02/01/19 12:45	02/04/19 12:48	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	02/01/19 11:14	02/01/19 17:15	EPA 245.1	3,245.1	GD
Nickel, Total	ND		mg/l	0.00200	--	1	02/01/19 12:45	02/04/19 12:48	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	02/01/19 12:45	02/04/19 12:48	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	02/01/19 12:45	02/04/19 12:48	EPA 3005A	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	02/01/19 12:45	02/04/19 12:48	EPA 3005A	3,200.8	AM
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		02/04/19 12:48	NA	107,-	

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1904083

Project Number: 6216.9.00 **Report Date:** 02/12/19

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): 01-02 Batch: WG1203061-1										
Mercury, Total	ND		mg/l	0.00020	--	1	02/01/19 11:14	02/01/19 16:55	3,245.1	GD

Prep Information

Digestion Method: EPA 245.1

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-02 Batch: WG1203073-1										
Antimony, Total	ND		mg/l	0.00400	--	1	02/01/19 12:45	02/04/19 11:33	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	02/01/19 12:45	02/04/19 11:33	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	02/01/19 12:45	02/04/19 11:33	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	02/01/19 12:45	02/04/19 11:33	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	02/01/19 12:45	02/04/19 11:33	3,200.8	AM
Lead, Total	ND		mg/l	0.00100	--	1	02/01/19 12:45	02/04/19 11:33	3,200.8	AM
Nickel, Total	ND		mg/l	0.00200	--	1	02/01/19 12:45	02/04/19 11:33	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	02/01/19 12:45	02/04/19 11:33	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	02/01/19 12:45	02/04/19 11:33	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	02/01/19 12:45	02/04/19 11:33	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): 01-02 Batch: WG1203076-1										
Iron, Total	ND		mg/l	0.050	--	1	02/01/19 12:45	02/01/19 20:09	19,200.7	AB

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216.9.00

Lab Number: L1904083

Report Date: 02/12/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1203061-2								
Mercury, Total	98		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1203073-2								
Antimony, Total	96		-		85-115	-		
Arsenic, Total	104		-		85-115	-		
Cadmium, Total	108		-		85-115	-		
Chromium, Total	97		-		85-115	-		
Copper, Total	97		-		85-115	-		
Lead, Total	104		-		85-115	-		
Nickel, Total	100		-		85-115	-		
Selenium, Total	112		-		85-115	-		
Silver, Total	103		-		85-115	-		
Zinc, Total	109		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01-02 Batch: WG1203076-2								
Iron, Total	104		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.00

Lab Number: L1904083
Report Date: 02/12/19

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): 01-02 QC Batch ID: WG1203061-3 QC Sample: L1903905-01 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00500	100		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1203073-3 QC Sample: L1904083-01 Client ID: BUILDING B RGP SAMPLE B-1A (OW)												
Antimony, Total	ND	0.5	0.5815	116		-	-		70-130	-		20
Arsenic, Total	0.00334	0.12	0.1327	108		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.05628	110		-	-		70-130	-		20
Chromium, Total	ND	0.2	0.2013	101		-	-		70-130	-		20
Copper, Total	ND	0.25	0.2421	97		-	-		70-130	-		20
Lead, Total	ND	0.51	0.5280	104		-	-		70-130	-		20
Nickel, Total	ND	0.5	0.4922	98		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1395	116		-	-		70-130	-		20
Silver, Total	ND	0.05	0.05129	102		-	-		70-130	-		20
Zinc, Total	ND	0.5	0.5513	110		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1203076-3 QC Sample: L1904083-01 Client ID: BUILDING B RGP SAMPLE B-1A (OW)												
Iron, Total	6.46	1	7.50	104		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216.9.00

Lab Number: L1904083

Report Date: 02/12/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1203061-4 QC Sample: L1903905-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1203073-4 QC Sample: L1904083-01 Client ID: BUILDING B RGP SAMPLE B-1A (OW)						
Antimony, Total	ND	ND	mg/l	NC		20
Arsenic, Total	0.00334	0.00359	mg/l	7		20
Cadmium, Total	ND	ND	mg/l	NC		20
Chromium, Total	ND	ND	mg/l	NC		20
Copper, Total	ND	ND	mg/l	NC		20
Lead, Total	ND	ND	mg/l	NC		20
Nickel, Total	ND	ND	mg/l	NC		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01-02 QC Batch ID: WG1203076-4 QC Sample: L1904083-01 Client ID: BUILDING B RGP SAMPLE B-1A (OW)						
Iron, Total	6.46	6.61	mg/l	2		20

INORGANICS
&
MISCELLANEOUS

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.00
Lab Number: L1904083
Report Date: 02/12/19

SAMPLE RESULTS

Lab ID: L1904083-01
Client ID: BUILDING B RGP SAMPLE B-1A (OW)
Sample Location: BOSTON, MA
Sample Depth:
Matrix: Water
Date Collected: 01/31/19 14:00
Date Received: 01/31/19
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	11.		mg/l	5.0	NA	1	-	02/01/19 10:45	121,2540D	DR
Cyanide, Total	ND		mg/l	0.005	--	1	02/01/19 11:35	02/01/19 14:59	121,4500CN-CE	AG
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	01/31/19 22:04	121,4500CL-D	AS
Nitrogen, Ammonia	2.17		mg/l	0.075	--	1	02/01/19 03:30	02/04/19 20:44	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.00	--	1	02/01/19 16:30	02/01/19 21:15	74,1664A	ML
Phenolics, Total	ND		mg/l	0.030	--	1	02/04/19 07:42	02/05/19 05:45	4,420.1	GD
Chromium, Hexavalent	ND		mg/l	0.010	--	1	02/01/19 00:45	02/01/19 01:12	1,7196A	MA
Anions by Ion Chromatography - Westborough Lab										
Chloride	608.		mg/l	12.5	--	25	-	02/02/19 18:27	44,300.0	JR

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.00
Lab Number: L1904083
Report Date: 02/12/19

SAMPLE RESULTS

Lab ID: L1904083-02
Client ID: BUILDING C RGP SAMPLE B-6 (OW)
Sample Location: BOSTON, MA
Sample Depth:
Matrix: Water
Date Collected: 01/31/19 11:00
Date Received: 01/31/19
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	02/01/19 10:45	121,2540D	DR
Cyanide, Total	ND		mg/l	0.005	--	1	02/01/19 11:35	02/01/19 15:03	121,4500CN-CE	AG
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	01/31/19 22:04	121,4500CL-D	AS
Nitrogen, Ammonia	0.155		mg/l	0.075	--	1	02/01/19 03:30	02/04/19 20:40	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.00	--	1	02/01/19 16:30	02/01/19 21:15	74,1664A	ML
Phenolics, Total	ND		mg/l	0.030	--	1	02/04/19 07:42	02/05/19 05:47	4,420.1	GD
Chromium, Hexavalent	ND		mg/l	0.010	--	1	02/01/19 00:45	02/01/19 01:13	1,7196A	MA
Anions by Ion Chromatography - Westborough Lab										
Chloride	159.		mg/l	12.5	--	25	-	02/02/19 18:39	44,300.0	JR

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1904083

Project Number: 6216.9.00 **Report Date:** 02/12/19

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): 01-02 Batch: WG1202901-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	01/31/19 22:04	121,4500CL-D	AS
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1202925-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	02/01/19 00:45	02/01/19 01:11	1,7196A	MA
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1202937-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	02/01/19 03:30	02/04/19 20:33	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1202982-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	02/01/19 10:45	121,2540D	DR
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1203034-1										
Cyanide, Total	ND		mg/l	0.005	--	1	02/01/19 11:35	02/01/19 14:52	121,4500CN-CE	AG
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1203167-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	02/01/19 16:30	02/01/19 21:15	74,1664A	ML
Anions by Ion Chromatography - Westborough Lab for sample(s): 01-02 Batch: WG1203484-1										
Chloride	ND		mg/l	0.500	--	1	-	02/02/19 15:27	44,300.0	JR
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1203529-1										
Phenolics, Total	ND		mg/l	0.030	--	1	02/04/19 07:42	02/05/19 05:43	4,420.1	GD

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216.9.00

Lab Number: L1904083

Report Date: 02/12/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1202901-2								
Chlorine, Total Residual	104		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1202925-2								
Chromium, Hexavalent	98		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1202937-2								
Nitrogen, Ammonia	85		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1203034-2								
Cyanide, Total	110		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1203167-2								
TPH	91		-		64-132	-		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 Batch: WG1203484-2								
Chloride	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1203529-2								
Phenolics, Total	88		-		70-130	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.00

Lab Number: L1904083
Report Date: 02/12/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1202901-4 QC Sample: L1904083-02 Client ID: BUILDING C RGP SAMPLE B-6 (OW)												
Chlorine, Total Residual	ND	0.25	0.18	**72**	Q	-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1202925-4 QC Sample: L1904083-02 Client ID: BUILDING C RGP SAMPLE B-6 (OW)												
Chromium, Hexavalent	ND	0.1	0.092	92		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1202937-4 QC Sample: L1904083-01 Client ID: BUILDING B RGP SAMPLE B-1A (OW)												
Nitrogen, Ammonia	2.17	4	5.84	92		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1203034-4 QC Sample: L1904083-02 Client ID: BUILDING C RGP SAMPLE B-6 (OW)												
Cyanide, Total	ND	0.2	0.208	104		-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1203167-4 QC Sample: L1904083-02 Client ID: BUILDING C RGP SAMPLE B-6 (OW)												
TPH	ND	20	17.9	90		-	-		64-132	-		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1203484-3 QC Sample: L1904055-01 Client ID: MS Sample												
Chloride	69.2	40	108	97		-	-		90-110	-		18
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1203529-4 QC Sample: L1904083-01 Client ID: BUILDING B RGP SAMPLE B-1A (OW)												
Phenolics, Total	ND	0.4	0.38	96		-	-		70-130	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216.9.00

Lab Number: L1904083

Report Date: 02/12/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1202901-3 QC Sample: L1904083-01 Client ID: BUILDING B RGP SAMPLE B-1A (OW)						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1202925-3 QC Sample: L1904083-01 Client ID: BUILDING B RGP SAMPLE B-1A (OW)						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1202937-3 QC Sample: L1904083-01 Client ID: BUILDING B RGP SAMPLE B-1A (OW)						
Nitrogen, Ammonia	2.17	2.22	mg/l	2		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1202982-2 QC Sample: L1904048-01 Client ID: DUP Sample						
Solids, Total Suspended	220	230	mg/l	4		29
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1203034-3 QC Sample: L1904083-01 Client ID: BUILDING B RGP SAMPLE B-1A (OW)						
Cyanide, Total	ND	ND	mg/l	NC		30
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1203167-3 QC Sample: L1904083-01 Client ID: BUILDING B RGP SAMPLE B-1A (OW)						
TPH, SGT-HEM	ND	ND	mg/l	NC		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1203484-4 QC Sample: L1904055-01 Client ID: DUP Sample						
Chloride	69.2	69.8	mg/l	1		18

Lab Duplicate Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216.9.00

Lab Number: L1904083

Report Date: 02/12/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1203529-3 QC Sample: L1904083-01 Client ID: BUILDING B RGP SAMPLE B-1A (OW)					
Phenolics, Total	ND	ND	mg/l	NC	20

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.00

Lab Number: L1904083
Report Date: 02/12/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1904083-01A	Vial Na2S2O3 preserved	A	NA		3.0	Y	Absent		624.1-SIM-RGP(7)
L1904083-01B	Vial Na2S2O3 preserved	A	NA		3.0	Y	Absent		624.1-SIM-RGP(7)
L1904083-01C	Vial Na2S2O3 preserved	A	NA		3.0	Y	Absent		624.1-SIM-RGP(7)
L1904083-01D	Vial Na2S2O3 preserved	A	NA		3.0	Y	Absent		624.1-RGP(7)
L1904083-01E	Vial Na2S2O3 preserved	A	NA		3.0	Y	Absent		624.1-RGP(7)
L1904083-01F	Vial Na2S2O3 preserved	A	NA		3.0	Y	Absent		624.1-RGP(7)
L1904083-01H	Vial Na2S2O3 preserved	A	NA		3.0	Y	Absent		504(14)
L1904083-01I	Vial Na2S2O3 preserved	A	NA		3.0	Y	Absent		504(14)
L1904083-01J	Vial HCl preserved	A	NA		3.0	Y	Absent		SUB-ETHANOL(14)
L1904083-01K	Vial HCl preserved	A	NA		3.0	Y	Absent		SUB-ETHANOL(14)
L1904083-01L	Vial HCl preserved	A	NA		3.0	Y	Absent		SUB-ETHANOL(14)
L1904083-01M	Plastic 250ml HNO3 preserved	A	<2	<2	3.0	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)
L1904083-01N	Plastic 250ml NaOH preserved	A	>12	>12	3.0	Y	Absent		TCN-4500(14)
L1904083-01O	Plastic 500ml H2SO4 preserved	A	<2	<2	3.0	Y	Absent		NH3-4500(28)
L1904083-01P	Amber 950ml H2SO4 preserved	A	<2	<2	3.0	Y	Absent		TPHENOL-420(28)
L1904083-01Q	Plastic 950ml unpreserved	A	7	7	3.0	Y	Absent		CL-300(28),HEXCR-7196(1),TRC-4500(1)
L1904083-01R	Plastic 950ml unpreserved	A	7	7	3.0	Y	Absent		TSS-2540(7)
L1904083-01S	Amber 1000ml HCl preserved	A	NA		3.0	Y	Absent		TPH-1664(28)
L1904083-01T	Amber 1000ml HCl preserved	A	NA		3.0	Y	Absent		TPH-1664(28)
L1904083-01U	Amber 1000ml Na2S2O3	A	7	7	3.0	Y	Absent		PCB-608.3(7)
L1904083-01V	Amber 1000ml Na2S2O3	A	7	7	3.0	Y	Absent		PCB-608.3(7)

*Values in parentheses indicate holding time in days

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.00

Lab Number: L1904083
Report Date: 02/12/19

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1904083-01W	Amber 1000ml Na2S2O3	A	7	7	3.0	Y	Absent		625.1-RGP(7)
L1904083-01X	Amber 1000ml Na2S2O3	A	7	7	3.0	Y	Absent		625.1-RGP(7)
L1904083-01Y	Amber 1000ml Na2S2O3	A	7	7	3.0	Y	Absent		625.1-SIM-RGP(7)
L1904083-01Z	Amber 1000ml Na2S2O3	A	7	7	3.0	Y	Absent		625.1-SIM-RGP(7)
L1904083-02A	Vial Na2S2O3 preserved	A	NA		3.0	Y	Absent		624.1-SIM-RGP(7)
L1904083-02B	Vial Na2S2O3 preserved	A	NA		3.0	Y	Absent		624.1-SIM-RGP(7)
L1904083-02C	Vial Na2S2O3 preserved	A	NA		3.0	Y	Absent		624.1-SIM-RGP(7)
L1904083-02D	Vial Na2S2O3 preserved	A	NA		3.0	Y	Absent		624.1-RGP(7)
L1904083-02E	Vial Na2S2O3 preserved	A	NA		3.0	Y	Absent		624.1-RGP(7)
L1904083-02F	Vial Na2S2O3 preserved	A	NA		3.0	Y	Absent		624.1-RGP(7)
L1904083-02H	Vial Na2S2O3 preserved	A	NA		3.0	Y	Absent		504(14)
L1904083-02I	Vial Na2S2O3 preserved	A	NA		3.0	Y	Absent		504(14)
L1904083-02J	Vial HCl preserved	A	NA		3.0	Y	Absent		SUB-ETHANOL(14)
L1904083-02K	Vial HCl preserved	A	NA		3.0	Y	Absent		SUB-ETHANOL(14)
L1904083-02L	Vial HCl preserved	A	NA		3.0	Y	Absent		SUB-ETHANOL(14)
L1904083-02M	Plastic 250ml HNO3 preserved	A	<2	<2	3.0	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)
L1904083-02N	Plastic 250ml NaOH preserved	A	>12	>12	3.0	Y	Absent		TCN-4500(14)
L1904083-02O	Plastic 500ml H2SO4 preserved	A	<2	<2	3.0	Y	Absent		NH3-4500(28)
L1904083-02P	Amber 950ml H2SO4 preserved	A	<2	<2	3.0	Y	Absent		TPHENOL-420(28)
L1904083-02Q	Plastic 950ml unpreserved	A	7	7	3.0	Y	Absent		CL-300(28),HEXCR-7196(1),TRC-4500(1)
L1904083-02R	Plastic 950ml unpreserved	A	7	7	3.0	Y	Absent		TSS-2540(7)
L1904083-02S	Amber 1000ml HCl preserved	A	NA		3.0	Y	Absent		TPH-1664(28)
L1904083-02T	Amber 1000ml HCl preserved	A	NA		3.0	Y	Absent		TPH-1664(28)
L1904083-02U	Amber 1000ml Na2S2O3	A	7	7	3.0	Y	Absent		HOLD-8082()
L1904083-02V	Amber 1000ml Na2S2O3	A	7	7	3.0	Y	Absent		HOLD-8082()
L1904083-02W	Amber 1000ml Na2S2O3	A	7	7	3.0	Y	Absent		625.1-RGP(7)

*Values in parentheses indicate holding time in days

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.00

Lab Number: L1904083
Report Date: 02/12/19

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1904083-02X	Amber 1000ml Na2S2O3	A	7	7	3.0	Y	Absent		625.1-RGP(7)
L1904083-02Y	Amber 1000ml Na2S2O3	A	7	7	3.0	Y	Absent		625.1-SIM-RGP(7)
L1904083-02Z	Amber 1000ml Na2S2O3	A	7	7	3.0	Y	Absent		625.1-SIM-RGP(7)

*Values in parentheses indicate holding time in days

Project Name:	KENMORE SQUARE NORTH	**Lab Number:**	L1904083
Project Number:	6216.9.00	**Report Date:**	02/12/19

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

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

Terms

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

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

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

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

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

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 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.

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

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

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

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

Project Name:	KENMORE SQUARE NORTH	**Lab Number:**	L1904083
Project Number:	6216.9.00	**Report Date:**	02/12/19

REFERENCES

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

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

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

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

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

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

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

107 Alpha Analytical - In-house calculation method.

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

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

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

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

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

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

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

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

Westborough Facility:

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

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

Mansfield Facility:

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

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

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

CHAIN OF CUSTODY

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: L1904083

ALPHA Job #: 1-31-19

Project Information

Project Name: Kenmore Square North

Project Location: Boston, MA

Project #: 6216.9.00

Project Manager: KWS

ALPHA Quote #:

Client Information

Client: McPhial Associates, LLC

Address: 2269 Massachusetts Avenue

Cambridge, MA 02140

Phone: 617-868-1420

Fax: 617-868-1423

Email: kseaman@mcphailgeo.com

☐ These samples have been Previously analyzed by Alpha

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Other Project Specific Requirements/Comments/Detection Limits:

Report Information Data Deliverables

☐ FAX ☐ EMAIL

☒ ADEx ☐ Add'l Deliverables

Billing Information

☒ Same as Client info

PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria
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	TPH-1664	Tphenol	625.1-RGP, 625.1 SIM-RGP	HexCr, TRC-4500, CL	TSS-2540	Total RGP Metals	NH3	TCN	Sub-Ethanol	504 624.1-RGP, 624.1SIM-RGP	PCB 608.3		Sample Specific Comments	TOTAL # BOTTLES
04083-01	Building B RGP Sample B-1A(ow)	1/31/19	1400	GW	TMC	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐		25
02	Building C RGP Sample B-6 (ow)	1/31/19	11:00	GW	TMC	☒	☒	☒	☒	☒	☒	☒	☒	☒	☒	☐	☐		25
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		
						☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐		

PLEASE ANSWER QUESTIONS ABOVE!

	TPH-1664	Tphenol	625.1	HexCr	TSS	Metals	NH3	TCN	Sub-Ethanol	504 624.1	PCB 608.3	
Container Type	A	A	A	P	P	P	P	P	V	V	A	-
Preservative	B	D	H	A	A	C	D	E	B	H	H	-

IS YOUR PROJECT MA MCP or CT RCP?

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

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	1/31/19 15:20	[signature] AAL	1/31/19 16:50
[signature] AAL	1/31/19 18:20	[signature]	1/31/19 18:20

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.

ALPHA ANALYTICAL
World Class Chemistry

Subcontract Chain of Custody

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

Alpha Job Number
L1904083

Client Information	Project Information	Regulatory Requirements/Report Limits
Client: Alpha Analytical Labs Address: Eight Walkup Drive Westborough, MA 01581-1019 Phone: 603.319.5010 Email: mgulli@alphalab.com	Project Location: MA Project Manager: Melissa Gulli **Turnaround & Deliverables Information** Due Date: 02/11/19 Deliverables:	State/Federal Program: Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L1904083

Report to include Method Blank, LCS/LCSD:

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

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	BUILDING B RGP SAMPLE B-1A (OW)	01-31-19 14:00	WATER	Ethanol by EPA 1671 Revision A	
	BUILDING C RGP SAMPLE B-6A (OW)	01-31-19 11:00	WATER	Ethanol by EPA 1671 Revision A	

	Relinquished By:	Date/Time:	Received By:	Date/Time:
		2/4/19 14:10		
Form No: AL_subcoc				

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

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

TestAmerica Job ID: 490-167913-1
Client Project/Site: L1904083
Revision: 1

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

Attn: Reports Dept.

Authorized for release by:
2/8/2019 6:34:40 PM

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

Table of Contents

Sample Summary

Client: Alpha Analytical Inc
Project/Site: L1904083

TestAmerica Job ID: 490-167913-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
490-167913-1	BUILDING B RGP SAMPLE B-1A (OW)	Water	01/31/19 14:00	02/05/19 09:00
490-167913-2	BUILDING C RGP SAMPLE B-6 (OW)	Water	01/31/19 11:00	02/05/19 09:00

Case Narrative

Client: Alpha Analytical Inc
Project/Site: L1904083

TestAmerica Job ID: 490-167913-1

Job ID: 490-167913-1

Laboratory: TestAmerica Nashville

Narrative

Job Narrative
490-167913-1

REVISED REPORT: Revised to correct the sample ID in 490-167913-2 at the client's request. This report replaces the one generated on 02/08/19 @ 1536.

Comments
No additional comments.

Receipt
The samples were received on 2/5/2019 9:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.7° C.

GC Semi VOA
Method 1671A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 490-573728.

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

Definitions/Glossary

Client: Alpha Analytical Inc
Project/Site: L1904083

TestAmerica Job ID: 490-167913-1

Glossary

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

Client Sample Results

Client: Alpha Analytical Inc
Project/Site: L1904083

TestAmerica Job ID: 490-167913-1

Client Sample ID: BUILDING B RGP SAMPLE B-1A (OW)

Lab Sample ID: 490-167913-1

Date Collected: 01/31/19 14:00
Matrix: Water
Date Received: 02/05/19 09:00

Method: 1671A - Ethanol (GC/FID)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		2000	500	ug/L			02/05/19 15:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Isopropyl acetate (Surr)	*82*		*70 - 130*		*02/05/19 15:36*	*1*

Client Sample Results

Client: Alpha Analytical Inc
Project/Site: L1904083

TestAmerica Job ID: 490-167913-1

Client Sample ID: BUILDING C RGP SAMPLE B-6 (OW)

Lab Sample ID: 490-167913-2
Date Collected: 01/31/19 11:00
Matrix: Water
Date Received: 02/05/19 09:00

Method: 1671A - Ethanol (GC/FID)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		2000	500	ug/L			02/05/19 15:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Isopropyl acetate (Surr)	*82*		*70 - 130*		*02/05/19 15:43*	*1*

QC Sample Results

Client: Alpha Analytical Inc
Project/Site: L1904083

TestAmerica Job ID: 490-167913-1

Method: 1671A - Ethanol (GC/FID)

Lab Sample ID: MB 490-573728/4
Matrix: Water
Analysis Batch: 573728

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		2000	500	ug/L			02/05/19 15:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Isopropyl acetate (Surr)	*89*		*70 - 130*		*02/05/19 15:12*	*1*

Lab Sample ID: LCS 490-573728/5
Matrix: Water
Analysis Batch: 573728

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ethanol			50200	53870		ug/L		107	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Isopropyl acetate (Surr)	*84*		*70 - 130*

Lab Sample ID: LCSD 490-573728/6
Matrix: Water
Analysis Batch: 573728

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol			50200	51040		ug/L		102	70 - 130	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Isopropyl acetate (Surr)	*81*		*70 - 130*

QC Association Summary

Client: Alpha Analytical Inc
Project/Site: L1904083

TestAmerica Job ID: 490-167913-1

GC VOA

Analysis Batch: 573728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-167913-1	BUILDING B RGP SAMPLE B-1A (OW)	Total/NA	Water	1671A	
490-167913-2	BUILDING C RGP SAMPLE B-6 (OW)	Total/NA	Water	1671A	
MB 490-573728/4	Method Blank	Total/NA	Water	1671A	
LCS 490-573728/5	Lab Control Sample	Total/NA	Water	1671A	
LCSD 490-573728/6	Lab Control Sample Dup	Total/NA	Water	1671A	

Lab Chronicle

Client: Alpha Analytical Inc
Project/Site: L1904083

TestAmerica Job ID: 490-167913-1

Client Sample ID: BUILDING B RGP SAMPLE B-1A (OW)

Lab Sample ID: 490-167913-1
Matrix: Water
Date Collected: 01/31/19 14:00
Date Received: 02/05/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1671A		1			573728	02/05/19 15:36	ZXS	TAL NSH

Client Sample ID: BUILDING C RGP SAMPLE B-6 (OW)

Lab Sample ID: 490-167913-2
Matrix: Water
Date Collected: 01/31/19 11:00
Date Received: 02/05/19 09:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1671A		1			573728	02/05/19 15:43	ZXS	TAL NSH

Laboratory References:

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

Method Summary

Client: Alpha Analytical Inc
Project/Site: L1904083

TestAmerica Job ID: 490-167913-1

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

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

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

Accreditation/Certification Summary

Client: Alpha Analytical Inc
Project/Site: L1904083

TestAmerica Job ID: 490-167913-1

Laboratory: TestAmerica Nashville

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

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2938	06-30-19 *

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

Analysis Method	Prep Method	Matrix	Analyte
1671A		Water	Ethanol

Maine	State Program	1	TN00032	11-03-19

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

Analysis Method	Prep Method	Matrix	Analyte
1671A		Water	Ethanol

Massachusetts	State Program	1	M-TN032	06-30-19

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

Analysis Method	Prep Method	Matrix	Analyte
1671A		Water	Ethanol

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-167913 Chain of Custody

Cooler Received/Opened On 2/5/2019 @ 9:00

Time Samples Removed From Cooler 12:45 Time Samples Placed In Storage 12:52 (2 Hour Window)

1. Tracking # 128306940196900494 (last 4 digits, FedEx) Courier: UPS ~~FedEx~~ MDT on 2/5/19

IR Gun ID 31470368 pH Strip Lot _____ Chlorine Strip Lot _____

2. Temperature of rep. sample or temp blank when opened: 1.7 *Degrees Celsius*

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

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

If yes, how many and where: _____

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

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

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

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

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

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

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

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

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

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

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

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

Larger than this.

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

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

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

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

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

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

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

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

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

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

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

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

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

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17

ALPHA ANALYTICAL
World Class Chemistry

Subcontract Chain of Custody

Loc: 490
167913

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

Alpha Job Number
L1904083

Client Information	Project Information	Regulatory Requirements/Report Limits
Client: Alpha Analytical Labs Address: Eight Walkup Drive Westborough, MA 01581-1019 Phone: 603.319.5010 Email: mgulli@alphalab.com	Project Location: MA Project Manager: Melissa Gulli **Turnaround & Deliverables Information** Due Date: 02/11/19 Deliverables:	State/Federal Program: Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L1904083

Report to include Method Blank, LCS/LCSD:

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

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	BUILDING B RGP SAMPLE B-1A (OW)	01-31-19 14:00	WATER	Ethanol by EPA 1671 Revision A	
	BUILDING C RGP SAMPLE B-6A (OW)	01-31-19 11:00	WATER	Ethanol by EPA 1671 Revision A	

	Relinquished By:	Date/Time:	Received By:	Date/Time:
		2/4/19 14:10	James Willis Jordan	02/05/19 09:00
Form No: AL_subcoc				

TA-NAS / 1.7

APPENDIX E:

SURFACE WATER LABORATORY ANALYTICAL DATA

ANALYTICAL REPORT

Lab Number:	L1902926
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Brendan O'Neil
Phone:	(617) 868-1420
Project Name:	LANDMARK CENTER
Project Number:	5512
Report Date:	01/28/19

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

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

Project Name: LANDMARK CENTER
Project Number: 5512

Lab Number: L1902926
Report Date: 01/28/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1902926-01	SURFACE WATER CHARLES RIVER SAMPLE	WATER	BOSTON, MA	01/23/19 13:00	01/23/19

Project Name:	LANDMARK CENTER	**Lab Number:**	L1902926
Project Number:	5512	**Report Date:**	01/28/19

Case Narrative

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

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

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

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

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

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

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

Authorized Signature:  Cristin Walker

Title: Technical Director/Representative Date: 01/28/19

METALS

Project Name: LANDMARK CENTER
Lab Number: L1902926
Project Number: 5512
Report Date: 01/28/19

SAMPLE RESULTS

Lab ID: L1902926-01
Client ID: SURFACE WATER CHARLES RIVER
Sample Location: SAMPLE
BOSTON, MA
Sample Depth:
Matrix: Water

Date Collected: 01/23/19 13:00
Date Received: 01/23/19
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	01/24/19 07:50	01/24/19 12:25	EPA 3005A	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	01/24/19 07:50	01/24/19 12:25	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	01/24/19 07:50	01/24/19 12:25	EPA 3005A	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	01/24/19 07:50	01/24/19 12:25	EPA 3005A	3,200.8	AM
Copper, Total	0.00177		mg/l	0.00100	--	1	01/24/19 07:50	01/24/19 12:25	EPA 3005A	3,200.8	AM
Iron, Total	0.410		mg/l	0.050	--	1	01/24/19 07:50	01/24/19 14:09	EPA 3005A	19,200.7	LC
Lead, Total	ND		mg/l	0.00100	--	1	01/24/19 07:50	01/24/19 12:25	EPA 3005A	3,200.8	AM
Mercury, Total	0.00020		mg/l	0.00020	--	1	01/24/19 11:13	01/24/19 17:20	EPA 245.1	3,245.1	MG
Nickel, Total	ND		mg/l	0.00200	--	1	01/24/19 07:50	01/24/19 12:25	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	01/24/19 07:50	01/24/19 12:25	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	01/24/19 07:50	01/24/19 12:25	EPA 3005A	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	01/24/19 07:50	01/24/19 12:25	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	76.9		mg/l	0.660	NA	1	01/24/19 07:50	01/24/19 14:09	EPA 3005A	1,6010D	LC

Project Name: LANDMARK CENTER
Project Number: 5512
Lab Number: L1902926
Report Date: 01/28/19

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: WG1200436-1										
Iron, Total	ND		mg/l	0.050	--	1	01/24/19 07:50	01/24/19 13:40	19,200.7	LC

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: WG1200438-1										
Antimony, Total	ND		mg/l	0.00400	--	1	01/24/19 07:50	01/24/19 12:08	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	01/24/19 07:50	01/24/19 12:08	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	01/24/19 07:50	01/24/19 12:08	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	01/24/19 07:50	01/24/19 12:08	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	01/24/19 07:50	01/24/19 12:08	3,200.8	AM
Lead, Total	ND		mg/l	0.00100	--	1	01/24/19 07:50	01/24/19 12:08	3,200.8	AM
Nickel, Total	ND		mg/l	0.00200	--	1	01/24/19 07:50	01/24/19 12:08	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	01/24/19 07:50	01/24/19 12:08	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	01/24/19 07:50	01/24/19 12:08	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	01/24/19 07:50	01/24/19 12:08	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: WG1200545-1										
Mercury, Total	ND		mg/l	0.00020	--	1	01/24/19 11:13	01/24/19 16:53	3,245.1	MG

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: LANDMARK CENTER

Project Number: 5512

Lab Number: L1902926

Report Date: 01/28/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1200436-2								
Iron, Total	110		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1200438-2								
Antimony, Total	88		-		85-115	-		
Arsenic, Total	106		-		85-115	-		
Cadmium, Total	105		-		85-115	-		
Chromium, Total	94		-		85-115	-		
Copper, Total	95		-		85-115	-		
Lead, Total	101		-		85-115	-		
Nickel, Total	96		-		85-115	-		
Selenium, Total	110		-		85-115	-		
Silver, Total	97		-		85-115	-		
Zinc, Total	105		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1200545-2								
Mercury, Total	100		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: LANDMARK CENTER
Project Number: 5512

Lab Number: L1902926
Report Date: 01/28/19

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: WG1200436-3 QC Sample: L1902857-02 Client ID: MS Sample												
Iron, Total	ND	1	1.12	112		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1200436-7 QC Sample: L1902926-01 Client ID: SURFACE WATER CHARLES RIVER SAMPLE												
Iron, Total	0.410	1	1.50	109		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1200438-3 QC Sample: L1902926-01 Client ID: SURFACE WATER CHARLES RIVER SAMPLE												
Antimony, Total	ND	0.5	0.5252	105		-	-		70-130	-		20
Arsenic, Total	ND	0.12	0.1287	107		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.05418	106		-	-		70-130	-		20
Chromium, Total	ND	0.2	0.1967	98		-	-		70-130	-		20
Copper, Total	0.00177	0.25	0.2460	98		-	-		70-130	-		20
Lead, Total	ND	0.51	0.5210	102		-	-		70-130	-		20
Nickel, Total	ND	0.5	0.4910	98		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1285	107		-	-		70-130	-		20
Silver, Total	ND	0.05	0.05069	101		-	-		70-130	-		20
Zinc, Total	ND	0.5	0.5398	108		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1200545-3 QC Sample: L1902841-01 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00494	99		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1200545-5 QC Sample: L1902841-02 Client ID: MS Sample												
Mercury, Total	0.00029	0.005	0.00492	92		-	-		70-130	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: LANDMARK CENTER
Project Number: 5512

Lab Number: L1902926
Report Date: 01/28/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1200436-4 QC Sample: L1902857-02 Client ID: DUP Sample						
Iron, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1200436-8 QC Sample: L1902926-01 Client ID: SURFACE WATER CHARLES RIVER SAMPLE						
Iron, Total	0.410	0.402	mg/l	2		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1200438-4 QC Sample: L1902926-01 Client ID: SURFACE WATER CHARLES RIVER SAMPLE						
Antimony, Total	ND	ND	mg/l	NC		20
Arsenic, Total	ND	ND	mg/l	NC		20
Cadmium, Total	ND	ND	mg/l	NC		20
Chromium, Total	ND	ND	mg/l	NC		20
Copper, Total	0.00177	0.00171	mg/l	3		20
Lead, Total	ND	ND	mg/l	NC		20
Nickel, Total	ND	ND	mg/l	NC		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1200545-4 QC Sample: L1902841-01 Client ID: DUP Sample						
Mercury, Total	ND	0.00033	mg/l	NC		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: LANDMARK CENTER

Project Number: 5512

Lab Number: L1902926

Report Date: 01/28/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1200545-6 QC Sample: L1902841-02 Client ID: DUP Sample					
Mercury, Total	0.00029	0.00024	mg/l	19	20

INORGANICS
&
MISCELLANEOUS

Project Name: LANDMARK CENTER
Project Number: 5512
Lab Number: L1902926
Report Date: 01/28/19

SAMPLE RESULTS

Lab ID: L1902926-01
Client ID: SURFACE WATER CHARLES RIVER SAMPLE
Sample Location: BOSTON, MA
Sample Depth:
Matrix: Water

Date Collected: 01/23/19 13:00
Date Received: 01/23/19
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Cyanide, Total	ND		mg/l	0.005	--	1	01/24/19 03:35	01/24/19 13:04	121,4500CN-CE	LH
pH (H)	7.0		SU	-	NA	1	-	01/24/19 07:17	121,4500H+-B	MA
Nitrogen, Ammonia	0.121		mg/l	0.075	--	1	01/24/19 02:00	01/24/19 20:58	121,4500NH3-BH	AT

Project Name: LANDMARK CENTER
Project Number: 5512
Lab Number: L1902926
Report Date: 01/28/19

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: WG1200399-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	01/24/19 02:00	01/24/19 20:39	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1200410-1										
Cyanide, Total	ND		mg/l	0.005	--	1	01/24/19 03:35	01/24/19 12:56	121,4500CN-CE	LH

Lab Control Sample Analysis

Batch Quality Control

Project Name: LANDMARK CENTER

Project Number: 5512

Lab Number: L1902926

Report Date: 01/28/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1200399-2								
Nitrogen, Ammonia	94		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1200410-2								
Cyanide, Total	94		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1200452-1								
pH	100		-		99-101	-		5

Matrix Spike Analysis
Batch Quality Control

Project Name: LANDMARK CENTER
Project Number: 5512

Lab Number: L1902926
Report Date: 01/28/19

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: WG1200399-4 QC Sample: L1902835-03 Client ID: MS Sample												
Nitrogen, Ammonia	0.750	4	4.11	84		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1200410-4 QC Sample: L1902875-02 Client ID: MS Sample												
Cyanide, Total	ND	0.2	0.179	90		-	-		90-110	-		30

Lab Duplicate Analysis

Batch Quality Control

Project Name: LANDMARK CENTER

Project Number: 5512

Lab Number: L1902926

Report Date: 01/28/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1200399-3 QC Sample: L1902835-03 Client ID: DUP Sample						
Nitrogen, Ammonia	0.750	0.712	mg/l	5		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1200410-3 QC Sample: L1902875-01 Client ID: DUP Sample						
Cyanide, Total	ND	ND	mg/l	NC		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1200452-2 QC Sample: L1902887-01 Client ID: DUP Sample						
pH	6.9	6.9	SU	0		5

Project Name: LANDMARK CENTER
Project Number: 5512

Lab Number: L1902926
Report Date: 01/28/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
A	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1902926-01A	Plastic 250ml HNO3 preserved	A	<2	<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),HARDT(180),PB-2008T(180),SB-2008T(180)
L1902926-01B	Plastic 250ml H2SO4 preserved	A	<2	<2	5.2	Y	Absent		NH3-4500(28)
L1902926-01C	Plastic 950ml unpreserved	A	7	7	5.2	Y	Absent		PH-4500(.01)
L1902926-01D	Plastic 250ml NaOH preserved	A	>12	>12	5.2	Y	Absent		TCN-4500(14)

*Values in parentheses indicate holding time in days

Project Name:	LANDMARK CENTER	**Lab Number:**	L1902926
Project Number:	5512	**Report Date:**	01/28/19

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

Footnotes

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

Terms

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

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

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

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

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

Report Format: Data Usability Report

Project Name:	LANDMARK CENTER	**Lab Number:**	L1902926
Project Number:	5512	**Report Date:**	01/28/19

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

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

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

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

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

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

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

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

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

Report Format: Data Usability Report

Project Name:	LANDMARK CENTER	**Lab Number:**	L1902926
Project Number:	5512	**Report Date:**	01/28/19

REFERENCES

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

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

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

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

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

EPA 6860: SCM: Perchlorate

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO2, NO3.

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

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

Westborough Facility:

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

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

Mansfield Facility:

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

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

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

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL

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

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

Date Rec'd in Lab: 1/23/19

ALPHA Job #: L1902926

Project Information

Project Name: Landark Center

Project Location: Boston, MA

Project #: 5512

Project Manager: BAO/KWS

ALPHA Quote #:

Client Information

Client: McPhail Associates, LLC

Address: 2269 Massachusetts Avenue

Cambridge, MA 02140

Phone: 6178681420

Fax: 6178681423

Email: bao/kseaman@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
NPDES RGP	RGP

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☒ No Are MCP Analytical Methods Required?

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

Other Project Specific Requirements/Comments/Detection Limits:

ANALYSIS

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	NH3	TSS, Chloride, Residual Chlorine	RGP Metals	TCN	pH, Hardness Temperture	HexCr, Tri Cr	Sample Specific Comments	TOTAL # BOTTLES
02926-01	Surface Water Charles River Sample	1/23/19	1300	SW	JSW	☒	☐	☒	☒	☒	☐		4

	NH3	TSS, Chloride, Residual Chlorine	RGP Metals	TCN	pH, Hardness Temperture	HexCr, Tri Cr						
Container Type	P	-	P	P	P	-	-	-	-	-	-	-
Preservative	E	-	C	D	A	-	-	-	-	-	-	-

PLEASE ANSWER QUESTIONS ABOVE!

IS YOUR PROJECT MA MCP or CT RCP?

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

Relinquished By:	Date/Time	Received By:	Date/Time
[signature]	1/23/19 13:00	Cooler	1/23/19 1300
Cooler	1/23/19 1600	[signature] AAL	1-23-19 1600
[signature] 1-23-19	1731	[signature]	1/23/19 1732

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.

APPENDIX F:

HISTORICAL GROUNDWATER LABORATORY ANALYTICAL DATA

ANALYTICAL REPORT

Lab Number:	L1625933
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	KENMORE SQ. NORTH
Project Number:	6216.9.01
Report Date:	08/22/16

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

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

Project Name: KENMORE SQ. NORTH
Project Number: 6216.9.01

Lab Number: L1625933
Report Date: 08/22/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1625933-01	B-1A (OW)	WATER	BOSTON, MA	08/18/16 14:00	08/18/16
L1625933-02	B-8 (OW)	WATER	BOSTON, MA	08/18/16 15:00	08/18/16

Project Name: KENMORE SQ. NORTH **Lab Number:** L1625933

Project Number: 6216.9.01 **Report Date:** 08/22/16

MADEP MCP Response Action Analytical Report Certification

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

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

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	NO
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	NO
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	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: KENMORE SQ. NORTH **Lab Number:** L1625933
Project Number: 6216.9.01 **Report Date:** 08/22/16

Case Narrative

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

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

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

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

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

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

Project Name:	KENMORE SQ. NORTH	**Lab Number:**	L1625933
Project Number:	6216.9.01	**Report Date:**	08/22/16

Case Narrative (continued)

MCP Related Narratives

Volatile Organics

In reference to question H:

The initial calibration, associated with L1625933-02, did not meet the method required minimum response factor on the lowest calibration standard for 1,4-dioxane (0.0018), as well as the average response factor for 1,4-dioxane.

The continuing calibration standard, associated with L1625933-02, is outside the acceptance criteria for several compounds; however, it is within overall method allowances. A copy of the continuing calibration standard is included as an addendum to this report.

EPH

In reference to question G:

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

VPH

L1625933-02: The sample has elevated detection limits due to the dilution required by the sample matrix.

In reference to question I:

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

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

Authorized Signature: Cristin Walker

Title: Technical Director/Representative Date: 08/22/16

ORGANICS

VOLATILES

Project Name: KENMORE SQ. NORTH **Lab Number:** L1625933

Project Number: 6216.9.01 **Report Date:** 08/22/16

SAMPLE RESULTS

Lab ID: L1625933-02
Client ID: B-8 (OW)
Sample Location: BOSTON, MA
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 08/20/16 00:48
Analyst: BD

Date Collected: 08/18/16 15:00
Date Received: 08/18/16
Field Prep: Not Specified

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

Project Name: KENMORE SQ. NORTH **Lab Number:** L1625933

Project Number: 6216.9.01 **Report Date:** 08/22/16

SAMPLE RESULTS

Lab ID: L1625933-02 Date Collected: 08/18/16 15:00

Client ID: B-8 (OW) Date Received: 08/18/16

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
Xylene (Total)	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethene (total)	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	7.3		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1

Project Name: KENMORE SQ. NORTH **Lab Number:** L1625933

Project Number: 6216.9.01 **Report Date:** 08/22/16

SAMPLE RESULTS

Lab ID: L1625933-02 Date Collected: 08/18/16 15:00

Client ID: B-8 (OW) Date Received: 08/18/16

Sample Location: BOSTON, MA Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	94		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	101		70-130
Dibromofluoromethane	98		70-130

Project Name: KENMORE SQ. NORTH **Lab Number:** L1625933

Project Number: 6216.9.01 **Report Date:** 08/22/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 08/19/16 20:19
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 02 Batch: WG924600-5					
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: KENMORE SQ. NORTH **Lab Number:** L1625933

Project Number: 6216.9.01 **Report Date:** 08/22/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 08/19/16 20:19
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 02 Batch: WG924600-5					
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	--
Xylene (Total)	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
1,2-Dichloroethene (total)	ND		ug/l	1.0	--
Dibromomethane	ND		ug/l	2.0	--
1,2,3-Trichloropropane	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	2.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	2.0	--
2-Butanone	ND		ug/l	5.0	--
4-Methyl-2-pentanone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.0	--
Tetrahydrofuran	ND		ug/l	2.0	--
2,2-Dichloropropane	ND		ug/l	2.0	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--
Bromobenzene	ND		ug/l	2.0	--
n-Butylbenzene	ND		ug/l	2.0	--
sec-Butylbenzene	ND		ug/l	2.0	--
tert-Butylbenzene	ND		ug/l	2.0	--
o-Chlorotoluene	ND		ug/l	2.0	--

Project Name: KENMORE SQ. NORTH **Lab Number:** L1625933

Project Number: 6216.9.01 **Report Date:** 08/22/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 08/19/16 20:19
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 02 Batch: WG924600-5					
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	--
Ethyl ether	ND		ug/l	2.0	--
Isopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--
Ethyl Acetate	ND		ug/l	10	--
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.0	--
Iodomethane	ND		ug/l	10	--
tert-Butyl Alcohol	ND		ug/l	10	--
Vinyl acetate	ND		ug/l	2.5	--
Acrolein	ND		ug/l	10	--
2-Chloroethylvinyl ether	ND		ug/l	10	--
Ethyl methacrylate	ND		ug/l	5.0	--
Methyl cyclohexane	ND		ug/l	10	--
Cyclohexane	ND		ug/l	10	--
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	--
1,4-Diethylbenzene	ND		ug/l	2.0	--
4-Ethyltoluene	ND		ug/l	2.0	--

Project Name: KENMORE SQ. NORTH **Lab Number:** L1625933

Project Number: 6216.9.01 **Report Date:** 08/22/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 08/19/16 20:19
Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 02 Batch: WG924600-5					
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	--
1,4-Dichlorobutane	ND		ug/l	5.0	--
Acrylonitrile	ND		ug/l	5.0	--
Halothane	ND		ug/l	2.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	94		70-130
Dibromofluoromethane	105		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQ. NORTH

Project Number: 6216.9.01

Lab Number: L1625933

Report Date: 08/22/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02 Batch: WG924600-3 WG924600-4								
Methylene chloride	98		94		70-130	4		20
1,1-Dichloroethane	100		92		70-130	8		20
Chloroform	110		96		70-130	14		20
Carbon tetrachloride	97		89		70-130	9		20
1,2-Dichloropropane	100		87		70-130	14		20
Dibromochloromethane	90		82		70-130	9		20
1,1,2-Trichloroethane	100		90		70-130	11		20
Tetrachloroethene	100		88		70-130	13		20
Chlorobenzene	98		87		70-130	12		20
Trichlorofluoromethane	100		93		70-130	7		20
1,2-Dichloroethane	100		95		70-130	5		20
1,1,1-Trichloroethane	98		89		70-130	10		20
Bromodichloromethane	98		87		70-130	12		20
trans-1,3-Dichloropropene	99		84		70-130	16		20
cis-1,3-Dichloropropene	94		86		70-130	9		20
1,1-Dichloropropene	98		87		70-130	12		20
Bromoform	88		75		70-130	16		20
1,1,2,2-Tetrachloroethane	100		87		70-130	14		20
Benzene	97		88		70-130	10		20
Toluene	100		88		70-130	13		20
Ethylbenzene	96		82		70-130	16		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQ. NORTH

Project Number: 6216.9.01

Lab Number: L1625933

Report Date: 08/22/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02 Batch: WG924600-3 WG924600-4								
Chloromethane	85		80		70-130	6		20
Bromomethane	110		92		70-130	18		20
Vinyl chloride	99		88		70-130	12		20
Chloroethane	100		95		70-130	5		20
1,1-Dichloroethene	100		96		70-130	4		20
trans-1,2-Dichloroethene	100		93		70-130	7		20
Trichloroethene	98		87		70-130	12		20
1,2-Dichlorobenzene	98		86		70-130	13		20
1,3-Dichlorobenzene	99		87		70-130	13		20
1,4-Dichlorobenzene	98		86		70-130	13		20
Methyl tert butyl ether	100		91		70-130	9		20
p/m-Xylene	100		85		70-130	16		20
o-Xylene	100		85		70-130	16		20
cis-1,2-Dichloroethene	100		97		70-130	3		20
Dibromomethane	97		86		70-130	12		20
1,2,3-Trichloropropane	91		81		70-130	12		20
Styrene	100		90		70-130	11		20
Dichlorodifluoromethane	81		74		70-130	9		20
Acetone	91		83		70-130	9		20
Carbon disulfide	90		82		70-130	9		20
2-Butanone	100		93		70-130	7		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: KENMORE SQ. NORTH
Project Number: 6216.9.01

Lab Number: L1625933
Report Date: 08/22/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02 Batch: WG924600-3 WG924600-4								
4-Methyl-2-pentanone	100		81		70-130	**21**	Q	20
2-Hexanone	99		81		70-130	20		20
Bromochloromethane	110		98		70-130	12		20
Tetrahydrofuran	100		94		70-130	6		20
2,2-Dichloropropane	110		94		70-130	16		20
1,2-Dibromoethane	100		88		70-130	13		20
1,3-Dichloropropane	99		87		70-130	13		20
1,1,1,2-Tetrachloroethane	95		81		70-130	16		20
Bromobenzene	96		84		70-130	13		20
n-Butylbenzene	120		82		70-130	**38**	Q	20
sec-Butylbenzene	98		85		70-130	14		20
tert-Butylbenzene	95		83		70-130	13		20
o-Chlorotoluene	96		85		70-130	12		20
p-Chlorotoluene	93		82		70-130	13		20
1,2-Dibromo-3-chloropropane	88		78		70-130	12		20
Hexachlorobutadiene	110		95		70-130	15		20
Isopropylbenzene	93		79		70-130	16		20
p-Isopropyltoluene	100		86		70-130	15		20
Naphthalene	100		89		70-130	12		20
n-Propylbenzene	95		82		70-130	15		20
1,2,3-Trichlorobenzene	100		88		70-130	13		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: KENMORE SQ. NORTH
Project Number: 6216.9.01

Lab Number: L1625933
Report Date: 08/22/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02 Batch: WG924600-3 WG924600-4								
1,2,4-Trichlorobenzene	100		89		70-130	12		20
1,3,5-Trimethylbenzene	96		84		70-130	13		20
1,2,4-Trimethylbenzene	98		82		70-130	18		20
Ethyl ether	98		94		70-130	4		20
Isopropyl Ether	99		89		70-130	11		20
Ethyl-Tert-Butyl-Ether	100		92		70-130	8		20
Tertiary-Amyl Methyl Ether	100		93		70-130	7		20
1,4-Dioxane	102		86		70-130	17		20
Ethyl Acetate	100		90		70-130	11		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	110		96		70-130	14		20
Iodomethane	71		**69**	Q	70-130	3		20
tert-Butyl Alcohol	92		86		70-130	7		20
Vinyl acetate	110		94		70-130	16		20
Acrolein	100		82		70-130	20		20
2-Chloroethylvinyl ether	97		84		70-130	14		20
Ethyl methacrylate	96		86		70-130	11		20
Methyl cyclohexane	97		91		70-130	6		20
Cyclohexane	100		90		70-130	11		20
trans-1,4-Dichloro-2-butene	**60**	Q	77		70-130	**25**	Q	20
1,4-Diethylbenzene	99		87		70-130	13		20
4-Ethyltoluene	96		84		70-130	13		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQ. NORTH

Project Number: 6216.9.01

Lab Number: L1625933

Report Date: 08/22/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 02 Batch: WG924600-3 WG924600-4								
1,2,4,5-Tetramethylbenzene	100		92		70-130	8		20
1,4-Dichlorobutane	89		77		70-130	14		20
Acrylonitrile	100		88		70-130	13		20
Halothane	100		90		70-130	11		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	94		95		70-130
Toluene-d8	103		99		70-130
4-Bromofluorobenzene	95		96		70-130
Dibromofluoromethane	103		104		70-130

PETROLEUM HYDROCARBONS

Project Name: KENMORE SQ. NORTH **Lab Number:** L1625933

Project Number: 6216.9.01 **Report Date:** 08/22/16

SAMPLE RESULTS

Lab ID:	L1625933-01	Date Collected:	08/18/16 14:00
Client ID:	B-1A (OW)	Date Received:	08/18/16
Sample Location:	BOSTON, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	98,EPH-04-1.1	Extraction Date:	08/19/16 03:29
Analytical Date:	08/19/16 16:52	Cleanup Method1:	EPH-04-1
Analyst:	SR	Cleanup Date1:	08/19/16

Quality Control Information

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

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

Project Name: KENMORE SQ. NORTH **Lab Number:** L1625933

Project Number: 6216.9.01 **Report Date:** 08/22/16

SAMPLE RESULTS

Lab ID:	L1625933-01	Date Collected:	08/18/16 14:00
Client ID:	B-1A (OW)	Date Received:	08/18/16
Sample Location:	BOSTON, MA	Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Extractable Petroleum Hydrocarbons - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	71		40-140
o-Terphenyl	71		40-140
2-Fluorobiphenyl	68		40-140
2-Bromonaphthalene	67		40-140

Project Name: KENMORE SQ. NORTH **Lab Number:** L1625933

Project Number: 6216.9.01 **Report Date:** 08/22/16

SAMPLE RESULTS

Lab ID:	L1625933-02	Date Collected:	08/18/16 15:00
Client ID:	B-8 (OW)	Date Received:	08/18/16
Sample Location:	BOSTON, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	98,EPH-04-1.1	Extraction Date:	08/19/16 03:29
Analytical Date:	08/19/16 17:25	Cleanup Method1:	EPH-04-1
Analyst:	SR	Cleanup Date1:	08/19/16

Quality Control Information

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

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

Project Name: KENMORE SQ. NORTH **Lab Number:** L1625933

Project Number: 6216.9.01 **Report Date:** 08/22/16

SAMPLE RESULTS

Lab ID:	L1625933-02	Date Collected:	08/18/16 15:00
Client ID:	B-8 (OW)	Date Received:	08/18/16
Sample Location:	BOSTON, MA	Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Extractable Petroleum Hydrocarbons - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	74		40-140
o-Terphenyl	52		40-140
2-Fluorobiphenyl	47		40-140
2-Bromonaphthalene	47		40-140

Project Name: KENMORE SQ. NORTH **Lab Number:** L1625933

Project Number: 6216.9.01 **Report Date:** 08/22/16

SAMPLE RESULTS

Lab ID:	L1625933-02	D	Date Collected:	08/18/16 15:00
Client ID:	B-8 (OW)		Date Received:	08/18/16
Sample Location:	BOSTON, MA		Field Prep:	Not Specified
Matrix:	Water			
Analytical Method:	100,VPH-04-1.1			
Analytical Date:	08/19/16 15:33			
Analyst:	JM			

Quality Control Information

Condition of sample received:	Satisfactory
Aqueous Preservative:	Laboratory Provided Preserved Container
Sample Temperature upon receipt:	Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Petroleum Hydrocarbons - Westborough Lab						
C5-C8 Aliphatics	ND		ug/l	250	--	5
C9-C12 Aliphatics	ND		ug/l	250	--	5
C9-C10 Aromatics	ND		ug/l	250	--	5
C5-C8 Aliphatics, Adjusted	ND		ug/l	250	--	5
C9-C12 Aliphatics, Adjusted	ND		ug/l	250	--	5

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	100		70-130
2,5-Dibromotoluene-FID	113		70-130

Project Name: KENMORE SQ. NORTH
Project Number: 6216.9.01

Lab Number: L1625933
Report Date: 08/22/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 98,EPH-04-1.1
Analytical Date: 08/19/16 16:21
Analyst: SR

Extraction Method: EPA 3510C
Extraction Date: 08/19/16 03:29
Cleanup Method: EPH-04-1
Cleanup Date: 08/19/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-02 Batch: WG924096-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	69		40-140
o-Terphenyl	54		40-140
2-Fluorobiphenyl	50		40-140
2-Bromonaphthalene	53		40-140

Project Name: KENMORE SQ. NORTH **Lab Number:** L1625933

Project Number: 6216.9.01 **Report Date:** 08/22/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 100,VPH-04-1.1
Analytical Date: 08/19/16 09:21
Analyst: JM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 02 Batch: WG924251-3					
C5-C8 Aliphatics	ND		ug/l	50.0	--
C9-C12 Aliphatics	ND		ug/l	50.0	--
C9-C10 Aromatics	ND		ug/l	50.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	101		70-130
2,5-Dibromotoluene-FID	113		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: KENMORE SQ. NORTH
Project Number: 6216.9.01

Lab Number: L1625933
Report Date: 08/22/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-02 Batch: WG924096-2 WG924096-3								
C9-C18 Aliphatics	76		78		40-140	3		25
C19-C36 Aliphatics	93		91		40-140	2		25
C11-C22 Aromatics	80		84		40-140	5		25
Naphthalene	69		70		40-140	1		25
2-Methylnaphthalene	70		71		40-140	1		25
Acenaphthylene	74		74		40-140	0		25
Acenaphthene	75		75		40-140	0		25
Fluorene	74		73		40-140	1		25
Phenanthrene	78		77		40-140	1		25
Anthracene	78		76		40-140	3		25
Fluoranthene	83		80		40-140	4		25
Pyrene	87		85		40-140	2		25
Benzo(a)anthracene	80		77		40-140	4		25
Chrysene	85		81		40-140	5		25
Benzo(b)fluoranthene	86		80		40-140	7		25
Benzo(k)fluoranthene	86		81		40-140	6		25
Benzo(a)pyrene	78		75		40-140	4		25
Indeno(1,2,3-cd)Pyrene	81		76		40-140	6		25
Dibenzo(a,h)anthracene	83		78		40-140	6		25
Benzo(ghi)perylene	78		73		40-140	7		25
Nonane (C9)	56		59		30-140	5		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQ. NORTH

Project Number: 6216.9.01

Lab Number: L1625933

Report Date: 08/22/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-02 Batch: WG924096-2 WG924096-3								
Decane (C10)	66		67		40-140	2		25
Dodecane (C12)	72		72		40-140	0		25
Tetradecane (C14)	76		74		40-140	3		25
Hexadecane (C16)	80		78		40-140	3		25
Octadecane (C18)	86		84		40-140	2		25
Nonadecane (C19)	87		84		40-140	4		25
Eicosane (C20)	88		85		40-140	3		25
Docosane (C22)	88		86		40-140	2		25
Tetracosane (C24)	88		86		40-140	2		25
Hexacosane (C26)	88		86		40-140	2		25
Octacosane (C28)	88		85		40-140	3		25
Triacontane (C30)	87		84		40-140	4		25
Hexatriacontane (C36)	86		83		40-140	4		25

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Chloro-Octadecane	87		93		40-140
o-Terphenyl	81		81		40-140
2-Fluorobiphenyl	75		78		40-140
2-Bromonaphthalene	79		81		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQ. NORTH

Project Number: 6216.9.01

Lab Number: L1625933

Report Date: 08/22/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 02 Batch: WG924251-1 WG924251-2								
C5-C8 Aliphatics	87		84		70-130	3		25
C9-C12 Aliphatics	88		84		70-130	5		25
C9-C10 Aromatics	91		90		70-130	1		25
Benzene	87		85		70-130	2		25
Toluene	89		88		70-130	2		25
Ethylbenzene	90		88		70-130	1		25
p/m-Xylene	91		89		70-130	2		25
o-Xylene	89		88		70-130	1		25
Methyl tert butyl ether	85		85		70-130	0		25
Naphthalene	88		90		70-130	2		25
1,2,4-Trimethylbenzene	91		90		70-130	1		25
Pentane	82		80		70-130	2		25
2-Methylpentane	87		85		70-130	3		25
2,2,4-Trimethylpentane	90		88		70-130	3		25
n-Nonane	92		88		30-130	5		25
n-Decane	90		86		70-130	4		25
n-Butylcyclohexane	93		89		70-130	4		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQ. NORTH

Project Number: 6216.9.01

Lab Number: L1625933

Report Date: 08/22/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 02 Batch: WG924251-1 WG924251-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2,5-Dibromotoluene-PID	91		91		70-130
2,5-Dibromotoluene-FID	100		100		70-130

Project Name: KENMORE SQ. NORTH
Project Number: 6216.9.01

Lab Number: L1625933
Report Date: 08/22/16

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1625933-01A	Amber 1000ml HCl preserved	A	<2	3.5	Y	Absent	EPH-DELUX-10(14)
L1625933-01B	Amber 1000ml HCl preserved	A	<2	3.5	Y	Absent	EPH-DELUX-10(14)
L1625933-02A	Vial HCl preserved	A	N/A	3.5	Y	Absent	MCP-8260-10(14)
L1625933-02B	Vial HCl preserved	A	N/A	3.5	Y	Absent	MCP-8260-10(14)
L1625933-02C	Vial HCl preserved	A	N/A	3.5	Y	Absent	VPH-10(14)
L1625933-02D	Vial HCl preserved	A	N/A	3.5	Y	Absent	VPH-10(14)
L1625933-02E	Amber 1000ml HCl preserved	A	<2	3.5	Y	Absent	EPH-DELUX-10(14)
L1625933-02F	Amber 1000ml HCl preserved	A	<2	3.5	Y	Absent	EPH-DELUX-10(14)

*Values in parentheses indicate holding time in days

Project Name:	KENMORE SQ. NORTH	**Lab Number:**	L1625933
Project Number:	6216.9.01	**Report Date:**	08/22/16

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
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:	KENMORE SQ. NORTH	**Lab Number:**	L1625933
Project Number:	6216.9.01	**Report Date:**	08/22/16

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:	KENMORE SQ. NORTH	**Lab Number:**	L1625933
Project Number:	6216.9.01	**Report Date:**	08/22/16

REFERENCES

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

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

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

Westborough Facility
EPA 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, SM9222D-MF**.

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

Date Rec'd in Lab: 8/18/16

ALPHA Job #: L1625933

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

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

Project Information

Project Name: 6276.9.01

Project Location: Boston, MA.

Project #: Kenmore Sq. North

Project Manager: WSB

ALPHA Quote #:

Report Information - Data Deliverables

☐ ADEx ☐ EMAIL

Billing Information

☐ Same as Client info PO #:

Client Information

Client: McPhail Assoc.

Address: 2269 Mass Ave
Cambridge Ma.

Phone: (617) 868-1420

Email:

Regulatory Requirements & Project Information Requirements

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

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

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

☐ Yes ☒ No NPDES RGP

☐ Other State /Fed Program _____ Criteria _____

Turn-Around Time

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

Date Due:

Additional Project Information:

ANALYSIS

VOC: ☒ 8260 ☐ 624 ☐ 524.2

SVOC: ☐ ABN ☐ PAH

METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15

METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13

EPH: ☒ Ranges & Targets ☐ Ranges Only

VPH: ☐ Ranges & Targets ☒ Ranges Only

☐ PCB ☐ PEST

TPH: ☐ Quant Only ☐ Fingerprint

SAMPLE INFO

Filtration
☐ Field
☐ Lab to do

Preservation
☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Sample Comments	TOTAL # BOTTLES
25933.01	B-1A (ow)	8/18/16	2:00	MW	MG		2
.02	B-8 (ow)	8/18/16	3:00	MW	MG		6

Container Type	V				A	V													
Preservative	B				B/A	B													

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
	8/18/16 3:00	AAL	8/18/16 16:32
AAL	8/18/16 18:08		8/18/16 1805

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

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

Method Blank Summary
Form 4

Client	: McPhail Associates	**Lab Number**	: L1625933
Project Name	: KENMORE SQ. NORTH	**Project Number**	: 6216.9.01
Lab Sample ID	: WG924600-5	**Lab File ID**	: VJ160819A13
Instrument ID	: JACK		
Matrix	: WATER	**Analysis Date**	: 08/19/16 20:19

Client Sample No.	Lab Sample ID	Analysis Date
WG924600-3LCS	WG924600-3	08/19/16 18:39
WG924600-4LCSD	WG924600-4	08/19/16 19:12
B-8 (OW)	L1625933-02	08/20/16 00:48

Continuing Calibration
Form 7

Client	: McPhail Associates	**Lab Number**	: L1625933	
Project Name	: KENMORE SQ. NORTH	**Project Number**	: 6216.9.01	
Instrument ID	: JACK	**Calibration Date**	: 08/19/16 18:39	
Lab File ID	: VJ160819A07	**Init. Calib. Date(s)**	: 08/09/16	08/09/16
Sample No	: WG924600-2	**Init. Calib. Times**	: 07:56	14:04
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	94	0
Dichlorodifluoromethane	0.243	0.198	-	18.5	20	71	.02
Chloromethane	0.419	0.355	-	15.3	20	76	-.03
Vinyl chloride	0.389	0.386	-	0.8	20	92	0
Bromomethane	10	11.363	-	-13.6	20	100	0
Chloroethane	0.207	0.22	-	-6.3	20	91	.02
Trichlorofluoromethane	0.338	0.354	-	-4.7	20	87	.02
Ethyl ether	0.125	0.123	-	1.6	20	89	0
1,1-Dichloroethene	0.251	0.255	-	-1.6	20	93	0
Carbon disulfide	0.913	0.82	-	10.2	20	85	.02
Freon-113	0.22	0.235	-	-6.8	20	90	.01
Iodomethane	10	7.072	-	29.3*	20	66	0
Acrolein	0.024	0.026*	-	-8.3	20	91	0
Methylene chloride	0.294	0.289	-	1.7	20	99	.01
Acetone	10	9.091	-	9.1	20	97	.02
trans-1,2-Dichloroethene	0.278	0.285	-	-2.5	20	91	.02
Methyl acetate	10	11.081	-	-10.8	20	95	0
Methyl tert-butyl ether	0.524	0.554	-	-5.7	20	94	.01
tert-Butyl alcohol	50	45.625	-	8.8	20	93	.01
Diisopropyl ether	0.883	0.875	-	0.9	20	89	0
1,1-Dichloroethane	0.529	0.554	-	-4.7	20	93	0
Halothane	0.181	0.191	-	-5.5	20	91	.01
Acrylonitrile	0.064	0.065	-	-1.6	20	94	.02
Ethyl tert-butyl ether	0.702	0.732	-	-4.3	20	94	.02
Vinyl acetate	0.422	0.449	-	-6.4	20	94	.01
cis-1,2-Dichloroethene	0.301	0.319	-	-6	20	93	.02
2,2-Dichloropropane	0.372	0.406	-	-9.1	20	91	0
Bromochloromethane	0.117	0.124	-	-6	20	94	.01
Cyclohexane	0.556	0.555	-	0.2	20	89	.01
Chloroform	0.456	0.488	-	-7	20	95	.01
Ethyl acetate	0.148	0.154	-	-4.1	20	94	.01
Carbon tetrachloride	0.311	0.302	-	2.9	20	88	0
Tetrahydrofuran	0.052	0.054	-	-3.8	20	98	.01
Dibromofluoromethane	0.167	0.172	-	-3	20	96	.01
1,1,1-Trichloroethane	0.396	0.387	-	2.3	20	87	.02
2-Butanone	10	10.204	-	-2	20	97	.02
1,1-Dichloropropene	0.393	0.384	-	2.3	20	88	0
Benzene	1.303	1.261	-	3.2	20	90	0
tert-Amyl methyl ether	0.597	0.614	-	-2.8	20	94	.01
1,2-Dichloroethane-d4	0.172	0.162	-	5.8	20	91	.01
1,2-Dichloroethane	0.273	0.28	-	-2.6	20	92	0
Methyl cyclohexane	0.52	0.503	-	3.3	20	87	0
Trichloroethene	0.302	0.297	-	1.7	20	90	0
Dibromomethane	10	9.703	-	3	20	93	0
1,2-Dichloropropane	0.302	0.307	-	-1.7	20	94	.01

* Value outside of QC limits.

Continuing Calibration
Form 7

Client	: McPhail Associates	**Lab Number**	: L1625933	
Project Name	: KENMORE SQ. NORTH	**Project Number**	: 6216.9.01	
Instrument ID	: JACK	**Calibration Date**	: 08/19/16 18:39	
Lab File ID	: VJ160819A07	**Init. Calib. Date(s)**	: 08/09/16	08/09/16
Sample No	: WG924600-2	**Init. Calib. Times**	: 07:56	14:04
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
2-Chloroethyl vinyl ether	0.135	0.131	-	3	20	96	0
Bromodichloromethane	0.327	0.322	-	1.5	20	94	0
1,4-Dioxane	0.0022	0.00226*	-	-2.7	20	105	0
cis-1,3-Dichloropropene	0.448	0.422	-	5.8	20	92	0
Chlorobenzene-d5	1	1	-	0	20	97	0
Toluene-d8	0.934	0.959	-	-2.7	20	96	0
Toluene	0.925	0.944	-	-2.1	20	90	0
4-Methyl-2-pentanone	10	9.963	-	0.4	20	96	0
Tetrachloroethene	0.406	0.413	-	-1.7	20	92	0
trans-1,3-Dichloropropene	0.387	0.382	-	1.3	20	92	0
Ethyl methacrylate	0.297	0.286	-	3.7	20	92	0
1,1,2-Trichloroethane	0.191	0.198	-	-3.7	20	94	.01
Chlorodibromomethane	10	9.012	-	9.9	20	90	0
1,3-Dichloropropane	0.417	0.413	-	1	20	93	0
1,2-Dibromoethane	0.22	0.227	-	-3.2	20	95	0
2-Hexanone	0.122	0.122	-	0	20	98	0
Chlorobenzene	1.086	1.068	-	1.7	20	92	0
Ethylbenzene	2.047	1.955	-	4.5	20	92	0
1,1,1,2-Tetrachloroethane	0.34	0.322	-	5.3	20	94	0
p/m Xylene	0.806	0.801	-	0.6	20	94	0
o Xylene	0.812	0.798	-	1.7	20	92	0
Styrene	1.378	1.385	-	-0.5	20	93	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	103	0
Bromoform	0.268	0.236	-	11.9	20	91	0
Isopropylbenzene	3.287	3.06	-	6.9	20	95	0
4-Bromofluorobenzene	0.669	0.637	-	4.8	20	99	0
Bromobenzene	0.754	0.722	-	4.2	20	98	0
n-Propylbenzene	4.054	3.84	-	5.3	20	95	0
1,4-Dichlorobutane	0.788	0.704	-	10.7	20	93	0
1,1,2,2-Tetrachloroethane	0.482	0.486	-	-0.8	20	95	0
4-Ethyltoluene	3.423	3.298	-	3.7	20	95	0
2-Chlorotoluene	2.633	2.526	-	4.1	20	96	0
1,3,5-Trimethylbenzene	2.844	2.722	-	4.3	20	97	0
1,2,3-Trichloropropane	0.394	0.36	-	8.6	20	90	0
trans-1,4-Dichloro-2-buten	0.211	0.126	-	40.3*	20	63	0
4-Chlorotoluene	2.45	2.29	-	6.5	20	96	0
tert-Butylbenzene	2.459	2.339	-	4.9	20	99	-.01
1,2,4-Trimethylbenzene	2.833	2.781	-	1.8	20	100	0
sec-Butylbenzene	3.604	3.531	-	2	20	100	-.01
p-Isopropyltoluene	2.943	2.929	-	0.5	20	100	0
1,3-Dichlorobenzene	1.584	1.563	-	1.3	20	100	0
1,4-Dichlorobenzene	1.553	1.524	-	1.9	20	100	-.01
p-Diethylbenzene	1.742	1.731	-	0.6	20	101	-.01
n-Butylbenzene	2.557	2.962	-	-15.8	20	125	0
1,2-Dichlorobenzene	1.421	1.394	-	1.9	20	101	0

* Value outside of QC limits.

Continuing Calibration
Form 7

Client	: McPhail Associates	**Lab Number**	: L1625933	
Project Name	: KENMORE SQ. NORTH	**Project Number**	: 6216.9.01	
Instrument ID	: JACK	**Calibration Date**	: 08/19/16 18:39	
Lab File ID	: VJ160819A07	**Init. Calib. Date(s)**	: 08/09/16	08/09/16
Sample No	: WG924600-2	**Init. Calib. Times**	: 07:56	14:04
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,2,4,5-Tetramethylbenzene	2.359	2.491	-	-5.6	20	99	0
1,2-Dibromo-3-chloropropan	0.073	0.065	-	11	20	97	0
1,3,5-Trichlorobenzene	1.015	1.06	-	-4.4	20	98	-.01
Hexachlorobutadiene	0.348	0.37	-	-6.3	20	102	0
1,2,4-Trichlorobenzene	0.821	0.837	-	-1.9	20	97	0
Naphthalene	1.571	1.599	-	-1.8	20	96	0
1,2,3-Trichlorobenzene	0.677	0.693	-	-2.4	20	97	0

* Value outside of QC limits.

ANALYTICAL REPORT

Lab Number:	L1626120
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	KENMORE SQUARE NORTH
Project Number:	6216
Report Date:	08/23/16

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

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

Project Name: KENMORE SQUARE NORTH
Project Number: 6216

Lab Number: L1626120
Report Date: 08/23/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1626120-01	B-4 (OW)	WATER	BOSTON, MA	08/19/16 08:30	08/19/16
L1626120-02	B-5 (OW)	WATER	BOSTON, MA	08/19/16 09:45	08/19/16

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1626120

Project Number: 6216 **Report Date:** 08/23/16

MADEP MCP Response Action Analytical Report Certification

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

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

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

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

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

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1626120
Project Number: 6216 **Report Date:** 08/23/16

Case Narrative

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

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

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

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

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

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

Project Name:	KENMORE SQUARE NORTH	**Lab Number:**	L1626120
Project Number:	6216	**Report Date:**	08/23/16

Case Narrative (continued)

MCP Related Narratives

Volatile Organics

In reference to question H:

The initial calibration, associated with L1626120-01, did not meet the method required minimum response factor on the lowest calibration standard for 2-butanone (0.0887) and 1,4-dioxane (0.0012), as well as the average response factor for 2-butanone and 1,4-dioxane. In addition, a quadratic fit was utilized for bromoform.

The continuing calibration standard, associated with L1626120-01, 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.

VPH

In reference to question I:

L1626120-01: The sample was analyzed for a subset of MCP analytes per the Chain of Custody.

EPH

In reference to question I:

L1626120-02: The sample was analyzed for a subset of MCP analytes per the Chain of Custody.

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

Authorized Signature: Melissa Cripps Melissa Cripps

Title: Technical Director/Representative Date: 08/23/16

ORGANICS

VOLATILES

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1626120

Project Number: 6216 **Report Date:** 08/23/16

SAMPLE RESULTS

Lab ID: L1626120-01
Client ID: B-4 (OW)
Sample Location: BOSTON, MA
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 08/23/16 07:40
Analyst: MM

Date Collected: 08/19/16 08:30
Date Received: 08/19/16
Field Prep: Not Specified

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

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1626120

Project Number: 6216 **Report Date:** 08/23/16

SAMPLE RESULTS

Lab ID: L1626120-01 Date Collected: 08/19/16 08:30

Client ID: B-4 (OW) Date Received: 08/19/16

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
Xylene (Total)	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethene (total)	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
2-Butanone	ND		ug/l	5.0	--	1
4-Methyl-2-pentanone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1626120

Project Number: 6216 **Report Date:** 08/23/16

SAMPLE RESULTS

Lab ID: L1626120-01 Date Collected: 08/19/16 08:30

Client ID: B-4 (OW) Date Received: 08/19/16

Sample Location: BOSTON, MA Field Prep: Not Specified

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Toluene-d8	91		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	99		70-130

Project Name: KENMORE SQUARE NORTH
Project Number: 6216
Lab Number: L1626120
Report Date: 08/23/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 08/23/16 06:33
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01 Batch: WG925061-5					
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: KENMORE SQUARE NORTH **Lab Number:** L1626120

Project Number: 6216 **Report Date:** 08/23/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 08/23/16 06:33
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01 Batch: WG925061-5					
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	--
Xylene (Total)	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
1,2-Dichloroethene (total)	ND		ug/l	1.0	--
Dibromomethane	ND		ug/l	2.0	--
1,2,3-Trichloropropane	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	2.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	2.0	--
2-Butanone	ND		ug/l	5.0	--
4-Methyl-2-pentanone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.0	--
Tetrahydrofuran	ND		ug/l	2.0	--
2,2-Dichloropropane	ND		ug/l	2.0	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--
Bromobenzene	ND		ug/l	2.0	--
n-Butylbenzene	ND		ug/l	2.0	--
sec-Butylbenzene	ND		ug/l	2.0	--
tert-Butylbenzene	ND		ug/l	2.0	--
o-Chlorotoluene	ND		ug/l	2.0	--

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1626120

Project Number: 6216 **Report Date:** 08/23/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 08/23/16 06:33
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01 Batch: WG925061-5					
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	--
Ethyl ether	ND		ug/l	2.0	--
Isopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	2.0	--
tert-Butyl Alcohol	ND		ug/l	10	--
2-Chloroethylvinyl ether	ND		ug/l	10	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	89		70-130
Toluene-d8	90		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	100		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216

Lab Number: L1626120

Report Date: 08/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG925061-3 WG925061-4								
Methylene chloride	100		99		70-130	1		20
1,1-Dichloroethane	100		99		70-130	1		20
Chloroform	100		99		70-130	1		20
Carbon tetrachloride	100		96		70-130	4		20
1,2-Dichloropropane	100		100		70-130	0		20
Dibromochloromethane	94		89		70-130	5		20
1,1,2-Trichloroethane	91		90		70-130	1		20
Tetrachloroethene	95		95		70-130	0		20
Chlorobenzene	95		94		70-130	1		20
Trichlorofluoromethane	100		96		70-130	4		20
1,2-Dichloroethane	97		94		70-130	3		20
1,1,1-Trichloroethane	100		100		70-130	0		20
Bromodichloromethane	100		100		70-130	0		20
trans-1,3-Dichloropropene	96		90		70-130	6		20
cis-1,3-Dichloropropene	100		100		70-130	0		20
1,1-Dichloropropene	100		97		70-130	3		20
Bromoform	100		97		70-130	3		20
1,1,2,2-Tetrachloroethane	90		83		70-130	8		20
Benzene	98		97		70-130	1		20
Toluene	93		91		70-130	2		20
Ethylbenzene	96		94		70-130	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216

Lab Number: L1626120

Report Date: 08/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG925061-3 WG925061-4								
Chloromethane	85		88		70-130	3		20
Bromomethane	120		120		70-130	0		20
Vinyl chloride	93		97		70-130	4		20
Chloroethane	98		100		70-130	2		20
1,1-Dichloroethene	100		100		70-130	0		20
trans-1,2-Dichloroethene	100		100		70-130	0		20
Trichloroethene	97		96		70-130	1		20
1,2-Dichlorobenzene	94		92		70-130	2		20
1,3-Dichlorobenzene	93		93		70-130	0		20
1,4-Dichlorobenzene	92		90		70-130	2		20
Methyl tert butyl ether	93		91		70-130	2		20
p/m-Xylene	90		90		70-130	0		20
o-Xylene	90		90		70-130	0		20
cis-1,2-Dichloroethene	100		100		70-130	0		20
Dibromomethane	97		96		70-130	1		20
1,2,3-Trichloropropane	96		95		70-130	1		20
Styrene	90		90		70-130	0		20
Dichlorodifluoromethane	84		86		70-130	2		20
Acetone	100		94		70-130	6		20
Carbon disulfide	110		100		70-130	10		20
2-Butanone	95		85		70-130	11		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216

Lab Number: L1626120

Report Date: 08/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG925061-3 WG925061-4								
4-Methyl-2-pentanone	83		81		70-130	2		20
2-Hexanone	90		89		70-130	1		20
Bromochloromethane	100		99		70-130	1		20
Tetrahydrofuran	93		90		70-130	3		20
2,2-Dichloropropane	110		110		70-130	0		20
1,2-Dibromoethane	94		91		70-130	3		20
1,3-Dichloropropane	91		88		70-130	3		20
1,1,1,2-Tetrachloroethane	100		97		70-130	3		20
Bromobenzene	95		94		70-130	1		20
n-Butylbenzene	74		88		70-130	17		20
sec-Butylbenzene	88		86		70-130	2		20
tert-Butylbenzene	85		84		70-130	1		20
o-Chlorotoluene	93		91		70-130	2		20
p-Chlorotoluene	91		90		70-130	1		20
1,2-Dibromo-3-chloropropane	88		93		70-130	6		20
Hexachlorobutadiene	96		98		70-130	2		20
Isopropylbenzene	96		98		70-130	2		20
p-Isopropyltoluene	90		88		70-130	2		20
Naphthalene	71		72		70-130	1		20
n-Propylbenzene	93		90		70-130	3		20
1,2,3-Trichlorobenzene	76		78		70-130	3		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216

Lab Number: L1626120

Report Date: 08/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG925061-3 WG925061-4								
1,2,4-Trichlorobenzene	78		78		70-130	0		20
1,3,5-Trimethylbenzene	87		86		70-130	1		20
1,2,4-Trimethylbenzene	86		85		70-130	1		20
Ethyl ether	94		93		70-130	1		20
Isopropyl Ether	96		94		70-130	2		20
Ethyl-Tert-Butyl-Ether	97		94		70-130	3		20
Tertiary-Amyl Methyl Ether	93		93		70-130	0		20
1,4-Dioxane	118		110		70-130	7		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	100		100		70-130	0		20
tert-Butyl Alcohol	98		88		70-130	11		20
2-Chloroethylvinyl ether	93		92		70-130	1		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	101		99		70-130
Toluene-d8	92		94		70-130
4-Bromofluorobenzene	99		100		70-130
Dibromofluoromethane	102		99		70-130

PETROLEUM HYDROCARBONS

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1626120

Project Number: 6216 **Report Date:** 08/23/16

SAMPLE RESULTS

Lab ID:	L1626120-01	Date Collected:	08/19/16 08:30
Client ID:	B-4 (OW)	Date Received:	08/19/16
Sample Location:	BOSTON, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	100,VPH-04-1.1		
Analytical Date:	08/23/16 09:50		
Analyst:	JM		

Quality Control Information

Condition of sample received:	Satisfactory
Aqueous Preservative:	Laboratory Provided Preserved Container
Sample Temperature upon receipt:	Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Petroleum Hydrocarbons - Westborough Lab						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	ND		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	96		70-130
2,5-Dibromotoluene-FID	105		70-130

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1626120

Project Number: 6216 **Report Date:** 08/23/16

SAMPLE RESULTS

Lab ID:	L1626120-02	Date Collected:	08/19/16 09:45
Client ID:	B-5 (OW)	Date Received:	08/19/16
Sample Location:	BOSTON, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	98,EPH-04-1.1	Extraction Date:	08/19/16 22:34
Analytical Date:	08/21/16 06:16	Cleanup Method1:	EPH-04-1
Analyst:	EK	Cleanup Date1:	08/20/16

Quality Control Information

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	88		40-140
o-Terphenyl	69		40-140
2-Fluorobiphenyl	59		40-140
2-Bromonaphthalene	57		40-140

Project Name: KENMORE SQUARE NORTH
Project Number: 6216
Lab Number: L1626120
Report Date: 08/23/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 98,EPH-04-1.1
Analytical Date: 08/21/16 05:44
Analyst: EK

Extraction Method: EPA 3510C
Extraction Date: 08/19/16 22:34
Cleanup Method: EPH-04-1
Cleanup Date: 08/20/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 02 Batch: WG924393-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	101		40-140
o-Terphenyl	75		40-140
2-Fluorobiphenyl	59		40-140
2-Bromonaphthalene	55		40-140

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1626120

Project Number: 6216 **Report Date:** 08/23/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 100,VPH-04-1.1
Analytical Date: 08/23/16 09:10
Analyst: JM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 01 Batch: WG925157-3					
C5-C8 Aliphatics	ND		ug/l	50.0	--
C9-C12 Aliphatics	ND		ug/l	50.0	--
C9-C10 Aromatics	ND		ug/l	50.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	97		70-130
2,5-Dibromotoluene-FID	102		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: KENMORE SQUARE NORTH
Project Number: 6216

Lab Number: L1626120
Report Date: 08/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 02 Batch: WG924393-2 WG924393-3								
C9-C18 Aliphatics	80		74		40-140	8		25
C19-C36 Aliphatics	94		93		40-140	1		25
C11-C22 Aromatics	78		75		40-140	4		25
Naphthalene	60		53		40-140	12		25
2-Methylnaphthalene	61		53		40-140	14		25
Acenaphthylene	65		56		40-140	15		25
Acenaphthene	66		57		40-140	15		25
Fluorene	69		59		40-140	16		25
Phenanthrene	71		63		40-140	12		25
Anthracene	70		64		40-140	9		25
Fluoranthene	76		69		40-140	10		25
Pyrene	78		72		40-140	8		25
Benzo(a)anthracene	73		68		40-140	7		25
Chrysene	78		72		40-140	8		25
Benzo(b)fluoranthene	77		71		40-140	8		25
Benzo(k)fluoranthene	77		70		40-140	10		25
Benzo(a)pyrene	70		65		40-140	7		25
Indeno(1,2,3-cd)Pyrene	74		68		40-140	8		25
Dibenzo(a,h)anthracene	76		70		40-140	8		25
Benzo(ghi)perylene	72		67		40-140	7		25
Nonane (C9)	60		53		30-140	12		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216

Lab Number: L1626120

Report Date: 08/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 02 Batch: WG924393-2 WG924393-3								
Decane (C10)	69		64		40-140	8		25
Dodecane (C12)	75		70		40-140	7		25
Tetradecane (C14)	79		73		40-140	8		25
Hexadecane (C16)	83		78		40-140	6		25
Octadecane (C18)	88		86		40-140	2		25
Nonadecane (C19)	89		88		40-140	1		25
Eicosane (C20)	90		89		40-140	1		25
Docosane (C22)	91		90		40-140	1		25
Tetracosane (C24)	91		90		40-140	1		25
Hexacosane (C26)	91		90		40-140	1		25
Octacosane (C28)	90		90		40-140	0		25
Triacontane (C30)	89		89		40-140	0		25
Hexatriacontane (C36)	89		88		40-140	1		25

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Chloro-Octadecane	106		92		40-140
o-Terphenyl	82		66		40-140
2-Fluorobiphenyl	68		63		40-140
2-Bromonaphthalene	70		64		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216

Lab Number: L1626120

Report Date: 08/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 Batch: WG925157-1 WG925157-2								
C5-C8 Aliphatics	83		84		70-130	1		25
C9-C12 Aliphatics	90		88		70-130	2		25
C9-C10 Aromatics	88		89		70-130	1		25
Benzene	84		85		70-130	1		25
Toluene	87		87		70-130	0		25
Ethylbenzene	87		87		70-130	1		25
p/m-Xylene	88		89		70-130	1		25
o-Xylene	87		87		70-130	0		25
Methyl tert butyl ether	76		76		70-130	1		25
Naphthalene	79		81		70-130	2		25
1,2,4-Trimethylbenzene	88		89		70-130	1		25
Pentane	80		81		70-130	1		25
2-Methylpentane	85		85		70-130	1		25
2,2,4-Trimethylpentane	86		87		70-130	0		25
n-Nonane	93		91		30-130	2		25
n-Decane	92		90		70-130	2		25
n-Butylcyclohexane	94		92		70-130	2		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216

Lab Number: L1626120

Report Date: 08/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 Batch: WG925157-1 WG925157-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2,5-Dibromotoluene-PID	85		84		70-130
2,5-Dibromotoluene-FID	90		89		70-130

Project Name: KENMORE SQUARE NORTH
Project Number: 6216

Lab Number: L1626120
Report Date: 08/23/16

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1626120-01A	Vial HCl preserved	A	N/A	3.5	Y	Absent	MCP-8260-10(14)
L1626120-01B	Vial HCl preserved	A	N/A	3.5	Y	Absent	MCP-8260-10(14)
L1626120-01C	Vial HCl preserved	A	N/A	3.5	Y	Absent	VPH-10(14)
L1626120-01D	Vial HCl preserved	A	N/A	3.5	Y	Absent	VPH-10(14)
L1626120-02A	Amber 1000ml HCl preserved	A	<2	3.5	Y	Absent	EPH-10(14)
L1626120-02B	Amber 1000ml HCl preserved	A	<2	3.5	Y	Absent	EPH-10(14)

*Values in parentheses indicate holding time in days

Project Name:	KENMORE SQUARE NORTH	**Lab Number:**	L1626120
Project Number:	6216	**Report Date:**	08/23/16

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
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:	KENMORE SQUARE NORTH	**Lab Number:**	L1626120
Project Number:	6216	**Report Date:**	08/23/16

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

REFERENCES

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

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

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

Westborough Facility
EPA 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, SM9222D-MF**.

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

Date Rec'd in Lab: 8/19/16

ALPHA Job #: L1626120

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

Client Information

Client: McPhail Assoc. LLC
Address: 2269 Mass Ave, Cambridge, MA
Phone: 617-868-1420
Email: WJB@mcphailgeo.com

Additional Project Information:

Project Information

Project Name: Kenmore Sq. North
Project Location: Boston, MA
Project #: 6216
Project Manager: WJB
ALPHA Quote #:

Turn-Around Time

☐ Standard ☒ RUSH (only confirmed if pre-approved!)
Date Due: 8/23/16

Report Information - Data Deliverables

☒ ADEx ☐ EMAIL

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☒ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☐ PAH	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15 ☐ RCRA5 ☐ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☒ Ranges Only	VPH: ☐ Ranges & Targets ☒ Ranges Only	☐ PCB ☐ PEST	TPH: ☐ Quant Only ☐ Fingerprint	Sample Comments	TOTAL # BOTTLES
26|20.01	B-4 (ow)	8/19/16	830	MW	Tme	X					X			4
.02	B-5 (ow)	↓	945	↓	↓				X						2

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

Container Type	V	A
Preservative	B	B

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
	8/19/16 1100	KML	8/19/16 1625
	8/19/16 1755		8/19/16 1755

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

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

Method Blank Summary
Form 4

Client	: McPhail Associates	**Lab Number**	: L1626120
Project Name	: KENMORE SQUARE NORTH	**Project Number**	: 6216
Lab Sample ID	: WG925061-5	**Lab File ID**	: VJ16023A08
Instrument ID	: JACK		
Matrix	: WATER	**Analysis Date**	: 08/23/16 06:33

Client Sample No.	Lab Sample ID	Analysis Date
WG925061-3LCS	WG925061-3	08/23/16 04:54
WG925061-4LCSD	WG925061-4	08/23/16 05:27
B-4 (OW)	L1626120-01	08/23/16 07:40

Continuing Calibration
Form 7

Client	: McPhail Associates	Lab Number	: L1626120	
Project Name	: KENMORE SQUARE NORTH	Project Number	: 6216	
Instrument ID	: JACK	Calibration Date	: 08/23/16 04:54	
Lab File ID	: VJ16023A02	Init. Calib. Date(s)	: 08/09/16	08/09/16
Sample No	: WG925061-2	Init. Calib. Times	: 08:13	14:55
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	92	0
Dichlorodifluoromethane	0.238	0.2	-	16	20	71	0
Chloromethane	0.299	0.256	-	14.4	20	78	0
Vinyl chloride	0.384	0.359	-	6.5	20	81	0
Bromomethane	10	12.38	-	-23.8*	20	109	0
Chloroethane	0.17	0.168	-	1.2	20	85	0
Trichlorofluoromethane	0.426	0.43	-	-0.9	20	88	0
Ethyl ether	0.171	0.16	-	6.4	20	86	0
1,1-Dichloroethene	0.309	0.319	-	-3.2	20	93	0
Carbon disulfide	10	10.756	-	-7.6	20	91	0
Freon-113	0.278	0.284	-	-2.2	20	88	0
Methylene chloride	0.265	0.27	-	-1.9	20	92	0
Acetone	10	10.064	-	-0.6	20	95	.02
trans-1,2-Dichloroethene	0.334	0.345	-	-3.3	20	93	0
Methyl tert-butyl ether	0.726	0.678	-	6.6	20	86	0
tert-Butyl alcohol	0.013	0.013*	-	0	20	83	0
Diisopropyl ether	1.103	1.063	-	3.6	20	87	0
1,1-Dichloroethane	0.622	0.638	-	-2.6	20	92	0
Ethyl tert-butyl ether	0.897	0.868	-	3.2	20	87	0
cis-1,2-Dichloroethene	0.35	0.355	-	-1.4	20	91	0
2,2-Dichloropropane	0.431	0.491	-	-13.9	20	95	0
Bromochloromethane	0.14	0.144	-	-2.9	20	91	0
Chloroform	0.535	0.537	-	-0.4	20	92	0
Carbon tetrachloride	0.393	0.392	-	0.3	20	90	0
Tetrahydrofuran	0.067	0.062	-	7.5	20	84	0
Dibromofluoromethane	0.177	0.181	-	-2.3	20	95	0
1,1,1-Trichloroethane	0.458	0.47	-	-2.6	20	93	0
2-Butanone	0.086	0.082*	-	4.7	20	85	0
1,1-Dichloropropene	0.45	0.452	-	-0.4	20	90	0
Benzene	1.427	1.399	-	2	20	90	0
tert-Amyl methyl ether	0.743	0.69	-	7.1	20	84	0
1,2-Dichloroethane-d4	0.189	0.19	-	-0.5	20	96	0
1,2-Dichloroethane	0.328	0.319	-	2.7	20	88	0
Trichloroethene	0.335	0.326	-	2.7	20	90	0
Dibromomethane	0.14	0.136	-	2.9	20	89	0
1,2-Dichloropropane	0.318	0.326	-	-2.5	20	89	0
2-Chloroethyl vinyl ether	0.144	0.135	-	6.2	20	80	0
Bromodichloromethane	0.341	0.343	-	-0.6	20	88	0
1,4-Dioxane	0.00123	0.00145*	-	-17.9	20	107	0
cis-1,3-Dichloropropene	0.445	0.467	-	-4.9	20	91	0
Chlorobenzene-d5	1	1	-	0	20	92	0
Toluene-d8	1.378	1.268	-	8	20	90	0
Toluene	1.462	1.363	-	6.8	20	90	0
4-Methyl-2-pentanone	0.126	0.104	-	17.5	20	75	0
Tetrachloroethene	0.61	0.582	-	4.6	20	88	0

* Value outside of QC limits.

Continuing Calibration
Form 7

Client	: McPhail Associates	**Lab Number**	: L1626120	
Project Name	: KENMORE SQUARE NORTH	**Project Number**	: 6216	
Instrument ID	: JACK	**Calibration Date**	: 08/23/16 04:54	
Lab File ID	: VJ16023A02	**Init. Calib. Date(s)**	: 08/09/16	08/09/16
Sample No	: WG925061-2	**Init. Calib. Times**	: 08:13	14:55
Channel	:			

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
trans-1,3-Dichloropropene	0.672	0.642	-	4.5	20	90	0
1,1,2-Trichloroethane	0.332	0.302	-	9	20	86	0
Chlorodibromomethane	0.382	0.359	-	6	20	88	0
1,3-Dichloropropane	0.707	0.644	-	8.9	20	85	0
1,2-Dibromoethane	0.339	0.317	-	6.5	20	88	0
2-Hexanone	0.179	0.16	-	10.6	20	78	0
Chlorobenzene	1.163	1.105	-	5	20	86	0
Ethylbenzene	2.018	1.935	-	4.1	20	87	0
1,1,1,2-Tetrachloroethane	0.393	0.394	-	-0.3	20	89	0
p/m Xylene	0.746	0.692	-	7.2	20	88	0
o Xylene	0.689	0.635	-	7.8	20	87	0
Styrene	1.134	1.05	-	7.4	20	88	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	99	0
Bromoform	0.324	0.322	-	0.6	20	87	0
Isopropylbenzene	3.645	3.497	-	4.1	20	84	.01
4-Bromofluorobenzene	0.676	0.671	-	0.7	20	96	0
Bromobenzene	0.814	0.772	-	5.2	20	90	0
n-Propylbenzene	4.147	3.84	-	7.4	20	87	0
1,1,2,2-Tetrachloroethane	0.551	0.499	-	9.4	20	87	.01
2-Chlorotoluene	2.733	2.538	-	7.1	20	88	0
1,3,5-Trimethylbenzene	2.683	2.338	-	12.9	20	86	0
1,2,3-Trichloropropane	0.433	0.416	-	3.9	20	88	0
4-Chlorotoluene	2.522	2.301	-	8.8	20	88	0
tert-Butylbenzene	2.454	2.091	-	14.8	20	85	0
1,2,4-Trimethylbenzene	2.532	2.172	-	14.2	20	87	0
sec-Butylbenzene	3.514	3.111	-	11.5	20	87	0
p-Isopropyltoluene	2.815	2.529	-	10.2	20	89	0
1,3-Dichlorobenzene	1.747	1.631	-	6.6	20	87	0
1,4-Dichlorobenzene	1.712	1.571	-	8.2	20	91	0
n-Butylbenzene	2.617	1.937	-	26*	20	72	0
1,2-Dichlorobenzene	1.646	1.546	-	6.1	20	88	.01
1,2-Dibromo-3-chloropropan	10	8.816	-	11.8	20	87	0
Hexachlorobutadiene	0.329	0.316	-	4	20	86	0
1,2,4-Trichlorobenzene	10	7.858	-	21.4*	20	84	0
Naphthalene	10	7.081	-	29.2*	20	78	0
1,2,3-Trichlorobenzene	10	7.652	-	23.5*	20	80	0

* Value outside of QC limits.

ANALYTICAL REPORT

Lab Number:	L1626224
Client:	McPhail Associates 2269 Massachusetts Avenue Cambridge, MA 02140
ATTN:	Ambrose Donovan
Phone:	(617) 868-1420
Project Name:	KENMORE SQUARE NORTH
Project Number:	6216.9.9
Report Date:	08/23/16

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

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

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.9

Lab Number: L1626224
Report Date: 08/23/16

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1626224-01	B-2 (OW)	WATER	BOSTON, MA	08/22/16 08:30	08/22/16
L1626224-02	B-3 (OW)	WATER	BOSTON, MA	08/22/16 10:00	08/22/16
L1626224-03	B-6 (OW)	WATER	BOSTON, MA	08/22/16 12:00	08/22/16

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1626224

Project Number: 6216.9.9 **Report Date:** 08/23/16

MADEP MCP Response Action Analytical Report Certification

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

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

A response to questions G, H and I is required for "Presumptive Certainty" status		
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	NO
H	Were all QC performance standards specified in the CAM protocol(s) achieved?	YES
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: KENMORE SQUARE NORTH **Lab Number:** L1626224
Project Number: 6216.9.9 **Report Date:** 08/23/16

Case Narrative

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

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

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

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

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

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

Project Name:	KENMORE SQUARE NORTH	**Lab Number:**	L1626224
Project Number:	6216.9.9	**Report Date:**	08/23/16

Case Narrative (continued)

MCP Related Narratives

EPH

In reference to question G:

L1626224-02 and -03: One or more of the target analytes did not achieve the requested CAM reporting limits.

In reference to question I:

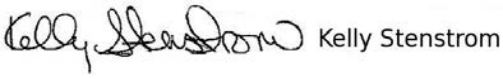
L1626224-01 was analyzed for a subset of MCP analytes per the Chain of Custody.

Metals

In reference to question I:

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

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

Authorized Signature:  Kelly Stenstrom

Title: Technical Director/Representative Date: 08/23/16

ORGANICS

PETROLEUM HYDROCARBONS

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1626224

Project Number: 6216.9.9 **Report Date:** 08/23/16

SAMPLE RESULTS

Lab ID:	L1626224-01	Date Collected:	08/22/16 08:30
Client ID:	B-2 (OW)	Date Received:	08/22/16
Sample Location:	BOSTON, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	98,EPH-04-1.1	Extraction Date:	08/22/16 19:42
Analytical Date:	08/23/16 15:00	Cleanup Method1:	EPH-04-1
Analyst:	DV	Cleanup Date1:	08/23/16

Quality Control Information

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	97		40-140
o-Terphenyl	89		40-140
2-Fluorobiphenyl	75		40-140
2-Bromonaphthalene	69		40-140

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1626224

Project Number: 6216.9.9 **Report Date:** 08/23/16

SAMPLE RESULTS

Lab ID:	L1626224-02	Date Collected:	08/22/16 10:00
Client ID:	B-3 (OW)	Date Received:	08/22/16
Sample Location:	BOSTON, MA	Field Prep:	Not Specified
Matrix:	Water		
Analytical Method:	100,VPH-04-1.1		
Analytical Date:	08/23/16 11:03		
Analyst:	JM		

Quality Control Information

Condition of sample received:	Satisfactory
Aqueous Preservative:	Laboratory Provided Preserved Container
Sample Temperature upon receipt:	Received on Ice

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Petroleum Hydrocarbons - Westborough Lab						
C5-C8 Aliphatics	ND		ug/l	50.0	--	1
C9-C12 Aliphatics	76.8		ug/l	50.0	--	1
C9-C10 Aromatics	ND		ug/l	50.0	--	1
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--	1
C9-C12 Aliphatics, Adjusted	76.8		ug/l	50.0	--	1
Benzene	ND		ug/l	2.00	--	1
Toluene	ND		ug/l	2.00	--	1
Ethylbenzene	ND		ug/l	2.00	--	1
p/m-Xylene	ND		ug/l	2.00	--	1
o-Xylene	ND		ug/l	2.00	--	1
Methyl tert butyl ether	ND		ug/l	3.00	--	1
Naphthalene	6.02		ug/l	4.00	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	103		70-130
2,5-Dibromotoluene-FID	112		70-130

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1626224

Project Number: 6216.9.9 **Report Date:** 08/23/16

SAMPLE RESULTS

Lab ID:	L1626224-02	Date Collected:	08/22/16 10:00
Client ID:	B-3 (OW)	Date Received:	08/22/16
Sample Location:	BOSTON, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	98,EPH-04-1.1	Extraction Date:	08/22/16 19:38
Analytical Date:	08/23/16 15:32	Cleanup Method1:	EPH-04-1
Analyst:	DV	Cleanup Date1:	08/23/16

Quality Control Information

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

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

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1626224

Project Number: 6216.9.9 **Report Date:** 08/23/16

SAMPLE RESULTS

Lab ID:	L1626224-02	Date Collected:	08/22/16 10:00
Client ID:	B-3 (OW)	Date Received:	08/22/16
Sample Location:	BOSTON, MA	Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Extractable Petroleum Hydrocarbons - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	90		40-140
o-Terphenyl	61		40-140
2-Fluorobiphenyl	52		40-140
2-Bromonaphthalene	53		40-140

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1626224

Project Number: 6216.9.9 **Report Date:** 08/23/16

SAMPLE RESULTS

Lab ID:	L1626224-03	Date Collected:	08/22/16 12:00
Client ID:	B-6 (OW)	Date Received:	08/22/16
Sample Location:	BOSTON, MA	Field Prep:	Not Specified
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	98,EPH-04-1.1	Extraction Date:	08/22/16 19:38
Analytical Date:	08/23/16 16:04	Cleanup Method1:	EPH-04-1
Analyst:	DV	Cleanup Date1:	08/23/16

Quality Control Information

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

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

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1626224

Project Number: 6216.9.9 **Report Date:** 08/23/16

SAMPLE RESULTS

Lab ID:	L1626224-03	Date Collected:	08/22/16 12:00
Client ID:	B-6 (OW)	Date Received:	08/22/16
Sample Location:	BOSTON, MA	Field Prep:	Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Extractable Petroleum Hydrocarbons - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	75		40-140
o-Terphenyl	71		40-140
2-Fluorobiphenyl	57		40-140
2-Bromonaphthalene	59		40-140

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.9

Lab Number: L1626224
Report Date: 08/23/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 98,EPH-04-1.1
Analytical Date: 08/23/16 13:25
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 08/22/16 19:38
Cleanup Method: EPH-04-1
Cleanup Date: 08/23/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 02-03 Batch: WG924901-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--
Naphthalene	ND		ug/l	10.0	--
2-Methylnaphthalene	ND		ug/l	10.0	--
Acenaphthylene	ND		ug/l	10.0	--
Acenaphthene	ND		ug/l	10.0	--
Fluorene	ND		ug/l	10.0	--
Phenanthrene	ND		ug/l	10.0	--
Anthracene	ND		ug/l	10.0	--
Fluoranthene	ND		ug/l	10.0	--
Pyrene	ND		ug/l	10.0	--
Benzo(a)anthracene	ND		ug/l	10.0	--
Chrysene	ND		ug/l	10.0	--
Benzo(b)fluoranthene	ND		ug/l	10.0	--
Benzo(k)fluoranthene	ND		ug/l	10.0	--
Benzo(a)pyrene	ND		ug/l	10.0	--
Indeno(1,2,3-cd)Pyrene	ND		ug/l	10.0	--
Dibenzo(a,h)anthracene	ND		ug/l	10.0	--
Benzo(ghi)perylene	ND		ug/l	10.0	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	95		40-140
o-Terphenyl	69		40-140
2-Fluorobiphenyl	52		40-140
2-Bromonaphthalene	55		40-140

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.9

Lab Number: L1626224
Report Date: 08/23/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 98,EPH-04-1.1
Analytical Date: 08/23/16 13:25
Analyst: DV

Extraction Method: EPA 3510C
Extraction Date: 08/22/16 19:42
Cleanup Method: EPH-04-1
Cleanup Date: 08/23/16

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01 Batch: WG924902-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	95		40-140
o-Terphenyl	69		40-140
2-Fluorobiphenyl	52		40-140
2-Bromonaphthalene	55		40-140

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1626224

Project Number: 6216.9.9 **Report Date:** 08/23/16

Method Blank Analysis
Batch Quality Control

Analytical Method: 100,VPH-04-1.1
Analytical Date: 08/23/16 09:10
Analyst: JM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Petroleum Hydrocarbons - Westborough Lab for sample(s): 02 Batch: WG925157-3					
C5-C8 Aliphatics	ND		ug/l	50.0	--
C9-C12 Aliphatics	ND		ug/l	50.0	--
C9-C10 Aromatics	ND		ug/l	50.0	--
C5-C8 Aliphatics, Adjusted	ND		ug/l	50.0	--
C9-C12 Aliphatics, Adjusted	ND		ug/l	50.0	--
Benzene	ND		ug/l	2.00	--
Toluene	ND		ug/l	2.00	--
Ethylbenzene	ND		ug/l	2.00	--
p/m-Xylene	ND		ug/l	2.00	--
o-Xylene	ND		ug/l	2.00	--
Methyl tert butyl ether	ND		ug/l	3.00	--
Naphthalene	ND		ug/l	4.00	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2,5-Dibromotoluene-PID	97		70-130
2,5-Dibromotoluene-FID	102		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.9

Lab Number: L1626224
Report Date: 08/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 02-03 Batch: WG924901-2 WG924901-3								
C9-C18 Aliphatics	85		82		40-140	4		25
C19-C36 Aliphatics	95		94		40-140	1		25
C11-C22 Aromatics	70		80		40-140	13		25
Naphthalene	60		68		40-140	13		25
2-Methylnaphthalene	59		67		40-140	13		25
Acenaphthylene	60		69		40-140	14		25
Acenaphthene	63		72		40-140	13		25
Fluorene	64		73		40-140	13		25
Phenanthrene	66		75		40-140	13		25
Anthracene	66		74		40-140	11		25
Fluoranthene	70		80		40-140	13		25
Pyrene	72		82		40-140	13		25
Benzo(a)anthracene	67		77		40-140	14		25
Chrysene	73		83		40-140	13		25
Benzo(b)fluoranthene	71		81		40-140	13		25
Benzo(k)fluoranthene	73		81		40-140	10		25
Benzo(a)pyrene	64		74		40-140	14		25
Indeno(1,2,3-cd)Pyrene	66		78		40-140	17		25
Dibenzo(a,h)anthracene	69		80		40-140	15		25
Benzo(ghi)perylene	65		77		40-140	17		25
Nonane (C9)	67		65		30-140	3		25

Lab Control Sample Analysis
Batch Quality Control

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.9

Lab Number: L1626224
Report Date: 08/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 02-03 Batch: WG924901-2 WG924901-3								
Decane (C10)	76		74		40-140	3		25
Dodecane (C12)	82		79		40-140	4		25
Tetradecane (C14)	86		82		40-140	5		25
Hexadecane (C16)	88		84		40-140	5		25
Octadecane (C18)	91		88		40-140	3		25
Nonadecane (C19)	92		89		40-140	3		25
Eicosane (C20)	92		90		40-140	2		25
Docosane (C22)	93		91		40-140	2		25
Tetracosane (C24)	92		91		40-140	1		25
Hexacosane (C26)	92		91		40-140	1		25
Octacosane (C28)	92		91		40-140	1		25
Triacontane (C30)	91		89		40-140	2		25
Hexatriacontane (C36)	87		89		40-140	2		25

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Chloro-Octadecane	101		97		40-140
o-Terphenyl	74		83		40-140
2-Fluorobiphenyl	66		74		40-140
2-Bromonaphthalene	66		75		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Lab Control Sample Analysis
Batch Quality Control

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.9

Lab Number: L1626224
Report Date: 08/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 Batch: WG924902-2 WG924902-3								
C9-C18 Aliphatics	85		82		40-140	4		25
C19-C36 Aliphatics	95		94		40-140	1		25
C11-C22 Aromatics	70		80		40-140	13		25
Naphthalene	60		68		40-140	13		25
2-Methylnaphthalene	59		67		40-140	13		25
Acenaphthylene	60		69		40-140	14		25
Acenaphthene	63		72		40-140	13		25
Fluorene	64		73		40-140	13		25
Phenanthrene	66		75		40-140	13		25
Anthracene	66		74		40-140	11		25
Fluoranthene	70		80		40-140	13		25
Pyrene	72		82		40-140	13		25
Benzo(a)anthracene	67		77		40-140	14		25
Chrysene	73		83		40-140	13		25
Benzo(b)fluoranthene	71		81		40-140	13		25
Benzo(k)fluoranthene	73		81		40-140	10		25
Benzo(a)pyrene	64		74		40-140	14		25
Indeno(1,2,3-cd)Pyrene	66		78		40-140	17		25
Dibenzo(a,h)anthracene	69		80		40-140	15		25
Benzo(ghi)perylene	65		77		40-140	17		25
Nonane (C9)	67		65		30-140	3		25

Lab Control Sample Analysis
Batch Quality Control

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.9

Lab Number: L1626224
Report Date: 08/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01 Batch: WG924902-2 WG924902-3								
Decane (C10)	76		74		40-140	3		25
Dodecane (C12)	82		79		40-140	4		25
Tetradecane (C14)	86		82		40-140	5		25
Hexadecane (C16)	88		84		40-140	5		25
Octadecane (C18)	91		88		40-140	3		25
Nonadecane (C19)	92		89		40-140	3		25
Eicosane (C20)	92		90		40-140	2		25
Docosane (C22)	93		91		40-140	2		25
Tetracosane (C24)	92		91		40-140	1		25
Hexacosane (C26)	92		91		40-140	1		25
Octacosane (C28)	92		91		40-140	1		25
Triacontane (C30)	91		89		40-140	2		25
Hexatriacontane (C36)	87		89		40-140	2		25

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Chloro-Octadecane	101		97		40-140
o-Terphenyl	74		83		40-140
2-Fluorobiphenyl	66		74		40-140
2-Bromonaphthalene	66		75		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216.9.9

Lab Number: L1626224

Report Date: 08/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 02 Batch: WG925157-1 WG925157-2								
C5-C8 Aliphatics	83		84		70-130	1		25
C9-C12 Aliphatics	90		88		70-130	2		25
C9-C10 Aromatics	88		89		70-130	1		25
Benzene	84		85		70-130	1		25
Toluene	87		87		70-130	0		25
Ethylbenzene	87		87		70-130	1		25
p/m-Xylene	88		89		70-130	1		25
o-Xylene	87		87		70-130	0		25
Methyl tert butyl ether	76		76		70-130	1		25
Naphthalene	79		81		70-130	2		25
1,2,4-Trimethylbenzene	88		89		70-130	1		25
Pentane	80		81		70-130	1		25
2-Methylpentane	85		85		70-130	1		25
2,2,4-Trimethylpentane	86		87		70-130	0		25
n-Nonane	93		91		30-130	2		25
n-Decane	92		90		70-130	2		25
n-Butylcyclohexane	94		92		70-130	2		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216.9.9

Lab Number: L1626224

Report Date: 08/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 02 Batch: WG925157-1 WG925157-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2,5-Dibromotoluene-PID	85		84		70-130
2,5-Dibromotoluene-FID	90		89		70-130

METALS

Project Name: KENMORE SQUARE NORTH
Lab Number: L1626224
Project Number: 6216.9.9
Report Date: 08/23/16

SAMPLE RESULTS

Lab ID: L1626224-02
Client ID: B-3 (OW)
Sample Location: BOSTON, MA
Matrix: Water

Date Collected: 08/22/16 10:00
Date Received: 08/22/16
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
MCP Dissolved Metals - Mansfield Lab											
Lead, Dissolved	ND		mg/l	0.010	--	1	08/23/16 07:50	08/23/16 12:16	EPA 3005A	97,6010C	JH

Project Name: KENMORE SQUARE NORTH **Lab Number:** L1626224

Project Number: 6216.9.9 **Report Date:** 08/23/16

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
MCP Dissolved Metals - Mansfield Lab for sample(s): 02 Batch: WG925002-1										
Lead, Dissolved	ND		mg/l	0.010	--	1	08/23/16 07:50	08/23/16 11:34	97,6010C	JH

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: KENMORE SQUARE NORTH

Project Number: 6216.9.9

Lab Number: L1626224

Report Date: 08/23/16

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Dissolved Metals - Mansfield Lab Associated sample(s): 02 Batch: WG925002-2 WG925002-3								
Lead, Dissolved	106		104		80-120	2		20

Project Name: KENMORE SQUARE NORTH
Project Number: 6216.9.9

Lab Number: L1626224
Report Date: 08/23/16

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler	
A	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1626224-01A	Amber 1000ml HCl preserved	A	<2	3.8	Y	Absent	EPH-10(14)
L1626224-01B	Amber 1000ml HCl preserved	A	<2	3.8	Y	Absent	EPH-10(14)
L1626224-02A	Vial HCl preserved	A	N/A	3.8	Y	Absent	VPH-DELUX-10(14)
L1626224-02B	Vial HCl preserved	A	N/A	3.8	Y	Absent	VPH-DELUX-10(14)
L1626224-02D	Amber 1000ml HCl preserved	A	<2	3.8	Y	Absent	EPH-DELUX-10(14)
L1626224-02E	Amber 1000ml HCl preserved	A	<2	3.8	Y	Absent	EPH-DELUX-10(14)
L1626224-02F	Plastic 950ml unpreserved	A	7	3.8	Y	Absent	-
L1626224-02G	Amber 1000ml unpreserved	A	7	3.8	Y	Absent	HOLD-8270(7)
L1626224-02H	Amber 1000ml unpreserved	A	7	3.8	Y	Absent	HOLD-8270(7)
L1626224-02X	Plastic 120ml HNO3 preserved Fil	A	<2	3.8	Y	Absent	MCP-PB-6010S-10(180)
L1626224-03A	Amber 1000ml HCl preserved	A	<2	3.8	Y	Absent	EPH-DELUX-10(14)
L1626224-03B	Amber 1000ml HCl preserved	A	<2	3.8	Y	Absent	EPH-DELUX-10(14)
L1626224-03C	Amber 1000ml unpreserved	A	7	3.8	Y	Absent	HOLD-8270(7)
L1626224-03D	Amber 1000ml unpreserved	A	7	3.8	Y	Absent	HOLD-8270(7)

*Values in parentheses indicate holding time in days

Project Name:	KENMORE SQUARE NORTH	**Lab Number:**	L1626224
Project Number:	6216.9.9	**Report Date:**	08/23/16

GLOSSARY

Acronyms

EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
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:	KENMORE SQUARE NORTH	**Lab Number:**	L1626224
Project Number:	6216.9.9	**Report Date:**	08/23/16

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:	KENMORE SQUARE NORTH	**Lab Number:**	L1626224
Project Number:	6216.9.9	**Report Date:**	08/23/16

REFERENCES

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

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

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

Westborough Facility
EPA 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, SM9222D-MF**.

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.

Serial_No:08231618:15

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL

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

Date Rec'd in Lab: 8/22/16

ALPHA Job #: L1626224

Project Information

Project Name: 6216.9.9
Project Location: Boston, MA.
Project #: Kenmore Squ. North
Project Manager: WJB
ALPHA Quote #:

Report Information - Data Deliverables

☐ ADEx ☐ EMAIL

Billing Information

☐ Same as Client info PO #:

Client Information

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

Regulatory Requirements & Project Information Requirements

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

Turn-Around Time

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

Date Due: 08-23-16

Additional Project Information:

ANALYSIS: VOC: ☐ 8260 ☐ 624 ☐ 524.2; SVOC: ☐ ABN ☐ PAH; METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15; METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13; EPH: ☒ Ranges & Targets ☐ Ranges Only; VPH: ☒ Ranges & Targets ☐ Ranges Only; ☐ PCB ☐ PEST; TPH: ☐ Quant Only ☐ Fingerprint; Dissolved Lead; Ranges only. Stnd.

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

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	EPH	VPH	Dissolved Lead	Sample Comments	Total # Bottles
26224.01	B-2 (ow)	8/22/16	8³⁰	GW	Tme	X				2
.02	B-3 (ow)	↓	10⁰⁰	↓	↓	X	X	X		7
03	B-6 (ow)	↓	12⁰⁰	↓	↓	X				4
	~~B-7 (ow)~~					~~X~~				4

	EPH	VPH	Dissolved Lead
Container Type	A	V	P
Preservative	A	B	A

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
T. Comer	8/22/16 1230	[signature] AAL	8/22/16 1320
[signature]	8/22/16 1800	[signature]	8/22/16 1800

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

From: Kirk W. Seaman
To: GeneralPermit, DeWatering
Subject: RE: Kenmore Square North DGP Application
Date: Monday, May 13, 2019 3:12:36 PM

Hi Michelle,

Thank you for clearing up this over the phone.

To summarize, the Beacon Street properties are not listed in the National Historic places database. The state's database does list 650 Beacon Street as a historic place but the Article 85 and other documentation in our application indicate that it is now not a historic place because of Mayor Walsh's intervening.

Thanks again for your help.

Kirk W. Seaman

McPHAIL ASSOCIATES, LLC

2269 Massachusetts Avenue
Cambridge, MA 02140

Tel: 617-349-7352
Cell: 626-590-8418

www.mcphailgeo.com

From: Vuto, Michelle <Vuto.Michelle@epa.gov> **On Behalf Of** GeneralPermit, DeWatering
Sent: Monday, May 13, 2019 3:00 PM
To: Kirk W. Seaman <KSeaman@mcphailgeo.com>
Subject: RE: Kenmore Square North DGP Application

Hi Kirk,

Thanks for the Article 85 information. Appendix III of the DGP only deals with national historic places, which I don't think this is. Can you please confirm?

No need to resubmit Appendix D, I can just append your email to the application so we have note that B-1A(OW) does not apply to this site.

Thanks,
Michelle

Michelle Vuto
Stormwater & Construction Permits
U.S. EPA Region 1
5 Post Office Square (06-4)
Boston, MA 02109-3912
617-918-1222

From: Kirk W. Seaman <KSeaman@mcphailgeo.com>
Sent: Monday, May 13, 2019 1:00 PM
To: GeneralPermit, DeWatering <GeneralPermit.Dewatering@epa.gov>
Subject: RE: Kenmore Square North DGP Application

Hi Michelle,

Do you need specific documentation for your additional information? I have attached an Article 85 application for the development project which outlines the historical status and the demolition of the buildings. Please let me know if that suffices, or if you require further information.

The B-1A(OW) data in the lab report in Appendix D does not apply to this part of the development. The two sample were obtained and submitted on the same day and for the same client, thus the same data report. I can strikethrough the B-1A(OW) data sets and resubmit the Appendix D report if that works for you.

Please let me know if I can answer any other questions.

Kirk W. Seaman

McPHAIL ASSOCIATES, LLC

2269 Massachusetts Avenue
Cambridge, MA 02140

Tel: 617-349-7352
Cell: 626-590-8418

www.mcphailgeo.com

From: Vuto, Michelle <Vuto.Michelle@epa.gov> **On Behalf Of** GeneralPermit, DeWatering
Sent: Thursday, May 9, 2019 5:16 PM
To: Kirk W. Seaman <KSeaman@mcphailgeo.com>

Subject: RE: Kenmore Square North DGP Application

Hi Kirk,

EPA needs additional information in order to continue the review of the Kenmore Square North Beacon Building project for coverage under the DGP. Regarding the National Historic Preservation Act requirements, because you answered no for Question 1, the appropriate State Historic Commission and THPO need to be contacted. Please see Appendix III for the instructions on how to contact the SHPO/THPOs.

Also, can you please clarify what the second groundwater sample corresponds to that was included in the DGP? The cover letter describes B-6(OW) but results for B-1A(OW) were also included.

Please let me know if you have any questions.

Thanks,
Michelle

Michelle Vuto
Stormwater & Construction Permits
U.S. EPA Region 1
5 Post Office Square (06-4)
Boston, MA 02109-3912
617-918-1222

From: Kirk W. Seaman <KSeaman@mcphailgeo.com>
Sent: Tuesday, May 07, 2019 3:45 PM
To: GeneralPermit, DeWatering <GeneralPermit.Dewatering@epa.gov>
Cc: Olivia Deterling <ODeterling@mcphailgeo.com>; Cassidy, Max <mcassidy@relatedbeal.com>; Tuttle Matthew P. <tuttlemp@BWSC.ORG>
Subject: Kenmore Square North DGP Application

Good Afternoon Michelle,

Attached is our application to dewater under the EPA's DGP for a site in Boston, MA.

Please let me know if you have any questions or require further documentation.

Kirk W. Seaman

McPHAIL ASSOCIATES, LLC

2269 Massachusetts Avenue
Cambridge, MA 02140

Tel: 617-349-7352
Cell: 626-590-8418

www.mcphailgeo.com