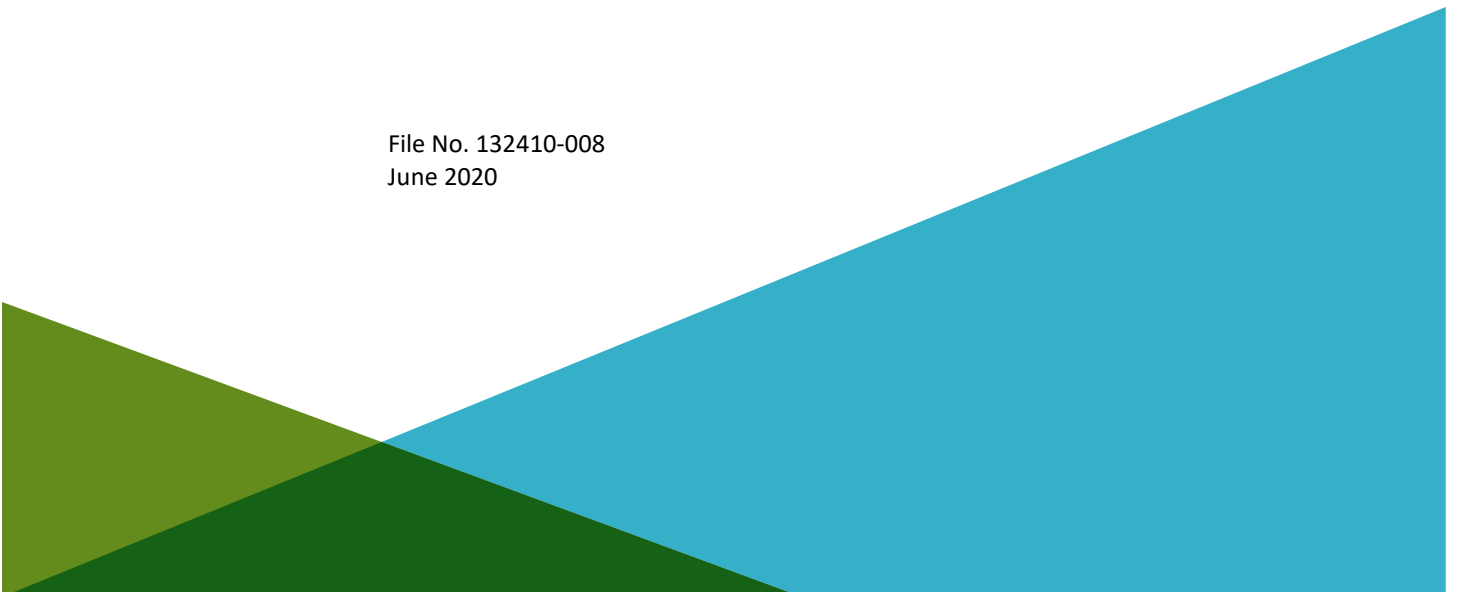


**REPORT ON
NOTICE OF INTENT (NOI)
TEMPORARY CONSTRUCTION DEWATERING
MASSDOT AIR RIGHTS PARCEL 12 – HOTEL BUILDING
AND PODIUM
408 NEWBURY STREET
BOSTON, MASSACHUSETTS**

by
Haley & Aldrich, Inc.
Boston, Massachusetts

for
US Environmental Protection Agency
Boston, Massachusetts

File No. 132410-008
June 2020





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

23 June 2020
File No. 132410-008

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

Attention: EPA/OEP RGP Applications Coordinator

Subject: Notice of Intent (NOI)
Temporary Construction Dewatering
MassDOT Air Rights Parcel 12 – Hotel Building and Podium
408 Newbury Street
Boston, Massachusetts

Dear Ms. Little:

On behalf of our client, S&A P-12 Property LLC, and in accordance with the National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP) in Massachusetts, MAG910000, this letter submits a Notice of Intent (NOI) and the applicable documentation as required by the US Environmental Protection Agency (EPA) for temporary construction site dewatering under the RGP. Haley & Aldrich, Inc. (Haley & Aldrich) has prepared this submission to facilitate off-site discharge of temporary dewatering effluent during construction activities at the Hotel Podium portions of the Massachusetts Department of Transportation (MassDOT) Air Rights Parcel 12, located at 408 Newbury Street in Boston, Massachusetts.

SITE LOCATION AND HISTORICAL SITE USAGE

The northern portion of the MassDOT Air Rights Parcel 12 site where construction of the Hotel Building is planned (the “site”), is bordered by Newbury Street to the north, Massachusetts Avenue to the east, and the Massachusetts Turnpike (I-90) to the south. The site is currently a grassy slope down from Newbury Street to the interstate with a paved entrance ramp to I-90 cutting through the site. Surface grades range from approximately El. 29 to El. 23 across the parking lot to El. 11 at the Massachusetts Bay Transportation Authority (MBTA) tracks.

The central portion of the of the MassDOT Air Rights Parcel 12 site where the retail Podium is planned on a deck structure over the Massachusetts Turnpike (I-90) is currently occupied by the east and westbound lanes of I-90 and the MBTA railroad alignment. Grades range from approximately El. 12 to El. 15 along the Turnpike roadway.

The site consists of filled land located on the original “Gravelly Point” peninsula of Boston’s Back Bay neighborhood, which was formerly surrounded by tidal marsh. The former buildings along Newbury Street were demolished for construction of I-90 in the 1960’s and the roadway was constructed along former railway lines.

PROPOSED ACTIVITIES

The MassDOT Air Rights Parcel 12 Development includes the construction of a mixed-use development of air rights above the Boston Extension of I-90, the MBTA railroad tracks and two land areas north and south on I-90.

This application is for dewatering activities that will occur in the land area on the north side of the Air Rights parcel along Newbury Street. This area will be developed as a 13-story hotel building with a one-level basement and a deck structure supporting a 2-story retail podium spanning I-90 .

GROUNDWATER QUALITY DATA

One groundwater sample was obtained from observation well SP-HA20-D5(OW) in February 2020. The collected sample was submitted to Alpha Analytical Laboratory (Alpha) of Westborough, MA, for chemical analysis of 2017 NPDES Remediation General Permit parameters including volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs), total metals, total petroleum hydrocarbons (TPH), extractable petroleum hydrocarbons (EPH), oil & grease, pesticides, polychlorinated biphenyls (PCBs), total suspended solids, chloride, total cyanide, total phenolics, and total residual chlorine.

Refer to Table I for a summary of groundwater and surface water analytical data. The recent groundwater analyses did not detect concentrations of chemical constituents above applicable Massachusetts Contingency Plan (MCP) RCGW-2 reportable concentrations. The construction dewatering effluent at the site will be managed under an RGP. The location of the observation well SP-HA20-D5(OW) is shown on Figure 2.

ETHANOL DISCUSSION

Ethanol sampling was not conducted on the groundwater sample collected in February 2020 as site history does not suggest that ethanol was stored at the property, and a petroleum product containing ethanol is not known to have been released at the site. Ethanol has been increasingly used in fuels since 2006 (according to the 2016 NOI Fact Sheet), and according to site history, the site has been landscaped and used as an I-90 on-ramp and east and west bound roadway since the 1960’s, with no known fuel-related storage or handling activities conducted onsite.

RECEIVING WATER QUALITY INFORMATION AND DILUTION FACTOR

On 6 December 2019, Haley & Aldrich collected a receiving water sample from the Muddy River using a disposable polyethylene bailer. The surface water sample was collected and submitted to Alpha for

chemical analysis of pH, total metals, hexavalent chromium, ammonia, and hardness. Field parameters, including pH and temperature, were collected from surface water sample at the time of sampling. The results of water quality testing are summarized in Table I.

The pH and temperature readings collected in the field were used to calculate the site Water Quality Based Effluent Limitations (WQBELs). We have additionally confirmed with the Massachusetts Department of Environmental Protection (MassDEP) that the dilution factor for the receiving waters is 37.2.

EFFLUENT CRITERIA DETERMINATION

The EPA suggested WQBEL Calculation spreadsheet was used to calculate the effluent criteria for the site. Groundwater and Receiving Water data were input and the resulting criteria was tabulated in the attached Table I. As requested by EPA, the Microsoft Excel spreadsheet for the WQBEL calculation will be submitted to the EPA via email, for their review upon submission of this NOI.

DEWATERING SYSTEM AND OFF-SITE DISCHARGE

During the below grade construction activities, it will be necessary to perform temporary dewatering to control surface water runoff from precipitation, and construction-generated water to enable excavation and foundation construction activities in-the-dry. Dewatering activities are anticipated to start in June 2020 and is anticipated to be required for up to 12 months. On average, we estimate effluent discharge rates of about 25 gallons per minute (gpm), with occasional peak flows of approximately 150 gpm during significant precipitation events. Temporary dewatering will be conducted from sumps located in excavations.

Construction dewatering includes piping and discharging to storm drains located on or near the site that discharge to the Muddy River, as shown on Figure 3. An effluent treatment system will be designed by the Contractor to meet the 2017 NPDES RGP Discharge Effluent Criteria. Prior to discharge, collected water is routed through a sedimentation tank and a bag filter and other necessary treatment components, to remove suspended solids and undissolved chemical constituents, as shown on Figure 4.

NMFS ELIGIBILITY

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

OWNER AND OPERATOR INFORMATION

Owner:

S&A P-12 Property LLC
136 Brookline Avenue
Boston, MA 02115
Contact: Mr. Abe Menzin
Executive Vice President, Development

Operator:

Suffolk
65 Allerton Street
Boston, MA 02119
Contact: Mr. Gregory Sawin
Senior Project Executive

APPENDICES

The completed "Suggested Notice of Intent" form as provided in the RGP is enclosed in Appendix A. The site owner is the S&A P-12 Property LLC. S&A P-12 Property LLC has hired Suffolk as the Construction Manager responsible for the site work, including dewatering activities. The excavation subcontractor hired by Suffolk will operate the dewatering system. Haley & Aldrich is monitoring the Contractor's dewatering activities on behalf of S&A P-12 Property LLC in accordance with the requirements for this NOI submission.

Appendices B and C include the National Register of Historic Places and ESA Documentation, respectively. Copies of the groundwater testing laboratory data reports are provided in Appendix D. Appendix E provides the site contractor's dewatering submittal which includes details of the dewatering system. A Best Management Practices Plan (BMPP), which outlines the proposed discharge operations covered under the RGP, will be available at the site and is not being submitted with this NOI as requested by EPA.

CLOSING

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

Sincerely yours,
HALEY & ALDRICH, INC



Elizabeth L. White, EIT
Environmental Engineer



Kenneth N. Alepidis, P.G. (NH)
Senior Technical Specialist - Geology



Douglas M. Lindsay, P.G. (NH), LSP
Associate | Senior Project Manager

Attachments:

Table I – Summary of Water Quality Data

Figure 1 – Site Locus

Figure 2 – Site and Subsurface Location Plan

Figure 3 – BWSC Plan

Figure 4 – Proposed Treatment System Schematic

Appendix A – NOI for RGP

Appendix B – National Register of Historic Places and Massachusetts

Historical Commission Documentation

Appendix C – Endangered Species Act Documentation

Appendix D – Laboratory Data Reports

Appendix E – Example Contractor Dewatering Submittal

c: S&A P-12 Property LLC; Abe Menzin

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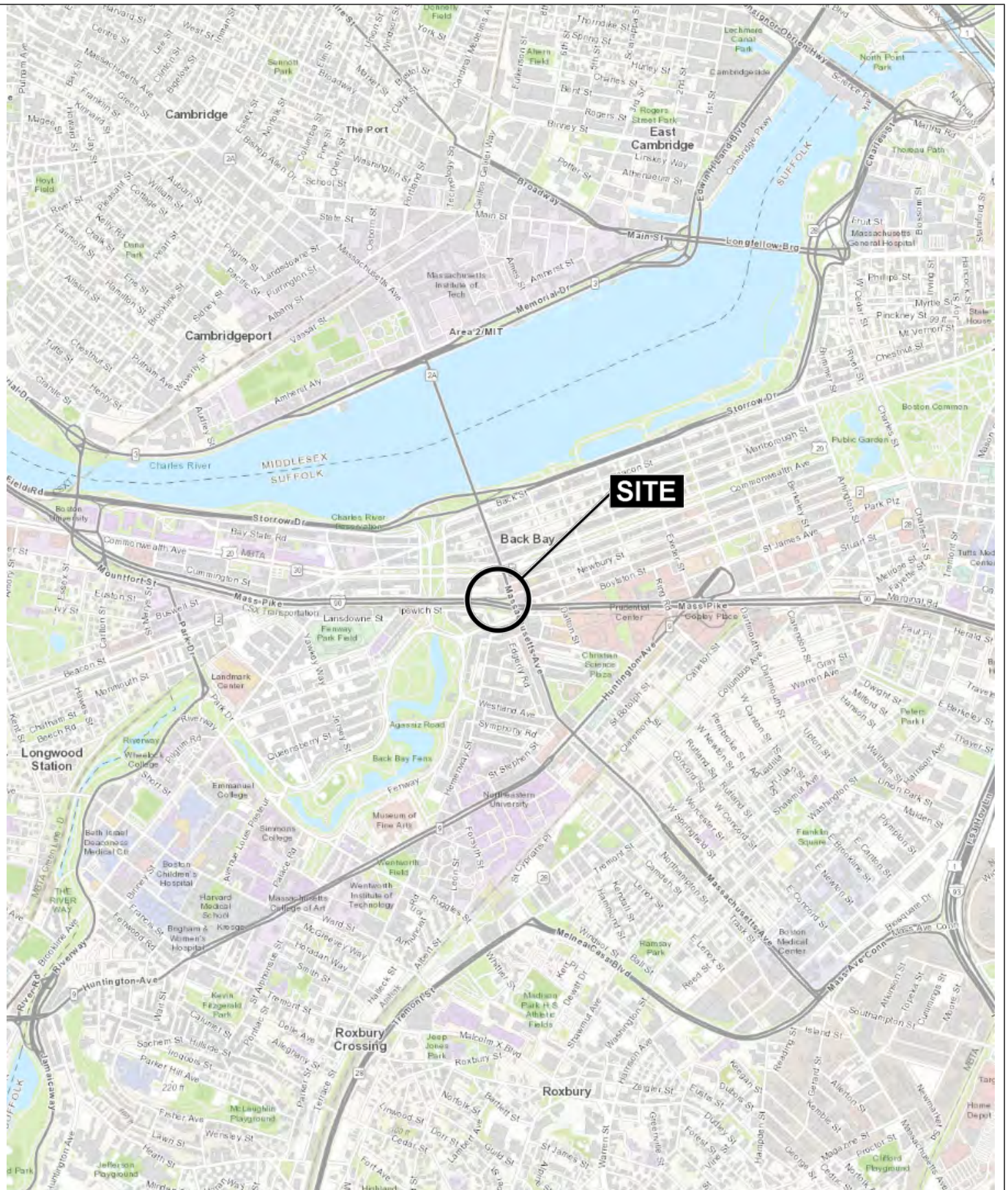
TABLES

TABLE I
SUMMARY OF WATER QUALITY DATA
MASSDOT AIR RIGHTS PARCEL 12 - HOTEL
BOSTON, MA
FILE NO. 132410

	Location Name Sample Name Sample Date Sample Type Lab Sample ID	2017 NPDES RGP Effluent Limits	SP-HA20-D5(OW) SP-HA20-D5(OW)_02112020 02/11/2020 SOURCE WATER L2006185-01	MUDDY_SURF MUDDY_SURF_20191206 12/06/2019 RECEIVIING WATER L1958575-01
Volatile Organic Compounds (ug/L)				
1,1,1-Trichloroethane		200	ND (2)	-
1,1,2-Trichloroethane		5	ND (1.5)	-
1,1-Dichloroethane		70	ND (1.5)	-
1,1-Dichloroethene		70	ND (1)	-
1,2,3-Trichloropropane		NA	ND (0.03)	-
1,2-Dibromo-3-chloropropane (DBCP)		NA	ND (0.01)	-
1,2-Dibromoethane (Ethylene Dibromide)		0.05	ND (0.01)	-
1,2-Dichlorobenzene		600	ND (5)	-
1,2-Dichloroethane		5	ND (1.5)	-
1,3-Dichlorobenzene		320	ND (5)	-
1,4-Dichlorobenzene		5	ND (5)	-
Acetone		7970	ND (10)	-
Benzene		5*	ND (1)	-
Carbon tetrachloride		4.4	ND (1)	-
cis-1,2-Dichloroethene		70	ND (1)	-
Ethylbenzene		*	ND (1)	-
m,p-Xylenes		*	ND (2)	-
Methyl Tert Butyl Ether		70	ND (10)	-
Methylene chloride		4.6	ND (1)	-
o-Xylene		*	ND (1)	-
Tert-Amyl Methyl Ether (TAME)		90	ND (20)	-
Tert-Butyl Alcohol (tert-Butanol)		120	ND (100)	-
Tetrachloroethene		5	ND (1)	-
Toluene		*	ND (1)	-
Trichloroethene		5	ND (1)	-
Vinyl chloride		2	ND (1)	-
Xylene (total)		*	ND (1)	-
SUM Volatile Organic Compounds		NA	ND	-
Total BTEX		100	ND	-
Volatile Organic Compounds SIM (ug/L)				
1,4-Dioxane		200	ND (50)	-
Semi-Volatile Organic Compounds (ug/L)				
bis(2-Ethylhexyl)phthalate		101***	ND (2.2)	-
Butyl benzylphthalate		***	ND (5)	-
Diethyl phthalate		***	ND (5)	-
Dimethyl phthalate		***	ND (5)	-
Di-n-butylphthalate		***	ND (5)	-
Di-n-octyl phthalate		***	ND (5)	-
SUM Semi-Volatile Organic Compounds		NA	ND	-
Semi-Volatile Organic Compounds (SIM) (ug/L)				
Acenaphthene		**	0.76	-
Acenaphthylene		**	ND (0.1)	-
Anthracene		**	0.15	-
Benzo(a)anthracene		1++	ND (0.1)	-
Benzo(a)pyrene		1++	ND (0.1)	-
Benzo(b)fluoranthene		1++	ND (0.1)	-
Benzo(g,h,i)perylene		**	ND (0.1)	-
Benzo(k)fluoranthene		1++	ND (0.1)	-
Chrysene		1++	ND (0.1)	-
Dibenz(a,h)anthracene		1++	ND (0.1)	-
Fluoranthene		**	0.13	-
Fluorene		**	0.25	-
Indeno(1,2,3-cd)pyrene		1++	ND (0.1)	-
Naphthalene		20**	16	-
Pentachlorophenol		1	ND (1)	-
Phenanthrene		**	0.22	-
Pyrene		**	0.1	-
SUM Semi-Volatile Organic Compounds		NA	17.51	-
Total Group I PAHs		1++	ND	-
Total Group II PAHs		100**	17.61	-
SUM of Phthalates		190***	ND	-
Total Petroleum Hydrocarbons (mg/L)				
Petroleum hydrocarbons		5	ND (4)	-
Inorganic Compounds (mg/L)				
Antimony, Total		0.206	ND (0.004)	ND (0.004)
Arsenic, Total		0.104	0.00151	ND (0.001)
Cadmium, Total		0.0102	ND (0.0002)	ND (0.0002)
Chromium, Total		0.323	0.00186	ND (0.001)
Chromium III (Trivalent), Total (mg/L)		0.323	ND (0.01)	-
Chromium VI (Hexavalent), Dissolved		0.323	ND (0.01)	ND (0.01)
Copper, Total		0.242	ND (0.001)	0.00294
Cyanide, Total		178	ND (0.005)	-
Hardness, Total		NA	949	84.4
Iron, Total		5	7.54	0.519
Lead, Total		0.16	ND (0.001)	0.00194
Mercury, Total		0.000739	ND (0.0002)	ND (0.0002)
Nickel, Total		1.45	ND (0.002)	ND (0.002)
Selenium, Total		0.2358	ND (0.005)	ND (0.005)
Silver, Total		0.0351	ND (0.0004)	ND (0.0004)
Zinc, Total		0.42	ND (0.01)	0.02506
Other				
Ammonia, Total (mg/L)		Report Only	5.92	0.19
Chloride, Total (mg/L)		Report Only	224	-
Chlorine, residual, Total (mg/L)		0.2	ND (0.02)	-
Total Phenols (mg/L)		1080	ND (0.03)	-
Total Suspended Solids (TSS) (mg/L)		30	30	-
pH (lab), Total (pH units)		NA	6.75	7.4
PCBs (ug/L)				
Aroclor-1016 (PCB-1016)		NA	ND (0.25)	-
Aroclor-1221 (PCB-1221)		NA	ND (0.25)	-
Aroclor-1232 (PCB-1232)		NA	ND (0.25)	-
Aroclor-1242 (PCB-1242)		NA	ND (0.25)	-
Aroclor-1248 (PCB-1248)		NA	ND (0.25)	-
Aroclor-1254 (PCB-1254)		NA	ND (0.25)	-
Aroclor-1260 (PCB-1260)		NA	ND (0.2)	-
Total PCBs		0.000064+	ND	-

ABBREVIATIONS AND NOTES:
-: Not Analyzed
µg/L: micrograms per liter
mg/L: milligram per liter
NA: Not Applicable
ND (2.5): Not detected, number in parentheses is the laboratory detection limit

FIGURES



MAP SOURCE: ESRI

SITE COORDINATES: 42°20'53"N, 71°5'19"W

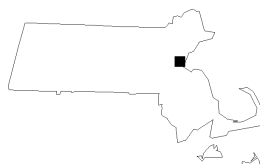
**HALEY
ALDRICH**

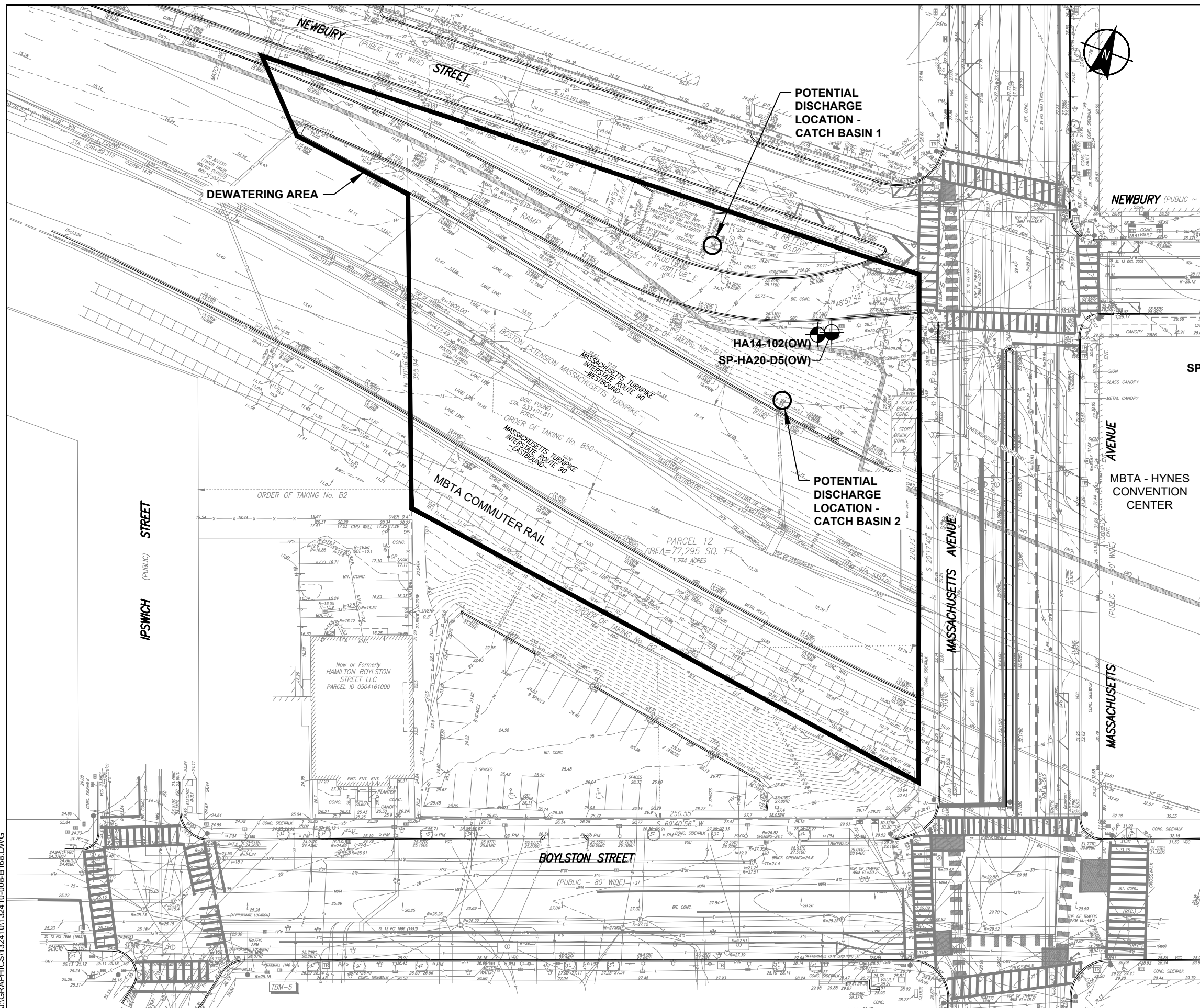
PARCEL 12 AIR RIGHTS
BOSTON, MASSACHUSETTS

PROJECT LOCUS

APPROXIMATE SCALE: 1 IN = 2000 FT
JUNE 2020

FIGURE 1





- LEGEND:**
- SP-HA20-D5(OW)** DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING DRILLED BY GEOLOGIC-EARTH EXPLORATION, INC. ON 29 JANUARY 2020 AND MONITORED BY HALEY & ALDRICH, INC.
- HA14-101** DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING DRILLED BY GEOLOGIC-EARTH EXPLORATION, INC. FROM 2 SEPTEMBER TO 1 OCTOBER 2014 AND MONITORED BY HALEY & ALDRICH, INC.
- (OW)** INDICATES OBSERVATION WELL IN COMPLETED BOREHOLE
- NOTES:**
1. BASE PLAN TAKEN FROM AN ELECTRONIC FILE TITLED "16334-(STATE PLANE & BCB) (9-13-2019).dwg", PROVIDED BY FELDMAN LAND SURVEYORS ON 13 SEPTEMBER 2019.
 2. ELEVATIONS ARE IN FEET AND REFERENCE BOSTON CITY BASE (BCB) DATUM.

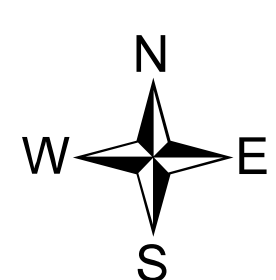
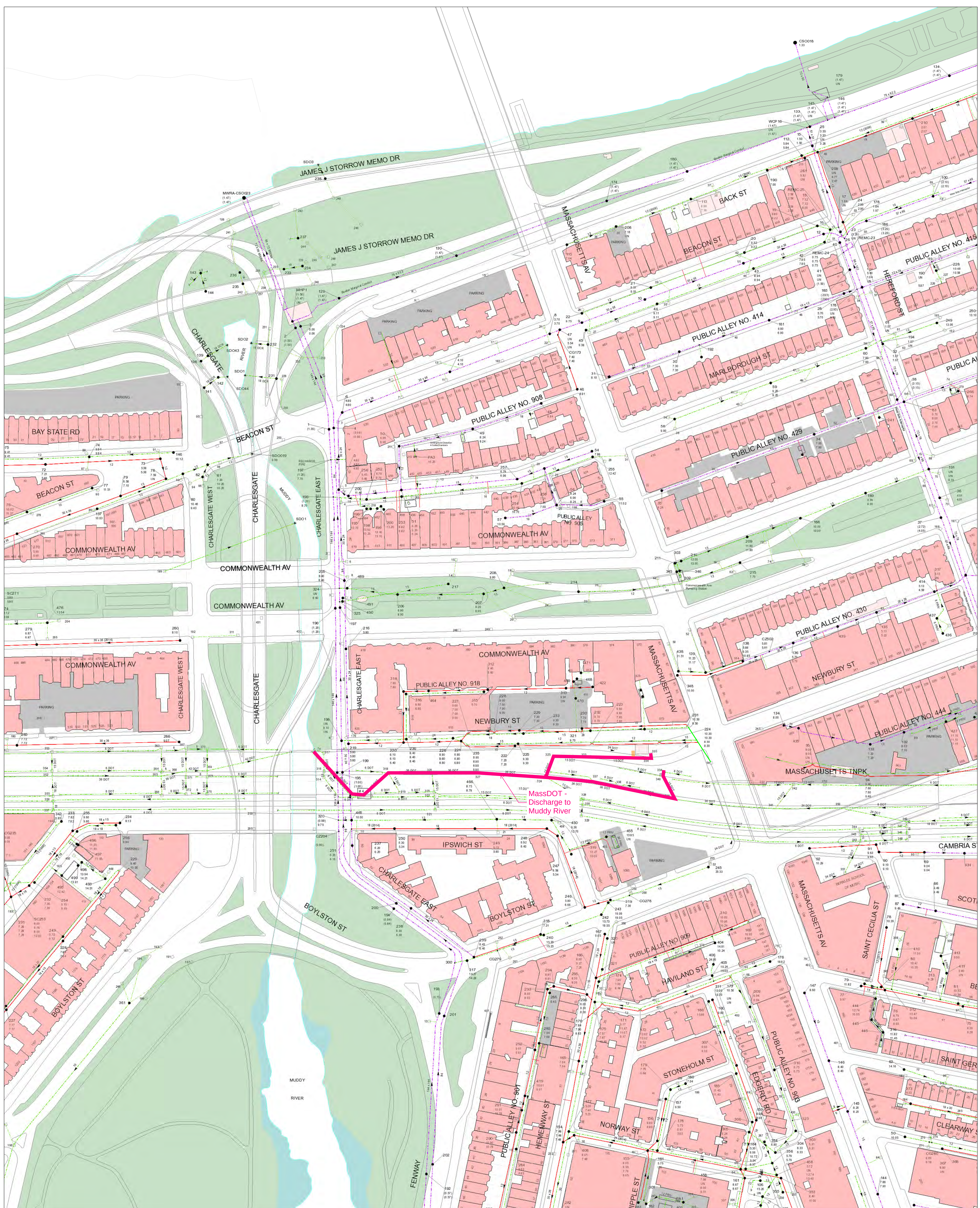
**HALEY
ALDRICH**

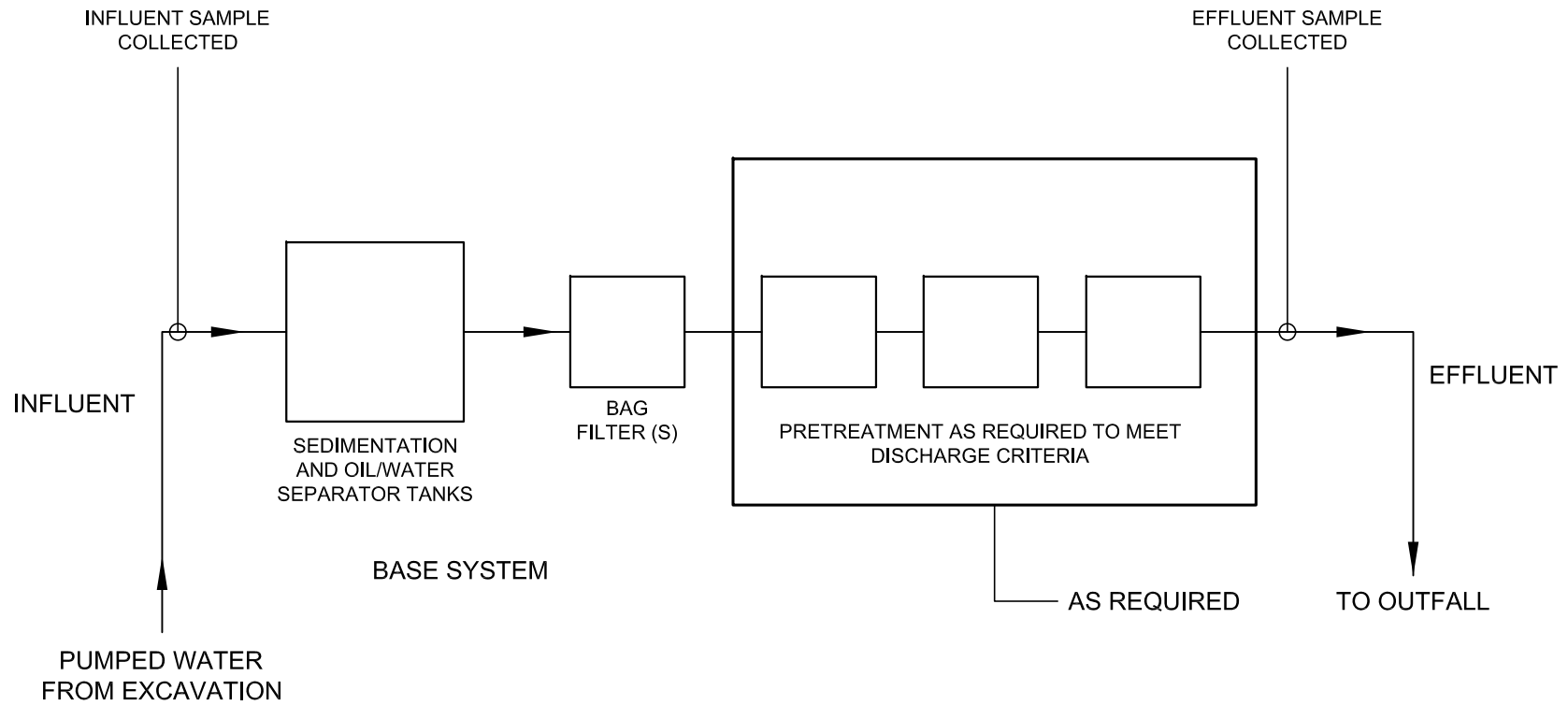
MASS DOT AIR RIGHTS PARCEL 12
BOSTON, MASSACHUSETTS

**SITE PLAN AND SUBSURFACE
EXPLORATION LOCATION PLAN**

SCALE: AS SHOWN
JUNE 2020

FIGURE 2





LEGEND:

—▶ DIRECTION OF FLOW

NOTE:

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

**HALEY
ALDRICH**

PARCEL 12 AIR RIGHTS
BOSTON, MASSACHUSETTS

**PROPOSED
TREATMENT SYSTEM
SCHEMATIC**

SCALE: NONE
JUNE 2020

FIGURE 4

APPENDIX A

NOI for RGP

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

A. General site information:

1. Name of site: Air Rights Parcel 12 - Hotel Building and Podiums	Site address: 408 Newbury Street Street: Boston, MA 02215		
2. Site owner S&A P-12 Property LLC Owner is (check one): ☐ Federal ☐ State/Tribal ☒ Private ☐ Other; if so, specify:	City: Boston	State: MA	Zip: 02118
3. Site operator, if different than owner Suffolk	Contact Person: Abe Menzin, Executive Vice President Development Telephone: 617-603-5412 Email: amenzin@samuelsre.com Mailing address: Street: 136 Brookline Avenue City: Boston State: MA Zip: 02115		
4. NPDES permit number assigned by EPA: N/A NPDES permit is (check all that apply): ☒ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	5. Other regulatory program(s) that apply to the site (check all that apply): ☒ MA Chapter 21e; list RTN(s): 3-36279 ☐ NH Groundwater Management Permit or Groundwater Release Detection Permit: ☐ CERCLA ☐ UIC Program ☐ POTW Pretreatment ☐ CWA Section 404		

B. Receiving water information:

1. Name of receiving water(s): Muddy River	Waterbody identification of receiving water(s): MA72-11	Classification of receiving water(s): B(CSO)\WWF
Receiving water is (check any that apply): ☐ Outstanding Resource Water ☐ Ocean Sanctuary ☐ territorial sea ☐ Wild and Scenic River		
2. Has the operator attached a location map in accordance with the instructions in B, above? (check one): ☒ Yes ☐ No Are sensitive receptors present near the site? (check one): ☐ Yes ☒ No If yes, specify:		
3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP. No		
4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.		12.1 ft ³ /s
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.		37.2
6. Has the operator received confirmation from the appropriate State for the 7Q10 and dilution factor indicated? (check one): ☒ Yes ☐ No If yes, indicate date confirmation received: 3/30/2020		
7. Has the operator attached a summary of receiving water sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ☒ Yes ☐ No		

C. Source water information:

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

2. Source water contaminants: None above RGP effluent limits	
a. For source waters that are contaminated groundwater or contaminated surface water, indicate are any contaminants present that are not included in the RGP? (check one): ☐ Yes ☒ No If yes, indicate the contaminant(s) and the maximum concentration present in accordance with the instructions in Appendix VIII.	b. For a source water that is a surface water other than the receiving water, potable water or other, indicate any contaminants present at the maximum concentration in accordance with the instructions in Appendix VIII? (check one): ☐ Yes ☐ No
3. Has the source water been previously chlorinated or otherwise contains residual chlorine? (check one): ☐ Yes ☒ No	

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ☐ Existing discharge ☒ New discharge ☐ New source	
Outfall(s): Outfall 1	Outfall location(s): (Latitude, Longitude) 42 20 52, 71 05 31
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ☒ Indirect discharge, if so, specify: The discharge will be pumped through site infrastructure connecting to MassDOT lines, then out to Muddy River. ☐ A private storm sewer system ☒ A municipal storm sewer system (MassDOT's storm sewer system) If the discharge enters the receiving water via a private or municipal storm sewer system: Has notification been provided to the owner of this system? (check one): ☐ Yes ☒ No A Construction permit (including dewatering) will be submitted to MassDOT) Has the operator has received permission from the owner to use such system for discharges? (check one): ☐ Yes ☒ No, if so, explain, with an estimated timeframe for obtaining permission: A Construction permit (including dewatering) will be submitted to MassDOT) Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ☒ Yes ☐ No	
Provide the expected start and end dates of discharge(s) (month/year): June 2020 - June 2021 Indicate if the discharge is expected to occur over a duration of: ☐ less than 12 months ☒ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ☒ Yes ☐ No	

2. Activity Category: (check all that apply)	3. Contamination Type Category: (check all that apply)	
☐ I – Petroleum-Related Site Remediation ☐ II – Non-Petroleum-Related Site Remediation ☒ III – Contaminated Site Dewatering ☐ IV – Dewatering of Pipelines and Tanks ☐ V – Aquifer Pump Testing ☐ VI – Well Development/Rehabilitation ☐ VII – Collection Structure Dewatering/Remediation ☐ VIII – Dredge-Related Dewatering	a. If Activity Category I or II: (check all that apply) ☐ A. Inorganics ☐ B. Non-Halogenated Volatile Organic Compounds ☐ C. Halogenated Volatile Organic Compounds ☐ D. Non-Halogenated Semi-Volatile Organic Compounds ☐ E. Halogenated Semi-Volatile Organic Compounds ☐ F. Fuels Parameters	
	b. If Activity Category III, IV, V, VI, VII or VIII: (check either G or H)	
	<table border="1"> <tr> <td data-bbox="970 800 1419 873">☒ G. Sites with Known Contamination</td><td data-bbox="1419 800 2003 873">☐ H. Sites with Unknown Contamination</td></tr> </table>	☒ G. Sites with Known Contamination
☒ G. Sites with Known Contamination	☐ H. Sites with Unknown Contamination	
<table border="1"> <tr> <td data-bbox="970 873 1419 1409"> c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply) ☒ A. Inorganics ☐ B. Non-Halogenated Volatile Organic Compounds ☐ C. Halogenated Volatile Organic Compounds ☐ D. Non-Halogenated Semi-Volatile Organic Compounds ☐ E. Halogenated Semi-Volatile Organic Compounds ☐ F. Fuels Parameters </td><td data-bbox="1419 873 2003 1409"> d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply </td></tr> </table>	c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply) ☒ A. Inorganics ☐ B. Non-Halogenated Volatile Organic Compounds ☐ C. Halogenated Volatile Organic Compounds ☐ D. Non-Halogenated Semi-Volatile Organic Compounds ☐ E. Halogenated Semi-Volatile Organic Compounds ☐ F. Fuels Parameters	d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply
c. If Category III-G, IV-G, V-G, VI-G, VII-G or VIII-G: (check all that apply) ☒ A. Inorganics ☐ B. Non-Halogenated Volatile Organic Compounds ☐ C. Halogenated Volatile Organic Compounds ☐ D. Non-Halogenated Semi-Volatile Organic Compounds ☐ E. Halogenated Semi-Volatile Organic Compounds ☐ F. Fuels Parameters	d. If Category III-H, IV-H, V-H, VI-H, VII-H or VIII-H Contamination Type Categories A through F apply	

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		X	1	4500NH3-BH	75	5920	5920	Report mg/L	---
Chloride		X	1	300.0	25000	224000	224000	Report µg/l	---
Total Residual Chlorine	X		1	4500CL	20	ND	ND	0.2 mg/L	409 ug/L
Total Suspended Solids		X	1	2540D	5000	30000	30000	30 mg/L	—
Antimony Total		X*	1	200.8	4	ND	ND	206 µg/L	23,781
Arsenic Total		X	1	200.8	1	1.51	1.51	104 µg/L	372
Cadmium Total		X*	1	200.8	0.2	ND	ND	10.2 µg/L	10.62
Chromium III		X*	1	107	10	ND	ND	323 µg/L	3402
Chromium VI	X		1	7196A	10	ND	ND	323 µg/L	424.9
Copper Total	X		1	200.8	1	ND	ND	242 µg/L	369
Iron Total		X	1	200.7	50	7540	7540	5,000 µg/L	37,157
Lead Total		X*	1	200.8	1	ND	ND	160 µg/L	130
Mercury Total		X*	1	245.1	0.2	ND	ND	0.739 µg/L	33.66
Nickel Total		X*	1	200.8	2	ND	ND	1,450 µg/L	2,063
Selenium Total	X		1	200.8	5	ND	ND	235.8 µg/L	185.8
Silver Total	X		1	200.8	0.4	ND	ND	35.1 µg/L	159.7
Zinc Total		X*	1	200.8	10	ND	ND	420 µg/L	4,739.7
Cyanide Total	X		1	4500CN-CE	5	ND	ND	178 mg/L	193.2
B. Non-Halogenated VOCs									
Total BTEX	X		1	624.1	NA	ND	ND	100 µg/L	---
Benzene		X*	1	624.1	1	ND	ND	5.0 µg/L	---
1,4 Dioxane	X		1	624.1	50	ND	ND	200 µg/L	---
Acetone		X*	1	624.1	10	ND	ND	7.97 mg/L	---
Phenol	X		1	420.1	30	ND	ND	1,080 µg/L	11,147

X* = detected in soil only

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	X		1	624.1	1.0	ND	ND	4.4 µg/L	59.5
1,2 Dichlorobenzene	X		1	624.1	5	ND	ND	600 µg/L	---
1,3 Dichlorobenzene	X		1	624.1	5	ND	ND	320 µg/L	---
1,4 Dichlorobenzene	X		1	624.1	5	ND	ND	5.0 µg/L	---
Total dichlorobenzene	X		1	624.1	5	NA	NA	763 µg/L in NH	---
1,1 Dichloroethane	X		1	624.1	1.5	ND	ND	70 µg/L	---
1,2 Dichloroethane	X		1	624.1	1.5	ND	ND	5.0 µg/L	---
1,1 Dichloroethylene	X		1	624.1	1	ND	ND	3.2 µg/L	---
Ethylene Dibromide	X		1	504.1	0.01	ND	ND	0.05 µg/L	---
Methylene Chloride	X		1	624.1	1.0	ND	ND	4.6 µg/L	---
1,1,1 Trichloroethane	X		1	624.1	2.0	ND	ND	200 µg/L	---
1,1,2 Trichloroethane	X		1	624.1	1.5	ND	ND	5.0 µg/L	---
Trichloroethylene	X		1	624.1	1.0	ND	ND	5.0 µg/L	---
Tetrachloroethylene	X		1	624.1	1.0	ND	ND	5.0 µg/L	122.6
cis-1,2 Dichloroethylene	X		1	624.1	1.0	ND	ND	70 µg/L	---
Vinyl Chloride	X		1	624.1	1.0	ND	ND	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	X		1	625.1	5	ND	ND	190 µg/L	
Diethylhexyl phthalate	X		1	625.1	2.2	ND	ND	101 µg/L	81.7
Total Group I PAHs		X*	1	625.1	0.1	ND	ND	1.0 µg/L	---
Benzo(a)anthracene		X*	1	625.1	0.1	ND	ND	As Total PAHs	0.1412
Benzo(a)pyrene		X*	1	625.1	0.1	ND	ND		0.1412
Benzo(b)fluoranthene		X*	1	625.1	0.1	ND	ND		0.1412
Benzo(k)fluoranthene		X*	1	625.1	0.1	ND	ND		0.1412
Chrysene		X*	1	625.1	0.1	ND	ND		0.1412
Dibenzo(a,h)anthracene		X*	1	625.1	0.1	ND	ND		0.1412
Indeno(1,2,3-cd)pyrene		X*	1	625.1	0.1	ND	ND		0.1412

X* = detected in soil only

[illegible]

Other Continuation

Additional compounds detected in soil only:**VOCs**

2-Butanone (Methyl Ethyl Ketone)

Acetone

Benzene

Carbon disulfide

Cymene (p-Isopropyltoluene)

Naphthalene

Tetrahydrofuran

Toluene

Other

Lead TCLP

Total Solids (%)

pH

Conductivity

Total Petroleum Hydrocarbons

SVOCs

2-Methylnaphthalene

3&4-Methylphenol

Acenaphthene

Acenaphthylene

Anthracene

Benzo(a)anthracene

Benzo(a)pyrene

Benzo(b)fluoranthene

Benzo(g,h,i)perylene

Benzo(k)fluoranthene

Chrysene

Dibenz(a,h)anthracene

Dibenzofuran

Fluoranthene

Fluorene

Indeno(1,2,3-cd)pyrene

Naphthalene

Phenanthrene

Pyrene

Metals (mg/kg)

Antimony

Barium

Beryllium

Cadmium

Chromium

Lead

Mercury

Nickel

Vanadium

Zinc

E. Treatment system information

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

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

Flocculation to control suspended solids

The following will be applied IF REQUIRED per effluent monitoring sampling:

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

Prior to discharge, collected water will be routed through a sedimentation tank and a bag filter and other necessary treatment components (potentially: Ion exchange, GAC, oil/water separator), to remove suspended solids and undissolved chemical constituents, as shown on Figure 4 of the NPDES permit application.

Identify each major treatment component (check any that apply):

☒ Fractionation tanks ☐ Equalization tank ☒ Oil/water separator ☐ Mechanical filter ☒ Media filter
☐ Chemical feed tank ☐ Air stripping unit ☒ Bag filter ☐ Other; if so, specify:

Indicate if either of the following will occur (check any that apply):

☐ Chlorination ☐ De-chlorination

3. Provide the **design flow capacity** in gallons per minute (gpm) of the most limiting component.

Indicate the most limiting component: **150 gpm**

Is use of a flow meter feasible? (check one): ☒ Yes ☐ No, if so, provide justification:

Provide the proposed maximum effluent flow in gpm. **150 gpm**

Provide the average effluent flow in gpm. **50 gpm**

If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:

4. Has the operator attached a schematic of flow in accordance with the instructions in E, above? (check one): ☒ Yes ☐ No

F. Chemical and additive information

1. Indicate the type(s) of chemical or additive that will be applied to effluent prior to discharge or that may otherwise be present in the discharge(s): (check all that apply) ☐ Algaecides/biocides ☐ Antifoams ☐ Coagulants ☐ Corrosion/scale inhibitors ☐ Disinfectants ☐ Flocculants ☐ Neutralizing agents ☐ Oxidants ☐ Oxygen ☐ scavengers ☐ pH conditioners ☐ Bioremedial agents, including microbes ☐ Chlorine or chemicals containing chlorine ☐ Other; if so, specify:
2. Provide the following information for each chemical/additive, using attachments, if necessary: a. Product name, chemical formula, and manufacturer of the chemical/additive; b. Purpose or use of the chemical/additive or remedial agent; c. Material Safety Data Sheet (MSDS) and Chemical Abstracts Service (CAS) Registry number for each chemical/additive; d. The frequency (hourly, daily, etc.), duration (hours, days), quantity (maximum and average), and method of application for the chemical/additive; e. Any material compatibility risks for storage and/or use including the control measures used to minimize such risks; and f. If available, the vendor's reported aquatic toxicity (NOAEL and/or LC50 in percent for aquatic organism(s)).
3. Has the operator attached an explanation which demonstrates that the addition of such chemicals/additives may be authorized under this general permit in accordance with the instructions in F, above? (check one): ☐ Yes ☒ No; if no, has the operator attached data that demonstrates each of the 126 priority pollutants in CWA Section 307(a) and 40 CFR Part 423.15(j)(1) are non-detect in discharges with the addition of the proposed chemical/additive? (check one): ☐ Yes ☐ No N/A

G. Endangered Species Act eligibility determination

1. Indicate under which criterion the discharge(s) is eligible for coverage under this general permit: ☐ FWS Criterion A: No endangered or threatened species or critical habitat are in proximity to the discharges or related activities or come in contact with the “action area”. ☒ FWS Criterion B: Formal or informal consultation with the FWS under section 7 of the ESA resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by FWS on a finding that the discharges and related activities are “not likely to adversely affect” listed species or critical habitat (informal consultation). Has the operator completed consultation with FWS? (check one): ☒ Yes ☐ No; if no, is consultation underway? (check one): ☐ Yes ☐ No ☐ FWS Criterion C: Using the best scientific and commercial data available, the effect of the discharges and related activities on listed species and critical habitat have been evaluated. Based on those evaluations, a determination is made by EPA, or by the operator and affirmed by EPA, that the discharges and related activities will have “no effect” on any federally threatened or endangered listed species or designated critical habitat under the jurisdiction of the FWS. This determination was made by: (check one) ☐ the operator ☐ EPA ☐ Other; if so, specify:

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

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

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

H. National Historic Preservation Act eligibility determination

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

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

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

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

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

Does the supporting documentation include any written agreement with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (TPHO), or other tribal representative that outlines measures the operator will carry out to mitigate or prevent any adverse effects on historic properties? (check one): ☐ Yes ☒ N/A

I. Supplemental information

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

Refer to attached Haley & Aldrich, Inc. letter.

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

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

J. Certification requirement

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

BMPP certification statement: A BMPP meeting the requirements of this general permit will be implemented upon initiation of discharge.

Notification provided to the appropriate State, including a copy of this NOI, if required.

Check one: Yes ☒ No ☐

Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.

Check one: Yes ☒ No ☐

Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested.

Check one: Yes ☒ No ☐ NA ☐

Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.

Check one: Yes ☒ No ☐ NA ☐

Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:

Check one: Yes ☐ No ☐ NA ☒

Signature:



Date: 06/18/2020

Print Name and Title: Gregory Sawin, Project Executive

APPENDIX B

National Register of Historic Places and Massachusetts Historical Commission Documentation

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Street No: 408; Street Name: Newbury St; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year
----------	---------------	--------	------	------

408 Newbury Street, Boston Search
408 Newbury St, Boston, Massachusetts, 02115

Available Layers

Base Layer
Inventory Layers
MassGIS Layers

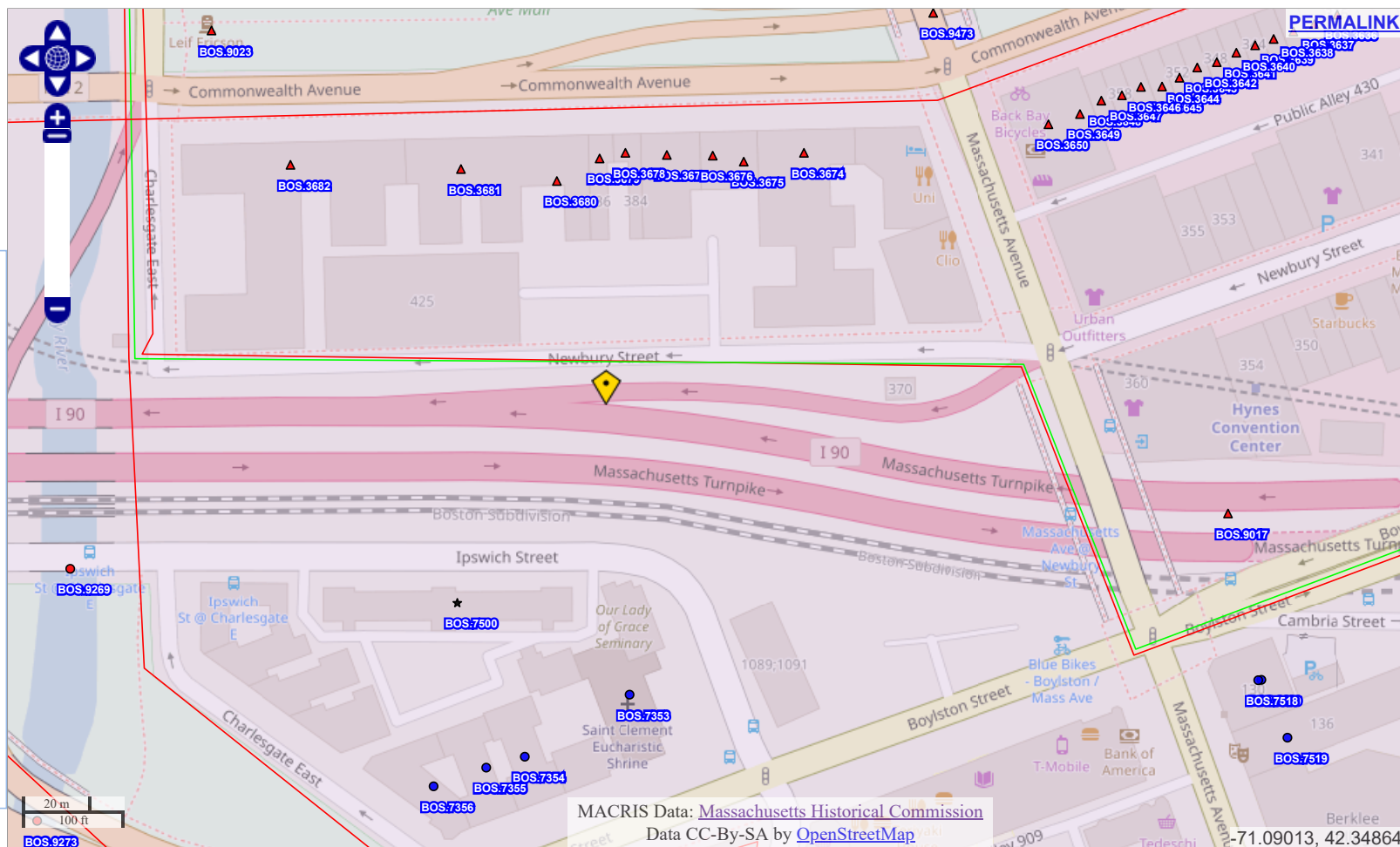
Legend

MHC Inventory Points

- Nat'l Register of Historic Places
- ★ Preservation Restriction
- ▲ Local Historic District
- ▲ NRHP and LHD
- Inventoried Property

Archaeology Login

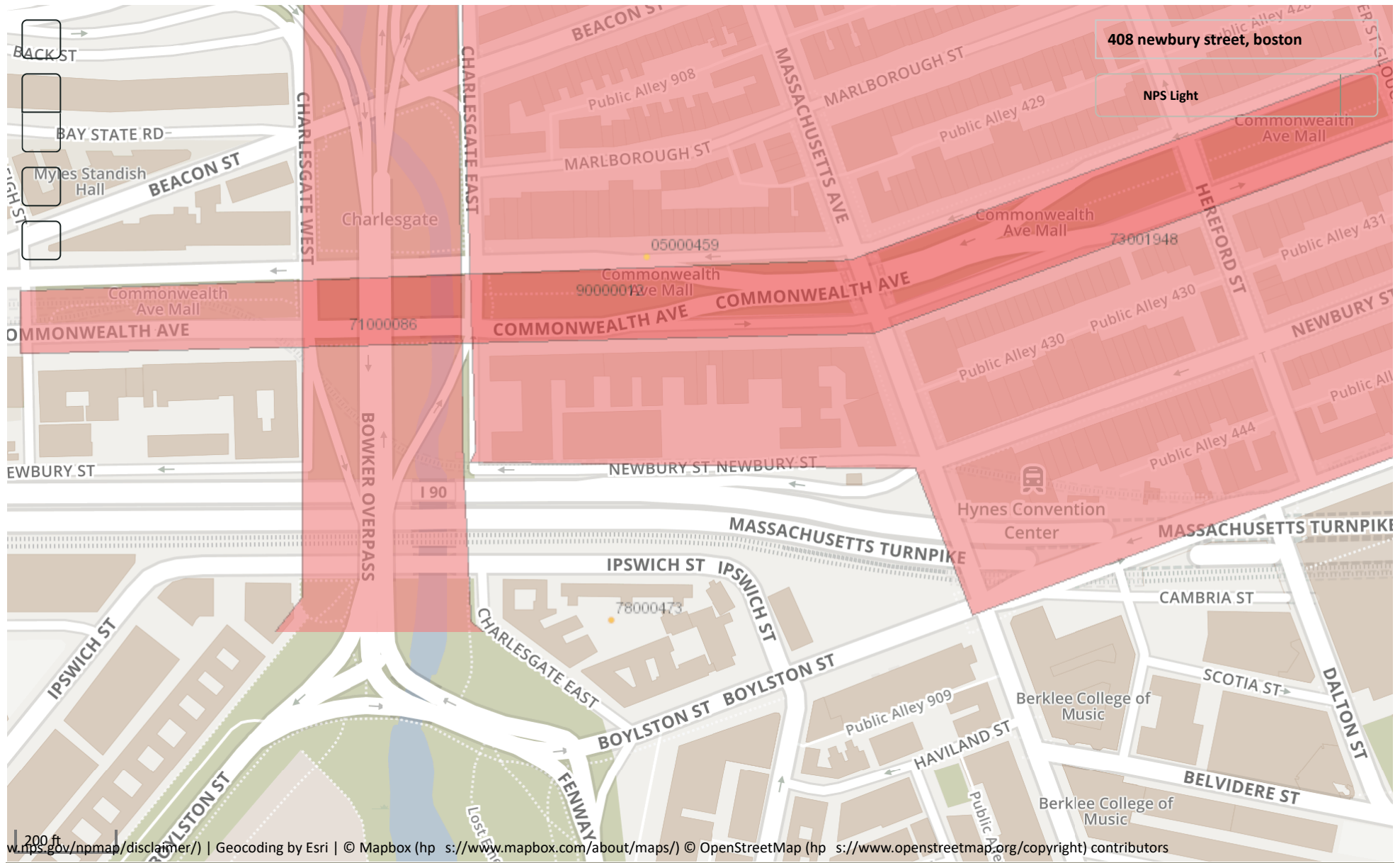
Username:
Password:



National Register of Historic Places

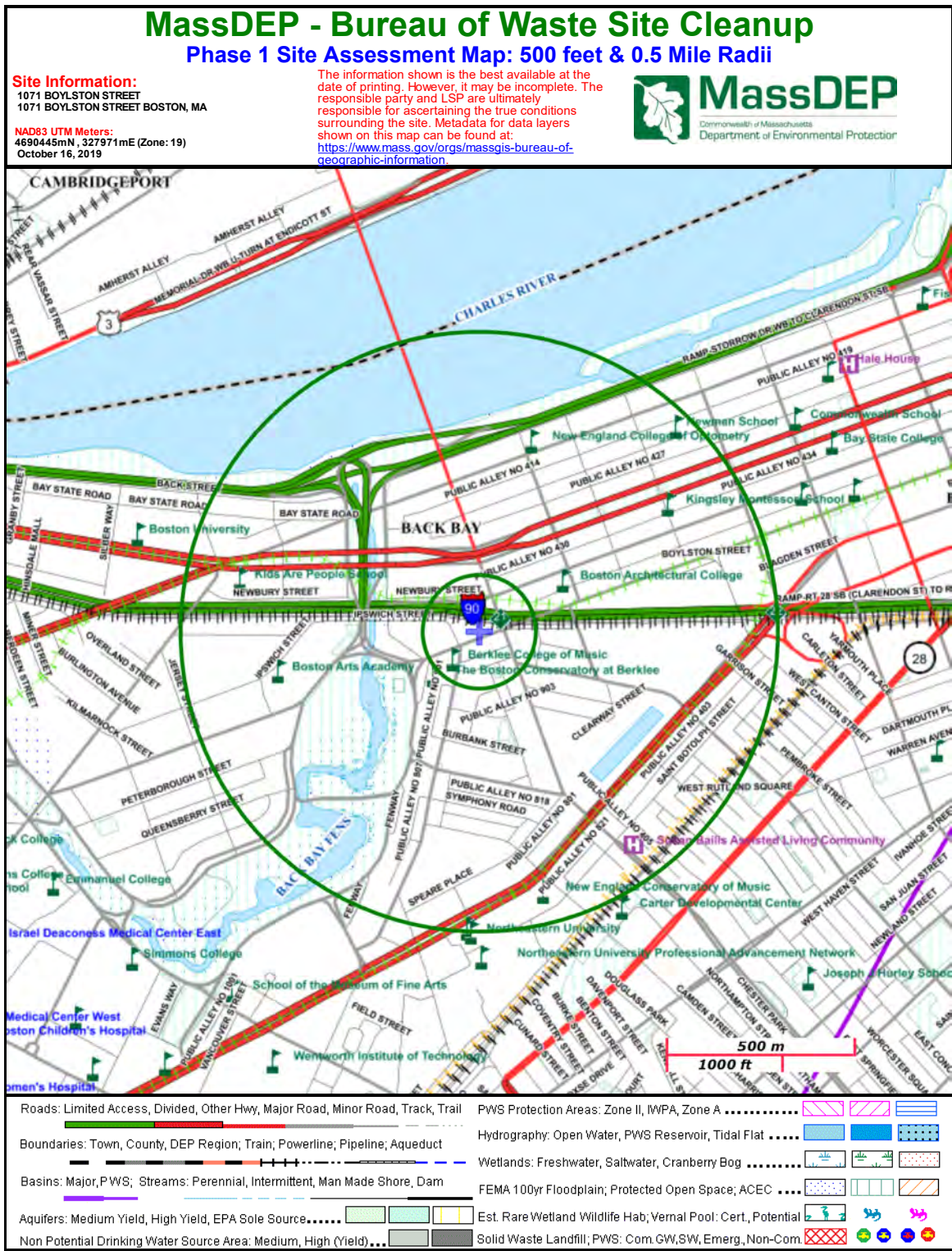
National Park Service
U.S. Department of the Interior

Public, non-restricted data depicting National Register spatial data processed by the Cultural Resources GIS facility. ...



APPENDIX C

ESA Documentation



APPENDIX D

Laboratory Data Reports



ANALYTICAL REPORT

Lab Number:	L1958575
Client:	Haley & Aldrich, Inc. 465 Medford Street, Suite 2200 Charlestown, MA 02129-1400
ATTN:	Scott Bamford
Phone:	(617) 886-7420
Project Name:	AIR RIGHTS PARCEL 12
Project Number:	132410-007 SID 6.2
Report Date:	12/12/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

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: AIR RIGHTS PARCEL 12
Project Number: 132410-007 SID 6.2

Lab Number: L1958575
Report Date: 12/12/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1958575-01	MUDDY_SURF_20191206	WATER	BACK BAY, BOSTON, MA	12/06/19 13:35	12/06/19

Project Name: AIR RIGHTS PARCEL 12
Project Number: 132410-007 SID 6.2

Lab Number: L1958575
Report Date: 12/12/19

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.

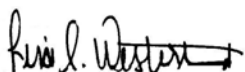
Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

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.

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:

 Lisa Westerlind

Title: Technical Director/Representative

Date: 12/12/19

METALS

Project Name: AIR RIGHTS PARCEL 12**Lab Number:** L1958575**Project Number:** 132410-007 SID 6.2**Report Date:** 12/12/19**SAMPLE RESULTS**

Lab ID: L1958575-01

Date Collected: 12/06/19 13:35

Client ID: MUDDY_SURF_20191206

Date Received: 12/06/19

Sample Location: BACK BAY, 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	12/11/19 01:13	12/11/19 10:52	EPA 3005A	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	12/11/19 01:13	12/11/19 10:52	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	12/11/19 01:13	12/11/19 10:52	EPA 3005A	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	12/11/19 01:13	12/11/19 10:52	EPA 3005A	3,200.8	AM
Copper, Total	0.00294		mg/l	0.00100	--	1	12/11/19 01:13	12/11/19 10:52	EPA 3005A	3,200.8	AM
Iron, Total	0.519		mg/l	0.050	--	1	12/11/19 01:13	12/11/19 08:33	EPA 3005A	19,200.7	PE
Lead, Total	0.00194		mg/l	0.00100	--	1	12/11/19 01:13	12/11/19 10:52	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	12/10/19 15:27	12/10/19 21:45	EPA 245.1	3,245.1	AL
Nickel, Total	ND		mg/l	0.00200	--	1	12/11/19 01:13	12/11/19 10:52	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	12/11/19 01:13	12/11/19 10:52	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	12/11/19 01:13	12/11/19 10:52	EPA 3005A	3,200.8	AM
Zinc, Total	0.02506		mg/l	0.01000	--	1	12/11/19 01:13	12/11/19 10:52	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	84.4		mg/l	0.660	NA	1	12/11/19 01:13	12/11/19 08:33	EPA 3005A	19,200.7	PE



Project Name: AIR RIGHTS PARCEL 12

Lab Number: L1958575

Project Number: 132410-007 SID 6.2

Report Date: 12/12/19

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 Batch: WG1319024-1									
Mercury, Total	ND	mg/l	0.00020	--	1	12/10/19 15:27	12/10/19 21:16	3,245.1	AL

Prep Information

Digestion Method: EPA 245.1

Parameter	Result Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1319168-1									
Antimony, Total	ND	mg/l	0.00400	--	1	12/11/19 01:13	12/11/19 10:31	3,200.8	AM
Arsenic, Total	ND	mg/l	0.00100	--	1	12/11/19 01:13	12/11/19 10:31	3,200.8	AM
Cadmium, Total	ND	mg/l	0.00020	--	1	12/11/19 01:13	12/11/19 10:31	3,200.8	AM
Chromium, Total	ND	mg/l	0.00100	--	1	12/11/19 01:13	12/11/19 10:31	3,200.8	AM
Copper, Total	ND	mg/l	0.00100	--	1	12/11/19 01:13	12/11/19 10:31	3,200.8	AM
Lead, Total	ND	mg/l	0.00100	--	1	12/11/19 01:13	12/11/19 10:31	3,200.8	AM
Nickel, Total	ND	mg/l	0.00200	--	1	12/11/19 01:13	12/11/19 10:31	3,200.8	AM
Selenium, Total	ND	mg/l	0.00500	--	1	12/11/19 01:13	12/11/19 10:31	3,200.8	AM
Silver, Total	ND	mg/l	0.00040	--	1	12/11/19 01:13	12/11/19 10:31	3,200.8	AM
Zinc, Total	ND	mg/l	0.01000	--	1	12/11/19 01:13	12/11/19 10:31	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: WG1319169-1									
Iron, Total	ND	mg/l	0.050	--	1	12/11/19 01:13	12/11/19 08:25	19,200.7	PE

Prep Information

Digestion Method: EPA 3005A



Project Name: AIR RIGHTS PARCEL 12**Lab Number:** L1958575**Project Number:** 132410-007 SID 6.2**Report Date:** 12/12/19

Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness by SM 2340B - Mansfield Lab for sample(s): 01 Batch: WG1319169-1										
Hardness	ND		mg/l	0.660	NA	1	12/11/19 01:13	12/11/19 08:25	19,200.7	PE

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: AIR RIGHTS PARCEL 12

Project Number: 132410-007 SID 6.2

Lab Number: L1958575

Report Date: 12/12/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1319024-2								
Mercury, Total	86		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1319168-2								
Antimony, Total	96		-		85-115	-		
Arsenic, Total	106		-		85-115	-		
Cadmium, Total	108		-		85-115	-		
Chromium, Total	102		-		85-115	-		
Copper, Total	98		-		85-115	-		
Lead, Total	104		-		85-115	-		
Nickel, Total	103		-		85-115	-		
Selenium, Total	113		-		85-115	-		
Silver, Total	99		-		85-115	-		
Zinc, Total	111		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1319169-2								
Iron, Total	102		-		85-115	-		
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 Batch: WG1319169-2								
Hardness	100		-		85-115	-		

Matrix Spike Analysis

Batch Quality Control

Project Name: AIR RIGHTS PARCEL 12

Project Number: 132410-007 SID 6.2

Lab Number: L1958575

Report Date: 12/12/19

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 QC Batch ID: WG1319024-3 QC Sample: L1957601-01 Client ID: MS Sample												
Mercury, Total	0.00041	0.005	0.00460	84		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1319168-3 QC Sample: L1958575-01 Client ID: MUDDY_SURF_20191206												
Antimony, Total	ND	0.5	0.3879	78		-	-		70-130	-		20
Arsenic, Total	ND	0.12	0.1302	108		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.05477	107		-	-		70-130	-		20
Chromium, Total	ND	0.2	0.2067	103		-	-		70-130	-		20
Copper, Total	0.00294	0.25	0.2553	101		-	-		70-130	-		20
Lead, Total	0.00194	0.51	0.5464	107		-	-		70-130	-		20
Nickel, Total	ND	0.5	0.5208	104		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1188	99		-	-		70-130	-		20
Silver, Total	ND	0.05	0.05094	102		-	-		70-130	-		20
Zinc, Total	0.02506	0.5	0.5912	113		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1319169-3 QC Sample: L1958575-01 Client ID: MUDDY_SURF_20191206												
Iron, Total	0.519	1	1.52	100		-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1319169-3 QC Sample: L1958575-01 Client ID: MUDDY_SURF_20191206												
Hardness	84.4	66.2	147	95		-	-		75-125	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: AIR RIGHTS PARCEL 12

Project Number: 132410-007 SID 6.2

Lab Number: L1958575

Report Date: 12/12/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1319024-4 QC Sample: L1957601-01 Client ID: DUP Sample						
Mercury, Total	0.00041	0.00054	mg/l	26	Q	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1319168-4 QC Sample: L1958575-01 Client ID: MUDDY_SURF_20191206						
Antimony, Total	ND	0.00443	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	0.00294	0.00302	mg/l	3		20
Lead, Total	0.00194	0.00204	mg/l	5		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	0.02506	0.02544	mg/l	2		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1319169-4 QC Sample: L1958575-01 Client ID: MUDDY_SURF_20191206						
Iron, Total	0.519	0.536	mg/l	3		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1319169-4 QC Sample: L1958575-01 Client ID: MUDDY_SURF_20191206						
Hardness	84.4	84.4	mg/l	0		20

INORGANICS & MISCELLANEOUS

Project Name: AIR RIGHTS PARCEL 12

Lab Number: L1958575

Project Number: 132410-007 SID 6.2

Report Date: 12/12/19

SAMPLE RESULTS

Lab ID: L1958575-01

Date Collected: 12/06/19 13:35

Client ID: MUDDY_SURF_20191206

Date Received: 12/06/19

Sample Location: BACK BAY, BOSTON, MA

Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
pH (H)	7.4		SU	-	NA	1	-	12/07/19 01:50	121,4500H+-B	JA
Nitrogen, Ammonia	0.190		mg/l	0.075	--	1	12/10/19 08:59	12/11/19 21:53	121,4500NH3-BH	AT
Chromium, Hexavalent	ND		mg/l	0.010	--	1	12/07/19 00:06	12/07/19 01:10	1,7196A	AS



Project Name: AIR RIGHTS PARCEL 12

Lab Number: L1958575

Project Number: 132410-007 SID 6.2

Report Date: 12/12/19

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 Batch: WG1318571-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	12/07/19 00:06	12/07/19 01:08	1,7196A	AS
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1318647-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	12/10/19 08:59	12/11/19 21:40	121,4500NH3-BH	AT

Lab Control Sample Analysis

Batch Quality Control

Project Name: AIR RIGHTS PARCEL 12

Project Number: 132410-007 SID 6.2

Lab Number: L1958575

Report Date: 12/12/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1317885-1								
pH	100		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1318571-2								
Chromium, Hexavalent	107		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1318647-2								
Nitrogen, Ammonia	90		-		80-120	-		20

Matrix Spike Analysis

Batch Quality Control

Project Name: AIR RIGHTS PARCEL 12

Lab Number: L1958575

Project Number: 132410-007 SID 6.2

Report Date: 12/12/19

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 QC Batch ID: WG1318571-4 QC Sample: L1958575-01 Client ID: MUDDY_SURF_20191206												
Chromium, Hexavalent	ND	0.1	0.099	99		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1318647-4 QC Sample: L1958270-01 Client ID: MS Sample												
Nitrogen, Ammonia	0.161	4	3.18	75	Q	-	-		80-120	-		20

Project Name: AIR RIGHTS PARCEL 12
Project Number: 132410-007 SID 6.2

Lab Duplicate Analysis

Batch Quality Control

Lab Number: L1958575
Report Date: 12/12/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1317885-2 QC Sample: L1958566-01 Client ID: DUP Sample						
pH	10.8	10.9	SU	1		5
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1318571-3 QC Sample: L1958577-01 Client ID: DUP Sample						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1318647-3 QC Sample: L1958270-01 Client ID: DUP Sample						
Nitrogen, Ammonia	0.161	0.182	mg/l	12		20

Project Name: AIR RIGHTS PARCEL 12**Lab Number:** L1958575**Project Number:** 132410-007 SID 6.2**Report Date:** 12/12/19**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(*)
L1958575-01A	Plastic 250ml unpreserved	A	7	7	2.0	Y	Absent		HEXCR-7196(1),PH-4500(.01)
L1958575-01B	Plastic 250ml HNO3 preserved	A	<2	<2	2.0	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),FE-UI(180),HARDU(180),CU-2008T(180),AS-2008T(180),HG-U(28),AG-2008T(180),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L1958575-01C	Plastic 500ml H2SO4 preserved	A	<2	<2	2.0	Y	Absent		NH3-4500(28)

Project Name: AIR RIGHTS PARCEL 12
Project Number: 132410-007 SID 6.2

Lab Number: L1958575
Report Date: 12/12/19

GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCS D	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.) Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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

Report Format: Data Usability Report



Project Name: AIR RIGHTS PARCEL 12**Lab Number:** L1958575**Project Number:** 132410-007 SID 6.2**Report Date:** 12/12/19

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

Terms

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

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

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

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

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

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

PFAS Total: With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. 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 Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- 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.

Report Format: Data Usability Report



Project Name: AIR RIGHTS PARCEL 12

Lab Number: L1958575

Project Number: 132410-007 SID 6.2

Report Date: 12/12/19

Data Qualifiers

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Project Name: AIR RIGHTS PARCEL 12
Project Number: 132410-007 SID 6.2

Lab Number: L1958575
Report Date: 12/12/19

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.
- 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.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

Revision 15

Published Date: 8/15/2019 9:53:42 AM

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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), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

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

Westborough Facility:**Drinking Water****EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,****EPA 180.1, SM2130B, SM4500Cl-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.****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.

[illegible]



ANALYTICAL REPORT

Lab Number:	L2006185
Client:	Haley & Aldrich, Inc. 465 Medford Street, Suite 2200 Charlestown, MA 02129-1400
ATTN:	Scott Bamford
Phone:	(617) 886-7420
Project Name:	PARCEL 12-HOTEL
Project Number:	132410-008 SID 7.1
Report Date:	03/05/20

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

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: PARCEL 12-HOTEL
Project Number: 132410-008 SID 7.1

Lab Number: L2006185
Report Date: 03/05/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2006185-01	SP-HA20-D5(OW)_02112020	WATER	BOSTON, MASSACHUSETTS	02/11/20 12:15	02/11/20

Project Name: PARCEL 12-HOTEL
Project Number: 132410-008 SID 7.1

Lab Number: L2006185
Report Date: 03/05/20

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: PARCEL 12-HOTEL
Project Number: 132410-008 SID 7.1

Lab Number: L2006185
Report Date: 03/05/20

Case Narrative (continued)

Report Revision

March 05, 2020: This report includes the results of the Total Hardness analysis performed on L2006185-01 (SP-HA20-D5(OW)_02112020).

Report Submission

February 25, 2020: This final report includes the results of all requested analyses.

February 17, 2020: This is a preliminary report.

Sample Receipt

L2006185-01 (SP-HA20-D5(OW)_02112020): Sample containers for the analysis of Ethanol were received, but were not listed on the chain of custody. At the client's request, the analysis was not performed.

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

Authorized Signature:

 Michelle M. Morris

Title: Technical Director/Representative

Date: 03/05/20

ORGANICS

VOLATILES

Project Name: PARCEL 12-HOTEL**Lab Number:** L2006185**Project Number:** 132410-008 SID 7.1**Report Date:** 03/05/20**SAMPLE RESULTS**

Lab ID: L2006185-01
 Client ID: SP-HA20-D5(OW)_02112020
 Sample Location: BOSTON, MASSACHUSETTS

Date Collected: 02/11/20 12:15
 Date Received: 02/11/20
 Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Analytical Method: 128,624.1

Analytical Date: 02/14/20 13:25

Analyst: GT

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

Project Name: PARCEL 12-HOTEL**Lab Number:** L2006185**Project Number:** 132410-008 SID 7.1**Report Date:** 03/05/20**SAMPLE RESULTS**

Lab ID: L2006185-01

Date Collected: 02/11/20 12:15

Client ID: SP-HA20-D5(OW)_02112020

Date Received: 02/11/20

Sample Location: BOSTON, MASSACHUSETTS

Field Prep: Refer to COC

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	94		60-140
Fluorobenzene	94		60-140
4-Bromofluorobenzene	85		60-140

Project Name: PARCEL 12-HOTEL**Lab Number:** L2006185**Project Number:** 132410-008 SID 7.1**Report Date:** 03/05/20**SAMPLE RESULTS**

Lab ID: L2006185-01
 Client ID: SP-HA20-D5(OW)_02112020
 Sample Location: BOSTON, MASSACHUSETTS

Date Collected: 02/11/20 12:15
 Date Received: 02/11/20
 Field Prep: Refer to COC

Sample Depth:

Matrix: Water
 Analytical Method: 128,624.1-SIM
 Analytical Date: 02/14/20 18:01
 Analyst: GT

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

1,4-Dioxane	ND		ug/l	50	--	1
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Surrogate	% Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	109		60-140
4-Bromofluorobenzene	106		60-140

Project Name: PARCEL 12-HOTEL**Lab Number:** L2006185**Project Number:** 132410-008 SID 7.1**Report Date:** 03/05/20**SAMPLE RESULTS**

Lab ID: L2006185-01
 Client ID: SP-HA20-D5(OW)_02112020
 Sample Location: BOSTON, MASSACHUSETTS

Date Collected: 02/11/20 12:15
 Date Received: 02/11/20
 Field Prep: Refer to COC

Sample Depth:

Matrix: Water
 Analytical Method: 14,504.1
 Analytical Date: 02/13/20 17:43
 Analyst: AMM

Extraction Method: EPA 504.1
 Extraction Date: 02/13/20 13:23

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.010	--	1	A
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	--	1	A
1,2,3-Trichloropropane	ND		ug/l	0.030	--	1	A

Project Name: PARCEL 12-HOTEL
Project Number: 132410-008 SID 7.1

Lab Number: L2006185
Report Date: 03/05/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 02/13/20 16:53
Analyst: AMM

Extraction Method: EPA 504.1
Extraction Date: 02/13/20 13:23

Parameter	Result	Qualifier	Units	RL	MDL
Microextractables by GC - Westborough Lab for sample(s): 01 Batch: WG1340342-1					
1,2-Dibromoethane	ND		ug/l	0.010	-- A
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	-- A
1,2,3-Trichloropropane	ND		ug/l	0.030	-- A

Project Name: PARCEL 12-HOTEL
Project Number: 132410-008 SID 7.1

Lab Number: L2006185
Report Date: 03/05/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
 Analytical Date: 02/14/20 11:33
 Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1340917-8					
Methylene chloride	ND		ug/l	1.0	--
1,1-Dichloroethane	ND		ug/l	1.5	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.5	--
Tetrachloroethene	ND		ug/l	1.0	--
1,2-Dichloroethane	ND		ug/l	1.5	--
1,1,1-Trichloroethane	ND		ug/l	2.0	--
Benzene	ND		ug/l	1.0	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Vinyl chloride	ND		ug/l	1.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--
1,2-Dichlorobenzene	ND		ug/l	5.0	--
1,3-Dichlorobenzene	ND		ug/l	5.0	--
1,4-Dichlorobenzene	ND		ug/l	5.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-xylene	ND		ug/l	1.0	--
Xylenes, Total	ND		ug/l	1.0	--
Acetone	ND		ug/l	10	--
Methyl tert butyl ether	ND		ug/l	10	--
Tert-Butyl Alcohol	ND		ug/l	100	--
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--

Project Name: PARCEL 12-HOTEL
Project Number: 132410-008 SID 7.1

Lab Number: L2006185
Report Date: 03/05/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
 Analytical Date: 02/14/20 11:33
 Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1340917-8					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	95		60-140
Fluorobenzene	96		60-140
4-Bromofluorobenzene	81		60-140

Project Name: PARCEL 12-HOTEL
Project Number: 132410-008 SID 7.1

Lab Number: L2006185
Report Date: 03/05/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1-SIM
 Analytical Date: 02/14/20 17:28
 Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1341364-4					
1,4-Dioxane	ND		ug/l	50	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	110		60-140
4-Bromofluorobenzene	106		60-140

Lab Control Sample Analysis Batch Quality Control

Project Name: PARCEL 12-HOTEL

Project Number: 132410-008 SID 7.1

Lab Number: L2006185

Report Date: 03/05/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab Associated sample(s): 01 Batch: WG1340342-2									
1,2-Dibromoethane	91		-		80-120	-			A
1,2-Dibromo-3-chloropropane	99		-		80-120	-			A
1,2,3-Trichloropropane	98		-		80-120	-			A

Lab Control Sample Analysis

Batch Quality Control

Project Name: PARCEL 12-HOTEL

Project Number: 132410-008 SID 7.1

Lab Number: L2006185

Report Date: 03/05/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1340917-7								
Methylene chloride	90		-		60-140	-		28
1,1-Dichloroethane	85		-		50-150	-		49
Carbon tetrachloride	90		-		70-130	-		41
1,1,2-Trichloroethane	100		-		70-130	-		45
Tetrachloroethene	90		-		70-130	-		39
1,2-Dichloroethane	100		-		70-130	-		49
1,1,1-Trichloroethane	95		-		70-130	-		36
Benzene	90		-		65-135	-		61
Toluene	95		-		70-130	-		41
Ethylbenzene	85		-		60-140	-		63
Vinyl chloride	90		-		5-195	-		66
1,1-Dichloroethene	90		-		50-150	-		32
cis-1,2-Dichloroethene	90		-		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	80		-		65-135	-		57
p/m-Xylene	88		-		60-140	-		30
o-xylene	80		-		60-140	-		30
Acetone	132		-		40-160	-		30
Methyl tert butyl ether	105		-		60-140	-		30
Tert-Butyl Alcohol	130		-		60-140	-		30
Tertiary-Amyl Methyl Ether	90		-		60-140	-		30

Lab Control Sample Analysis **Batch Quality Control**

Project Name: PARCEL 12-HOTEL

Lab Number: L2006185

Project Number: 132410-008 SID 7.1

Report Date: 03/05/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1340917-7

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	96				60-140
Fluorobenzene	96				60-140
4-Bromofluorobenzene	83				60-140

Lab Control Sample Analysis Batch Quality Control

Project Name: PARCEL 12-HOTEL

Lab Number: L2006185

Project Number: 132410-008 SID 7.1

Report Date: 03/05/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1341364-3								
1,4-Dioxane	100		-		60-140	-		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Fluorobenzene	109				60-140
4-Bromofluorobenzene	105				60-140

Matrix Spike Analysis

Batch Quality Control

Project Name: PARCEL 12-HOTEL

Project Number: 132410-008 SID 7.1

Lab Number: L2006185

Report Date: 03/05/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1340342-3 QC Sample: L2006427-01 Client ID: MS Sample													
1,2-Dibromoethane	ND	0.251	0.235	94		-	-		80-120	-		20	A
1,2-Dibromo-3-chloropropane	ND	0.251	0.257	102		-	-		80-120	-		20	A
1,2,3-Trichloropropane	ND	0.251	0.253	101		-	-		80-120	-		20	A

SEMIVOLATILES

Project Name: PARCEL 12-HOTEL
Project Number: 132410-008 SID 7.1

Lab Number: L2006185
Report Date: 03/05/20

SAMPLE RESULTS

Lab ID: L2006185-01
Client ID: SP-HA20-D5(OW)_02112020
Sample Location: BOSTON, MASSACHUSETTS

Date Collected: 02/11/20 12:15
Date Received: 02/11/20
Field Prep: Refer to COC

Sample Depth:

Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 02/17/20 14:25
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 02/12/20 03:37

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	86		42-122
2-Fluorobiphenyl	82		46-121
4-Terphenyl-d14	99		47-138

Project Name: PARCEL 12-HOTEL**Lab Number:** L2006185**Project Number:** 132410-008 SID 7.1**Report Date:** 03/05/20**SAMPLE RESULTS**

Lab ID: L2006185-01
 Client ID: SP-HA20-D5(OW)_02112020
 Sample Location: BOSTON, MASSACHUSETTS

Date Collected: 02/11/20 12:15
 Date Received: 02/11/20
 Field Prep: Refer to COC

Sample Depth:

Matrix: Water
 Analytical Method: 129,625.1-SIM
 Analytical Date: 02/14/20 13:51
 Analyst: DV

Extraction Method: EPA 625.1
 Extraction Date: 02/12/20 03:41

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	0.76		ug/l	0.10	--	1
Fluoranthene	0.13		ug/l	0.10	--	1
Naphthalene	16		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	0.15		ug/l	0.10	--	1
Benzo(ghi)perylene	ND		ug/l	0.10	--	1
Fluorene	0.25		ug/l	0.10	--	1
Phenanthrene	0.22		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	0.10		ug/l	0.10	--	1
Pentachlorophenol	ND		ug/l	1.0	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	47		25-87
Phenol-d6	41		16-65
Nitrobenzene-d5	88		42-122
2-Fluorobiphenyl	79		46-121
2,4,6-Tribromophenol	109		45-128
4-Terphenyl-d14	92		47-138

Project Name: PARCEL 12-HOTEL
Project Number: 132410-008 SID 7.1

Lab Number: L2006185
Report Date: 03/05/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1
 Analytical Date: 02/12/20 16:00
 Analyst: JG

Extraction Method: EPA 625.1
 Extraction Date: 02/12/20 03:37

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1339777-1					
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	91		42-122
2-Fluorobiphenyl	91		46-121
4-Terphenyl-d14	98		47-138

Project Name: PARCEL 12-HOTEL
Project Number: 132410-008 SID 7.1

Lab Number: L2006185
Report Date: 03/05/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1-SIM
Analytical Date: 02/12/20 18:49
Analyst: DV

Extraction Method: EPA 625.1
Extraction Date: 02/12/20 03:41

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1339778-1					
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	61		25-87
Phenol-d6	50		16-65
Nitrobenzene-d5	96		42-122
2-Fluorobiphenyl	78		46-121
2,4,6-Tribromophenol	114		45-128
4-Terphenyl-d14	106		47-138



Lab Control Sample Analysis

Batch Quality Control

Project Name: PARCEL 12-HOTEL

Project Number: 132410-008 SID 7.1

Lab Number: L2006185

Report Date: 03/05/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1339777-2								
Bis(2-ethylhexyl)phthalate	87		-		29-137	-		82
Butyl benzyl phthalate	85		-		1-140	-		60
Di-n-butylphthalate	85		-		8-120	-		47
Di-n-octylphthalate	85		-		19-132	-		69
Diethyl phthalate	90		-		1-120	-		100
Dimethyl phthalate	94		-		1-120	-		183

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	89				42-122
2-Fluorobiphenyl	85				46-121
4-Terphenyl-d14	87				47-138

Lab Control Sample Analysis Batch Quality Control

Project Name: PARCEL 12-HOTEL

Project Number: 132410-008 SID 7.1

Lab Number: L2006185

Report Date: 03/05/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1339778-2								
Acenaphthene	86		-		60-132	-		30
Fluoranthene	100		-		43-121	-		30
Naphthalene	82		-		36-120	-		30
Benzo(a)anthracene	95		-		42-133	-		30
Benzo(a)pyrene	93		-		32-148	-		30
Benzo(b)fluoranthene	98		-		42-140	-		30
Benzo(k)fluoranthene	81		-		25-146	-		30
Chrysene	84		-		44-140	-		30
Acenaphthylene	78		-		54-126	-		30
Anthracene	87		-		43-120	-		30
Benzo(ghi)perylene	92		-		1-195	-		30
Fluorene	85		-		70-120	-		30
Phenanthrene	90		-		65-120	-		30
Dibenzo(a,h)anthracene	92		-		1-200	-		30
Indeno(1,2,3-cd)pyrene	100		-		1-151	-		30
Pyrene	102		-		70-120	-		30
Pentachlorophenol	115		-		38-152	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: PARCEL 12-HOTEL

Lab Number: L2006185

Project Number: 132410-008 SID 7.1

Report Date: 03/05/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
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Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1339778-2

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	59				25-87
Phenol-d6	48				16-65
Nitrobenzene-d5	91				42-122
2-Fluorobiphenyl	74				46-121
2,4,6-Tribromophenol	98				45-128
4-Terphenyl-d14	98				47-138

PCBS

Project Name: PARCEL 12-HOTEL
Project Number: 132410-008 SID 7.1

Lab Number: L2006185
Report Date: 03/05/20

SAMPLE RESULTS

Lab ID: L2006185-01
Client ID: SP-HA20-D5(OW)_02112020
Sample Location: BOSTON, MASSACHUSETTS

Date Collected: 02/11/20 12:15
Date Received: 02/11/20
Field Prep: Refer to COC

Sample Depth:

Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 02/14/20 11:55
Analyst: HT

Extraction Method: EPA 608.3
Extraction Date: 02/12/20 18:19
Cleanup Method: EPA 3665A
Cleanup Date: 02/12/20
Cleanup Method: EPA 3660B
Cleanup Date: 02/13/20

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	53		37-123	B
Decachlorobiphenyl	42		38-114	B
2,4,5,6-Tetrachloro-m-xylene	55		37-123	A
Decachlorobiphenyl	42		38-114	A

Project Name: PARCEL 12-HOTEL
Project Number: 132410-008 SID 7.1

Lab Number: L2006185
Report Date: 03/05/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 127,608.3
 Analytical Date: 02/13/20 05:47
 Analyst: AWS

Extraction Method: EPA 608.3
 Extraction Date: 02/12/20 16:58
 Cleanup Method: EPA 3665A
 Cleanup Date: 02/12/20
 Cleanup Method: EPA 3660B
 Cleanup Date: 02/13/20

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG1340087-1						
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	91		37-123	B
Decachlorobiphenyl	107		38-114	B
2,4,5,6-Tetrachloro-m-xylene	83		37-123	A
Decachlorobiphenyl	77		38-114	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: PARCEL 12-HOTEL

Lab Number: L2006185

Project Number: 132410-008 SID 7.1

Report Date: 03/05/20

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: WG1340087-2									
Aroclor 1016	78		-		50-140	-		36	A
Aroclor 1260	72		-		8-140	-		38	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	86				37-123	B
Decachlorobiphenyl	99				38-114	B
2,4,5,6-Tetrachloro-m-xylene	82				37-123	A
Decachlorobiphenyl	75				38-114	A

METALS

Project Name: PARCEL 12-HOTEL**Lab Number:** L2006185**Project Number:** 132410-008 SID 7.1**Report Date:** 03/05/20**SAMPLE RESULTS**

Lab ID: L2006185-01

Date Collected: 02/11/20 12:15

Client ID: SP-HA20-D5(OW)_02112020

Date Received: 02/11/20

Sample Location: BOSTON, MASSACHUSETTS

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	02/12/20 14:12	02/14/20 10:47	EPA 3005A	3,200.8	AM
Arsenic, Total	0.00151		mg/l	0.00100	--	1	02/12/20 14:12	02/14/20 10:47	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	02/12/20 14:12	02/14/20 10:47	EPA 3005A	3,200.8	AM
Chromium, Total	0.00186		mg/l	0.00100	--	1	02/12/20 14:12	02/14/20 10:47	EPA 3005A	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	02/12/20 14:12	02/14/20 10:47	EPA 3005A	3,200.8	AM
Iron, Total	7.54		mg/l	0.050	--	1	02/12/20 14:12	02/14/20 18:24	EPA 3005A	19,200.7	LC
Lead, Total	ND		mg/l	0.00100	--	1	02/12/20 14:12	02/14/20 10:47	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	02/13/20 11:18	02/13/20 16:32	EPA 245.1	3,245.1	AL
Nickel, Total	ND		mg/l	0.00200	--	1	02/12/20 14:12	02/14/20 10:47	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	02/12/20 14:12	02/14/20 10:47	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	02/12/20 14:12	02/14/20 10:47	EPA 3005A	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	02/12/20 14:12	02/14/20 10:47	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	949		mg/l	0.660	NA	1	02/12/20 14:12	02/14/20 18:24	EPA 3005A	19,200.7	LC

General Chemistry - Mansfield Lab

Chromium, Trivalent	ND		mg/l	0.010	--	1		02/14/20 10:47	NA	107,-	
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Project Name: PARCEL 12-HOTEL
Project Number: 132410-008 SID 7.1

Lab Number: L2006185
Report Date: 03/05/20

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: WG1339926-1										
Iron, Total	ND		mg/l	0.050	--	1	02/12/20 14:12	02/14/20 11:46	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 Hardness by SM 2340B - Mansfield Lab for sample(s): 01 Batch: WG1339926-1										
Hardness	ND		mg/l	0.660	NA	1	02/12/20 14:12	02/14/20 11:46	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: WG1339961-1										
Mercury, Total	ND		mg/l	0.00020	--	1	02/13/20 11:18	02/13/20 15:59	3,245.1	AL

Prep Information

Digestion Method: EPA 245.1

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1340733-1										
Antimony, Total	ND		mg/l	0.00400	--	1	02/12/20 14:12	02/14/20 09:43	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	02/12/20 14:12	02/14/20 09:43	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	02/12/20 14:12	02/14/20 09:43	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	02/12/20 14:12	02/14/20 09:43	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	02/12/20 14:12	02/14/20 09:43	3,200.8	AM



Project Name: PARCEL 12-HOTEL

Lab Number: L2006185

Project Number: 132410-008 SID 7.1

Report Date: 03/05/20

Method Blank Analysis Batch Quality Control

Lead, Total	ND	mg/l	0.00100	--	1	02/12/20 14:12	02/14/20 09:43	3,200.8	AM
Nickel, Total	ND	mg/l	0.00200	--	1	02/12/20 14:12	02/14/20 09:43	3,200.8	AM
Selenium, Total	ND	mg/l	0.00500	--	1	02/12/20 14:12	02/14/20 09:43	3,200.8	AM
Silver, Total	ND	mg/l	0.00040	--	1	02/12/20 14:12	02/14/20 09:43	3,200.8	AM
Zinc, Total	ND	mg/l	0.01000	--	1	02/12/20 14:12	02/14/20 09:43	3,200.8	AM

Prep Information

Digestion Method: EPA 3005A



Lab Control Sample Analysis

Batch Quality Control

Project Name: PARCEL 12-HOTEL

Project Number: 132410-008 SID 7.1

Lab Number: L2006185

Report Date: 03/05/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1339926-2								
Iron, Total	109		-		85-115	-		
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 Batch: WG1339926-2								
Hardness	100		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1339961-2								
Mercury, Total	98		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1340733-2								
Antimony, Total	86		-		85-115	-		
Arsenic, Total	103		-		85-115	-		
Cadmium, Total	109		-		85-115	-		
Chromium, Total	103		-		85-115	-		
Copper, Total	103		-		85-115	-		
Lead, Total	108		-		85-115	-		
Nickel, Total	102		-		85-115	-		
Selenium, Total	112		-		85-115	-		
Silver, Total	102		-		85-115	-		
Zinc, Total	114		-		85-115	-		

Matrix Spike Analysis **Batch Quality Control**

Project Name: PARCEL 12-HOTEL
Project Number: 132410-008 SID 7.1

Lab Number: L2006185
Report Date: 03/05/20

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: WG1339926-3 QC Sample: L2005829-02 Client ID: MS Sample												
Iron, Total	ND	1	1.10	110		-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1339926-3 QC Sample: L2005829-02 Client ID: MS Sample												
Hardness	10.6	66.2	74.9	97		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1339926-7 QC Sample: L2005922-01 Client ID: MS Sample												
Iron, Total	0.439	1	1.47	103		-	-		75-125	-		20
Total Hardness by SM 2340B - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1339926-7 QC Sample: L2005922-01 Client ID: MS Sample												
Hardness	236	66.2	294	88		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1339961-3 QC Sample: L2006033-01 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00514	103		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1340733-3 QC Sample: L2000002-92 Client ID: MS Sample												
Antimony, Total	ND	0.5	0.4731	95		-	-		70-130	-		20
Arsenic, Total	ND	0.12	0.1240	103		-	-		70-130	-		20
Cadmium, Total	0.00547	0.051	0.06045	108		-	-		70-130	-		20
Chromium, Total	ND	0.2	0.2133	107		-	-		70-130	-		20
Copper, Total	3.151	0.25	3.334	73		-	-		70-130	-		20
Lead, Total	0.1218	0.51	0.6787	109		-	-		70-130	-		20
Nickel, Total	4.516	0.5	5.084	114		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1456	121		-	-		70-130	-		20
Silver, Total	ND	0.05	0.05105	102		-	-		70-130	-		20
Zinc, Total	14.87	0.5	15.29	84		-	-		70-130	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: PARCEL 12-HOTEL

Project Number: 132410-008 SID 7.1

Lab Number: L2006185

Report Date: 03/05/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1339961-4 QC Sample: L2006033-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1340733-4 QC Sample: L2000002-92 Client ID: DUP Sample						
Antimony, Total	ND	ND	mg/l	NC		20
Arsenic, Total	ND	ND	mg/l	NC		20
Cadmium, Total	0.00547	0.00546	mg/l	0		20
Chromium, Total	ND	ND	mg/l	NC		20
Copper, Total	3.151	3.296	mg/l	4		20
Lead, Total	0.1218	0.1289	mg/l	6		20
Nickel, Total	4.516	4.851	mg/l	7		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	14.87	15.68	mg/l	5		20

INORGANICS & MISCELLANEOUS

Project Name: PARCEL 12-HOTEL

Lab Number: L2006185

Project Number: 132410-008 SID 7.1

Report Date: 03/05/20

SAMPLE RESULTS

Lab ID: L2006185-01

Date Collected: 02/11/20 12:15

Client ID: SP-HA20-D5(OW)_02112020

Date Received: 02/11/20

Sample Location: BOSTON, MASSACHUSETTS

Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	30.		mg/l	10	NA	2	-	02/12/20 08:05	121,2540D	EM
Cyanide, Total	ND		mg/l	0.005	--	1	02/12/20 10:40	02/12/20 13:54	121,4500CN-CE	LH
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	02/12/20 06:46	121,4500CL-D	JA
Nitrogen, Ammonia	5.92		mg/l	0.075	--	1	02/12/20 04:20	02/12/20 19:45	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.00	--	1	02/13/20 16:00	02/13/20 22:00	74,1664A	ML
Phenolics, Total	ND		mg/l	0.030	--	1	02/12/20 05:05	02/12/20 09:14	4,420.1	MV
Chromium, Hexavalent	ND		mg/l	0.010	--	1	02/12/20 00:15	02/12/20 01:05	1,7196A	CB
Anions by Ion Chromatography - Westborough Lab										
Chloride	224.		mg/l	12.5	--	25	-	02/12/20 18:56	44,300.0	AT



Project Name: PARCEL 12-HOTEL

Lab Number: L2006185

Project Number: 132410-008 SID 7.1

Report Date: 03/05/20

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: WG1339728-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	02/12/20 00:15	02/12/20 01:03	1,7196A	CB
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1339747-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	02/12/20 04:20	02/12/20 19:10	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1339792-1										
Phenolics, Total	ND		mg/l	0.030	--	1	02/12/20 05:05	02/12/20 09:10	4,420.1	MV
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1339827-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	02/12/20 06:46	121,4500CL-D	JA
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1339828-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	02/12/20 08:05	121,2540D	EM
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1339904-1										
Cyanide, Total	ND		mg/l	0.005	--	1	02/12/20 10:40	02/12/20 15:29	121,4500CN-CE	LH
Anions by Ion Chromatography - Westborough Lab for sample(s): 01 Batch: WG1340155-1										
Chloride	ND		mg/l	0.500	--	1	-	02/12/20 17:17	44,300.0	AT
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1340512-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	02/13/20 16:00	02/13/20 22:00	74,1664A	ML



Lab Control Sample Analysis Batch Quality Control

Project Name: PARCEL 12-HOTEL

Project Number: 132410-008 SID 7.1

Lab Number: L2006185

Report Date: 03/05/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1339728-2								
Chromium, Hexavalent	109		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1339747-2								
Nitrogen, Ammonia	100		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1339792-2								
Phenolics, Total	87		-		70-130	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1339827-2								
Chlorine, Total Residual	92		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1339904-2								
Cyanide, Total	97		-		90-110	-		
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 Batch: WG1340155-2								
Chloride	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1340512-2								
TPH	89		-		64-132	-		34

Matrix Spike Analysis

Batch Quality Control

Project Name: PARCEL 12-HOTEL
Project Number: 132410-008 SID 7.1

Lab Number: L2006185
Report Date: 03/05/20

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: WG1339728-4 QC Sample: L2006185-01 Client ID: SP-HA20-D5(OW)_02112020												
Chromium, Hexavalent	ND	0.1	0.105	105		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1339747-4 QC Sample: L2006132-02 Client ID: MS Sample												
Nitrogen, Ammonia	65.7	4	88.6	572	Q	-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1339792-4 QC Sample: L2005847-01 Client ID: MS Sample												
Phenolics, Total	ND	0.4	0.38	94		-	-		70-130	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1339827-4 QC Sample: L2006185-01 Client ID: SP-HA20-D5(OW)_02112020												
Chlorine, Total Residual	ND	0.25	0.21	84		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1339904-4 QC Sample: L2006105-02 Client ID: MS Sample												
Cyanide, Total	ND	0.2	0.201	100		-	-		90-110	-		30
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1340155-3 QC Sample: L2005610-02 Client ID: MS Sample												
Chloride	34900	4000	37500	65	Q	-	-		90-110	-		18
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1340512-4 QC Sample: L2006115-01 Client ID: MS Sample												
TPH	ND	20	20.6	103		-	-		64-132	-		34

Lab Duplicate Analysis

Batch Quality Control

Project Name: PARCEL 12-HOTEL

Project Number: 132410-008 SID 7.1

Lab Number: L2006185

Report Date: 03/05/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1339728-3 QC Sample: L2006185-01 Client ID: SP-HA20-D5(OW)_02112020						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1339747-3 QC Sample: L2006132-02 Client ID: DUP Sample						
Nitrogen, Ammonia	65.7	64.7	mg/l	2		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1339792-3 QC Sample: L2005847-01 Client ID: DUP Sample						
Phenolics, Total	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1339827-3 QC Sample: L2006014-02 Client ID: DUP Sample						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1339828-2 QC Sample: L2006081-01 Client ID: DUP Sample						
Solids, Total Suspended	170	180	mg/l	6		29
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1339904-3 QC Sample: L2006105-01 Client ID: DUP Sample						
Cyanide, Total	0.007	ND	mg/l	NC		30
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1340155-4 QC Sample: L2005610-02 Client ID: DUP Sample						
Chloride	34900	34800	mg/l	0		18
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1340512-3 QC Sample: L2006115-01 Client ID: DUP Sample						
TPH	ND	ND	mg/l	NC		34

Project Name: PARCEL 12-HOTEL
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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(*)
L2006185-01A	Vial Na2S2O3 preserved	A	NA		2.4	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2006185-01A1	Vial Na2S2O3 preserved	A	NA		2.4	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2006185-01B	Vial Na2S2O3 preserved	A	NA		2.4	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2006185-01B1	Vial Na2S2O3 preserved	A	NA		2.4	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2006185-01C	Vial Na2S2O3 preserved	A	NA		2.4	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2006185-01C1	Vial Na2S2O3 preserved	A	NA		2.4	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L2006185-01D	Vial Na2S2O3 preserved	A	NA		2.4	Y	Absent		504(14)
L2006185-01E	Vial Na2S2O3 preserved	A	NA		2.4	Y	Absent		504(14)
L2006185-01F	Vial unpreserved	A	7	7	2.4	Y	Absent		ARCHIVE()
L2006185-01G	Vial unpreserved	A	7	7	2.4	Y	Absent		ARCHIVE()
L2006185-01H	Vial unpreserved	A	7	7	2.4	Y	Absent		ARCHIVE()
L2006185-01I	Plastic 250ml NaOH preserved	A	>12	>12	2.4	Y	Absent		TCN-4500(14)
L2006185-01J	Plastic 250ml HNO3 preserved	A	<2	<2	2.4	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),HARDU(180),CU-2008T(180),FE-UI(180),SE-2008T(180),HG-U(28),AS-2008T(180),AG-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L2006185-01K	Plastic 250ml HNO3 preserved	A	<2	<2	2.4	Y	Absent		HOLD-METAL-DISSOLVED(180)
L2006185-01L	Plastic 250ml HNO3 preserved	A	<2	<2	2.4	Y	Absent		HOLD-METAL-DISSOLVED(180)
L2006185-01M	Plastic 250ml unpreserved	A	7	7	2.4	Y	Absent		HOLD-WETCHEM()
L2006185-01N	Plastic 500ml H2SO4 preserved	A	<2	<2	2.4	Y	Absent		NH3-4500(28)
L2006185-01O	Plastic 950ml unpreserved	A	7	7	2.4	Y	Absent		TSS-2540(7)
L2006185-01P	Plastic 950ml unpreserved	A	7	7	2.4	Y	Absent		HEXCR-7196(1),CL-300(28),TRC-4500(1)
L2006185-01Q	Amber 950ml H2SO4 preserved	A	<2	<2	2.4	Y	Absent		TPHENOL-420(28)
L2006185-01R	Amber 1000ml Na2S2O3	A	7	7	2.4	Y	Absent		PCB-608.3(7)

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Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L2006185-01S	Amber 1000ml Na2S2O3	A	7	7	2.4	Y	Absent		PCB-608.3(7)
L2006185-01T	Amber 1000ml Na2S2O3	A	7	7	2.4	Y	Absent		625.1-RGP(7)
L2006185-01U	Amber 1000ml Na2S2O3	A	7	7	2.4	Y	Absent		625.1-RGP(7)
L2006185-01V	Amber 1000ml Na2S2O3	A	7	7	2.4	Y	Absent		625.1-SIM-RGP(7)
L2006185-01W	Amber 1000ml Na2S2O3	A	7	7	2.4	Y	Absent		625.1-SIM-RGP(7)
L2006185-01X	Amber 1000ml HCl preserved	A	NA		2.4	Y	Absent		TPH-1664(28)
L2006185-01Y	Amber 1000ml HCl preserved	A	NA		2.4	Y	Absent		TPH-1664(28)

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GLOSSARY

Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCS D	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
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

Report Format: Data Usability Report



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

Terms

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

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

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

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

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

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

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

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

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

Data Qualifiers

- A** - Spectra identified as "Aldol Condensates" are byproducts of the extraction/concentration procedures when acetone is introduced in the process.
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- 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

Report Format: Data Usability Report



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Data Qualifiers

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.

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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.



Alpha Analytical, Inc.Facility: **Company-wide**Department: **Quality Assurance**Title: **Certificate/Approval Program Summary**ID No.: **17873**

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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), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.**EPA 8270D:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO₂, NO₃.**Mansfield Facility****SM 2540D:** TSS**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

EPA TO-12 Non-methane organics**EPA 3C** Fixed gases**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, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B****EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.****Non-Potable Water****SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,****SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.**EPA 624.1:** Volatile Halocarbons & Aromatics,**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.****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.

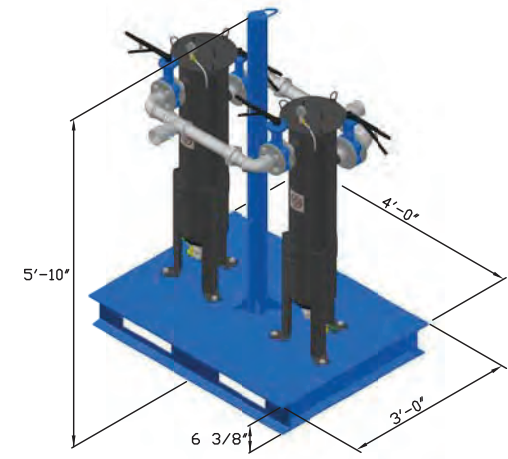
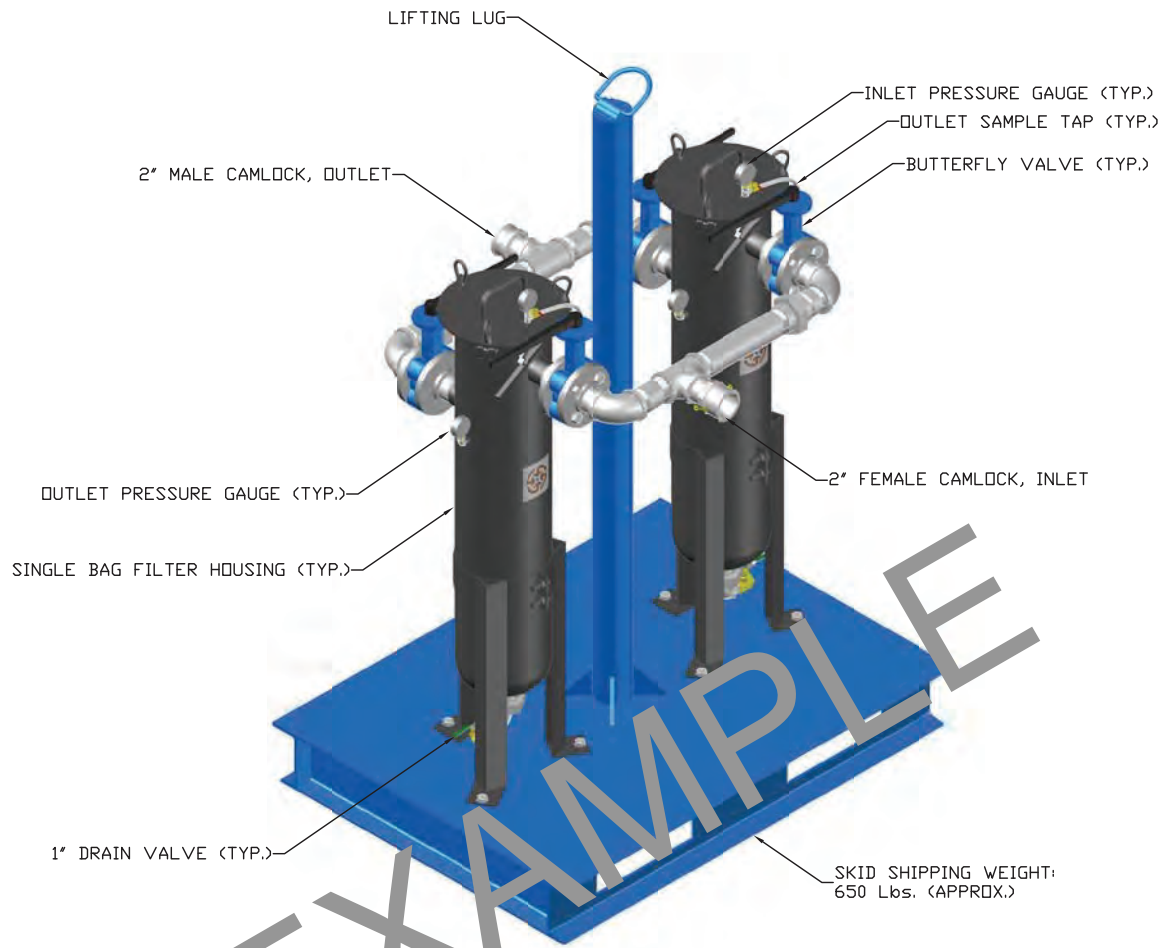
L2006185

 CHAIN OF CUSTODY		Service Centers Brewer, ME 04412 Portsmouth, NH 03801 Malwah, NJ 07430 Albany, NY 12285 Tonawanda, NY 14150 Holmes, PA 19043		Page 1 1 of 1		Date Rec'd in Lab 2/11/20		ALPHA Job # L2006185							
Westborough, MA 01581 8 Walkup Dr. TEL: 508-698-0220 FAX: 508-698-9193		Mansfield, MA 02048 320 Forbes Blvd TEL: 508-622-0900 FAX: 508-622-3268		Project Information Project Name: Parcel 12 - Hotel Project Location: Boston, Massachusetts Project # 132410-008 SID 7.1 (Use Project name as Project #) Project Manager: S. Bamford ALPHAQuote #: Turn-Around Time: Standard X Due Date: (only if pre approved) # of Days: 5		Deliverables Email: EQuIS (1 File) Fax: EQuIS (4 File) Other:		Billing Information Same as Client Info PO #							
H&A Information H&A Client: S&A P-12 Property LLC H&A Address: 465 Medford Street H&A Phone: 617-886-7440 H&A Fax: ewhite@haleyaldrich.com H&A Email: kalepids@haleyaldrich.com		Regulatory Requirements (Program/Criteria) EPA NPDES RGP		Disposal Site Information Please identify below location of applicable disposal facilities. Disposal Facility: NJ NY Other:		ANALYSIS		Sample Filtration X Done Lab to do Preservation Lab to do (Please Specify below) Sample Specific Comments							
These samples have been previously analyzed by Alpha Other project specific requirements/comments: 13. Dissolved Metals ON HOLD (Field Filtered) Dissolved Hardness on HOLD (FFS) Please sample per EPA Approved 2017 RGP Permit methods Please specify Metals or TAL		ALPHA Lab ID (Lab Use Only) 00185-01		Sample ID SP-HA20-D5(OW) 02112020		Collection Date: 2/11 Time: 12:15		Sample Matrix AQ		Sampler's Initials SRP		1. TSS-2540 2. TRC-4500 3. TCN-4500 4. 504 5. 8260 & 8260 SIM for Dioxane, or applicable method 6. HEXCR-3500 & Trivalent Chromium 7. TPHENOL-420 8. 8270TCL (including Diethylthiophthalide) 9. 8270TCL-SIM, or applicable method 10. CL-300 11. Total Metals - Ag, As, Cd, Cr, Cu, Ni, Pb, Sb, Se, Zn, Fe 12. Ammonia 13. Diss. Metals-Ag, As, Cd, Cr, Cu, Ni, Pb, Sb, Se, Zn, Fe 14. Hardness 15. TPH-1664 16. PCB-608		Total Bottles 28	
Preservative Code: A = None B = HCl C = HNO ₃ D = H ₂ SO ₄ E = NaOH F = MeOH G = NaHSO ₄ H = Na ₂ S ₂ O ₃ K/E = Zn Ac/NaOH O = Other		Container Code: P = Plastic A = Amber Glass V = Vial G = Glass B = Bacteria Cup C = Cube O = Other E = Encore D = BOD Bottle		Westboro: Certification No: MA935 Mansfield: Certification No: MAD15		Container Type		Preservative		Relinquished By: A. Paul Date/Time: 2/11/20 Received By: M. Carter Date/Time: 2/11/20 16:50 2/11/20 16:30 2/11/20 17:00		Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. Alpha Analytical's services under this Chain of Custody shall be performed in accordance with terms and conditions within Blanket Service Agreement# 2015-15-Alpha Analytical by and between Haley & Aldrich, Inc., its subsidiaries and affiliates and Alpha Analytical.			
Document ID: 20455 Rev 1 (1/28/2016)															

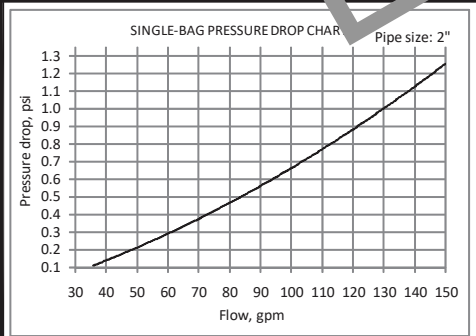
APPENDIX E

Contractor Dewatering Submittal

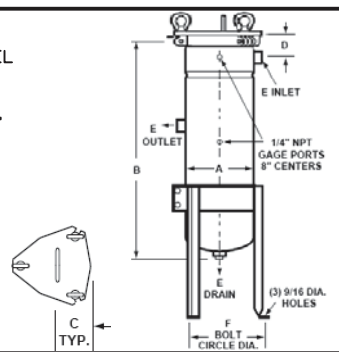
T:\Cad Files\Rentals - STANDARD DRAWINGS\EQUIPMENT SPECIFICATION\BAG FILTERS\ST-0002-SPC Rev-C Duplex Single Bag Filter Skid.dwg



NOTE: THIS DRAWING DEPICTS A "TYPICAL" SKID. ACTUAL DETAILS AND DIMENSIONS MAY VARY.



- SINGLE BAG FILTER SPECIFICATIONS**
- | | |
|-----------------------------|---------------|
| - CONSTRUCTION: | CARBON STEEL |
| - HOUSING STYLE: | STANDARD |
| - NUMBER OF BASKETS: | 1 |
| - STRAINING FILTERING AREA: | 26.4 SQR. FT. |
| - INLET/OUTLET SIZE: | 2" |
| - DRAIN SIZE (1x): | 2" |
| - NOMINAL FLOW RATE: | 100 GPM |
| - STANDARD PRESSURE: | 125 PSI |
| - WEIGHT (PER DRY UNIT): | 70 Lbs. |
- BASIC DIMENSIONS**
- MODEL NUMBER & A: 8 (8.6")
LEG BOLT CIRCLE F: Ø12.0"
B: 35.9" C: 6.0"
D: 3.5" E: 2.0"



C	ADDED SKID WEIGHT		02/18/09
NO.	REVISIONS		DATE
DUPLIX SINGLE BAG FILTER SKID STANDARD EQUIPMENT SPECIFICATION			
SCALE: NTS		APPROVED BY: JB	DRAWN BY: AAV
DATE: 02/18/09			
 GROUND/WATER TREATMENT & TECHNOLOGY P.O. BOX 1174 DENVILLE, NJ 07834			
THIS DRAWING IS THE PROPERTY OF GROUND/WATER TREATMENT & TECHNOLOGY, INC			
DWG SIZE: A	SHEET: 1 OF 1	DRAWING NUMBER: ST-0002-SPC	C

Mirafi[®] 140N

Mirafi[®] 140N is a needlepunched nonwoven geotextile composed of polypropylene fibers, which are formed into a stable network such that the fibers retain their relative position. Mirafi[®] 140N is inert to biological degradation and resists naturally encountered chemicals, alkalis, and acids. Mirafi[®] 140N meets Aashto M288-06 Class 3 for elongation > 50%.

Mechanical Properties	Test Method	Unit	Minimum Average Roll Value	
			MD	CD
Grab Tensile Strength	ASTM D4632	lb (N)	20 (534)	120 (534)
Grab Tensile Elongation	ASTM D4632	%	50	50
Trapezoid Tear Strength	ASTM D4533	lbs (N)	50 (223)	50 (223)
CBR Puncture Strength	ASTM D6241	lbs (N)	310 (1380)	
Apparent Opening Size (AOS) ¹	ASTM D4751	U.S. Sieve (mm)	70 (0.212)	
Permittivity	ASTM D4491	sec ⁻¹	1.7	
Flow Rate	ASTM D4491	gal/min/ft ² (l/min/m ²)	135 (5500)	
UV Resistance (at 500 hours)	ASTM D4355	% strength retained	70	

¹ ASTM D4751: AOS is Maximum Opening Diameter Value

Physical Properties	Unit	Typical Value	
Roll Dimensions (width x length)	ft (m)	12.5 x 360 (3.8 x 110)	15 x 360 (4.5 x 110)
Roll Area	yd ² (m ²)	500 (418)	600 (502)
Estimated Roll Weight	lb (kg)	133 (60)	160 (72)

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