HALEY ALDRICH

www.haleyaldrich.com

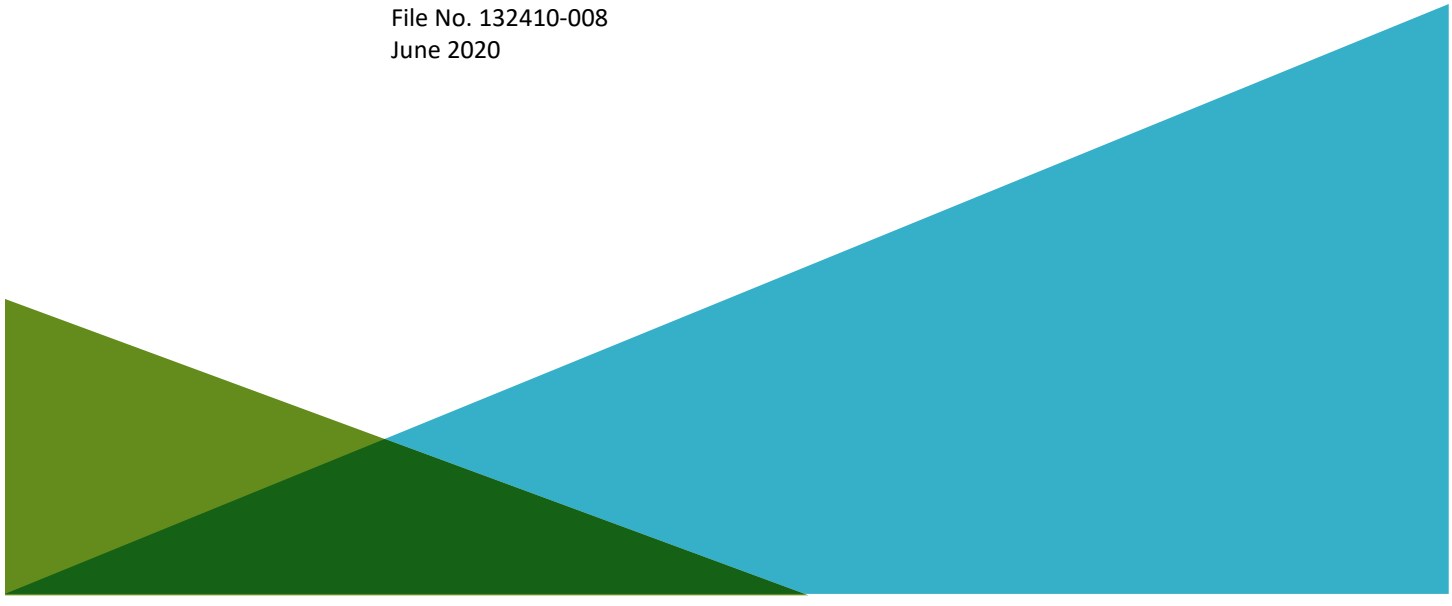
REPORT ON

NOTICE OF INTENT (NOI)
TEMPORARY CONSTRUCTION DEWATERING
MASSDOT AIR RIGHTS PARCEL 12 – OFFICE BUILDING
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

24 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: Ms. Little; EPA/OEP RGP Applications Coordinator

Subject: Notice of Intent (NOI)
Temporary Construction Dewatering
MassDOT Air Rights Parcel 12 – Office Building
Boston, Massachusetts

Ladies and Gentlemen:

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 during construction activities at the Office Building portion of the MassDOT Air Rights Parcel 12, located at 1001 Boylston Street in Boston, Massachusetts.

SITE LOCATION AND HISTORICAL SITE USAGE

The south portion of the MassDOT Air Rights Parcel 12 site where the Office Building is planned (the "Site"), is bordered by Boylston Street to the south, Massachusetts Avenue to the east, a 7-story residential structure to the west (1085 Boylston Street), and the MBTA railroad to the north. The Site is currently a paved parking lot with a steep slope down to the MBTA tracks to the north. Surface grades range from approximately El. 29 to El. 23 across the parking lot to El. 11 at the MBTA tracks. A 60-ft long concrete retaining wall (No. 201), acting as a wing-wall for the Massachusetts Avenue Bridge, provides up to 20 ft grade separation between a portion of the Site and the MBTA tracks.

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. Former buildings on the site were demolished for construction of I-90 in the 1960's and the area.

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 the Massachusetts Turnpike (I-90), the Massachusetts Bay Transportation Authority (MBTA) railroad tracks, and two land areas north and south on the Massachusetts Turnpike.

This application is for dewatering activities that will occur in the land area on the south side of the Air Rights parcel along Boylston Street. This area will be developed as a 20-story office building (with penthouse level) with a two-level below-grade parking garage.

GROUNDWATER QUALITY DATA

One groundwater sample was obtained from observation well HA14-101(OW) in August 2019. 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, semi-volatile organic compounds, polycyclic aromatic hydrocarbons, total metals, total petroleum hydrocarbons, extractable petroleum hydrocarbons, oil & grease, pesticides, polychlorinated biphenyls, total suspended solids, chloride, total cyanide, total phenolics, and total residual chlorine.

Refer to Table I for a summary of groundwater and surface analytical data. The recent groundwater analyses did not detect concentrations of chemical constituents above applicable Massachusetts Contingency Plan RCGW-2 reportable concentrations. The construction dewatering effluent at the Site will be managed under an RGP. The location of the observation well HA14-101(OW) is shown on Figure 2.

ETHANOL DISCUSSION

Ethanol sampling was not conducted on the groundwater sample collected in August 2019 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 used for parking 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 Charles 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 88.36.

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, groundwater seepage and construction-generated water to enable excavation in-the-dry. The dewatering will be conducted within an impervious support of excavation and groundwater cut-off wall limiting groundwater seepage into the excavation. 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 or from dewatering wells installed at the Site.

Construction dewatering includes piping and discharging to storm drains located on or near the site that discharge to the Charles 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 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. Appendix D provides an application for a temporary construction dewatering permit being submitted to the City of Boston. Copies of the groundwater testing laboratory data reports are provided in Appendix E. Appendix F 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 – BWSC Permit Application
Appendix E – Laboratory Data Reports
Appendix F – Example Contractor Dewatering Submittal

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

\\haleyaldrich.com\share\bos_common\132410 - P12 Air Rights\Dewatering Permits\P12 RGP - Office\Text\2020-0624-Parcel 12 Office RGP Text-F.docx

TABLES

TABLE I
SUMMARY OF GROUNDWATER AND RECEIVING WATER QUALITY DATA
MASSDOT AIR RIGHTS PARCEL 12 - OFFICE BUILDING
BOSTON, MA
FILE NO. 132410

	Action Level		
Location Name		HA14-101	HA20-CHARLES RIVER
Sample Name	2017 NPDES	HA14-101(OW)-20190807	CHARLES_SURF_20191206
Sample Date	RGP Effluent	08/07/2019	12/6/2019
	Limits	L1935412-01	
Lab Sample ID		L2006185-01	L1958577-01
Volatile Organic Compounds (ug/L)			
1,1,1-Trichloroethane	200	ND (2)	-
1,1,2,2-Tetrachloroethane	NA	ND (1)	-
1,1,2-Trichloroethane	200	ND (1.5)	-
1,1-Dichloroethane	70	ND (1.5)	-
1,1-Dichloroethene	3.2	ND (1)	-
1,2-Dibromoethane (Ethylene Dibromide)	0.05	ND (0.01)	-
1,2-Dichlorobenzene	600	ND (5)	-
1,2-Dichloroethane	5	ND (1.5)	-
1,2-Dichloropropane	NA	ND (3.5)	-
1,3-Dichlorobenzene	320	ND (5)	-
1,3-Dichloropropene	NA	ND (1.5)	-
1,4-Dichlorobenzene	5	ND (5)	-
2-Butanone (Methyl Ethyl Ketone)	NA	ND (10)	-
2-Chloroethyl vinyl ether	NA	ND (10)	-
2-Hexanone	NA	ND (10)	-
4-Methyl-2-Pentanone (Methyl Isobutyl Ketone)	NA	ND (10)	-
Acetone	7970	ND (10)	-
Acrolein	NA	ND (8)	-
Acrylonitrile	NA	ND (10)	-
Benzene	5*	ND (1)	-
Bromodichloromethane	NA	ND (1)	-
Bromoform	NA	ND (1)	-
Bromomethane (Methyl Bromide)	NA	ND (5)	-
Carbon disulfide	NA	ND (5)	-
Carbon tetrachloride	4.4	ND (1)	-
Chlorobenzene	NA	ND (3.5)	-
Chloroethane	NA	ND (2)	-
Chloroform (Trichloromethane)	NA	ND (1)	-
Chloromethane (Methyl Chloride)	NA	ND (5)	-
cis-1,2-Dichloroethene	NA	ND (1)	-
cis-1,3-Dichloropropene	NA	ND (1.5)	-
Dibromochloromethane	NA	ND (1)	-
Dibromomethane	NA	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)	-
Styrene	NA	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)	-
trans-1,2-Dichloroethene	NA	ND (1.5)	-
trans-1,3-Dichloropropene	NA	ND (1.5)	-
Trichloroethene	5	ND (1)	-
Trichlorofluoromethane (CFC-11)	NA	ND (5)	-
Vinyl acetate	NA	ND (10)	-
Vinyl chloride	2	ND (1)	-
Xylene (total)	*	ND (1)	-
SUM of Volatile Organic Compounds	NA	ND	-
Total BTEX	0.1*	ND	-
Volatile Organic Compounds SIM (ug/L)			
1,4-Dioxane	200	ND (50)	-
Semi-Volatile Organic Compounds (ug/L)			
1,2,4-Trichlorobenzene	NA	ND (5)	-
2,2'-oxybis(1-Chloropropane)	NA	ND (2)	-
2,4,5-Trichlorophenol	NA	ND (5)	-
2,4,6-Trichlorophenol	NA	ND (5)	-
2,4-Dichlorophenol	NA	ND (5)	-
2,4-Dimethylphenol	NA	ND (5)	-
2,4-Dinitrophenol	NA	ND (20)	-
2,4-Dinitrotoluene	NA	ND (5)	-
2,6-Dinitrotoluene	NA	ND (5)	-
2-Chloronaphthalene	NA	ND (2)	-
2-Chlorophenol	NA	ND (2)	-
2-Methylphenol (o-Cresol)	NA	ND (5)	-
2-Nitrophenol	NA	ND (5)	-
3&4-Methylphenol	NA	ND (5)	-
3,3'-Dichlorobenzidine	NA	ND (5)	-
4,6-Dinitro-2-methylphenol	NA	ND (10)	-
4-Bromophenyl phenyl ether	NA	ND (2)	-
4-Chloro-3-methylphenol	NA	ND (2)	-
4-Chloroaniline	NA	ND (5)	-
4-Chlorophenyl phenyl ether	NA	ND (2)	-

TABLE I
SUMMARY OF GROUNDWATER AND RECEIVING WATER QUALITY DATA
MASSDOT AIR RIGHTS PARCEL 12 - OFFICE BUILDING
BOSTON, MA
FILE NO. 132410

	Action Level		
Location Name		HA14-101	HA20-CHARLES RIVER
Sample Name	2017 NPDES	HA14-101(OW)-20190807	CHARLES_SURF_20191206
Sample Date	RGP Effluent	08/07/2019	12/6/2019
	Limits	L1935412-01	
Lab Sample ID		L2006185-01	L1958577-01
4-Nitrophenol	NA	ND (10)	-
Acetophenone	NA	ND (5)	-
Aniline	NA	ND (2)	-
Azobenzene	NA	ND (2)	-
Benzidine	NA	ND (20)	-
Benzoic acid	NA	ND (50)	-
Benzyl Alcohol	NA	ND (2)	-
bis(2-Chloroethoxy)methane	NA	ND (5)	-
bis(2-Chloroethyl)ether	NA	ND (2)	-
bis(2-Ethylhexyl)phthalate	101***	ND (2.2)	-
Butyl benzylphthalate	***	ND (5)	-
Dibenzofuran	NA	ND (2)	-
Diethyl phthalate	***	ND (5)	-
Dimethyl phthalate	NA	ND (5)	-
Di-n-butylphthalate	***	ND (5)	-
Di-n-octyl phthalate	***	ND (5)	-
Hexachlorobutadiene	NA	ND (2)	-
Hexachlorocyclopentadiene	NA	ND (10)	-
Hexachloroethane	NA	ND (2)	-
Isophorone	NA	ND (5)	-
Nitrobenzene	NA	ND (2)	-
N-Nitrosodimethylamine	NA	ND (2)	-
N-Nitrosodi-n-propylamine	NA	ND (5)	-
N-Nitrosodiphenylamine	NA	ND (2)	-
Phenol	1080	ND (5)	-
Pyridine	NA	ND (5)	-
SUM of Semi-Volatile Organic Compounds	NA	ND	-
Semi-Volatile Organic Compounds (SIM) (ug/L)			
2-Methylnaphthalene	NA	ND (0.1)	-
Acenaphthene	**	ND (0.1)	-
Acenaphthylene	**	ND (0.1)	-
Anthracene	**	ND (0.1)	-
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	**	ND (0.1)	-
Fluorene	**	ND (0.1)	-
Hexachlorobenzene	NA	ND (0.1)	-
Indeno(1,2,3-cd)pyrene	1++	ND (0.1)	-
Naphthalene	20**	ND (0.1)	-
Pentachlorophenol	1	ND (1)	-
Phenanthrene	**	ND (0.1)	-
Pyrene	**	ND (0.1)	-
SUM of Semi-Volatile Organic Compounds	NA	ND	-
Total Group I PAHS	1	ND	-
Total Group II PAHS	100**	ND	-
SUM of Phthalates	190***	ND	-
Total Petroleum Hydrocarbons (mg/L)			
Oil and Grease (HEM), Total	NA	ND (4)	-
Petroleum hydrocarbons	5	ND (4)	-
EPH (ug/L)			
MADEP C11-C22 Aromatic Hydrocarbons, Adjusted	NA	ND (100)	-
MADEP C19-C36 Aliphatic Hydrocarbons	NA	ND (100)	-
MADEP C9-C18 Aliphatic Hydrocarbons	NA	ND (100)	-
SUM of EPH	5	ND	-
Total Inorganic Compounds (mg/L)			
Antimony, Total	0.206	ND (0.004)	ND(0.002)
Arsenic, Total	0.104	ND (0.001)	ND(0.0005)
Cadmium, Total	0.0102	ND (0.0002)	ND(0.0001)
Chromium, Total	0.323	ND (0.001)	ND(0.0005)
Chromium III (Trivalent), Total	0.323	ND (0.01)	-
Chromium VI (Hexavalent), Dissolved	0.323	ND (0.01)	ND(0.005)
Copper, Total	0.242	ND (0.001)	0.00226
Iron, Total	5	0.459	0.503
Lead, Total	0.16	ND (0.001)	0.00143
Mercury, Total	0.000739	ND (0.0002)	ND(0.0001)
Nickel, Total	1.45	ND (0.002)	ND(0.001)
Selenium, Total	0.2358	ND (0.005)	ND(0.0025)
Silver, Total	0.0351	ND (0.0004)	ND(0.0002)
Zinc, Total	0.42	ND (0.01)	0.02122

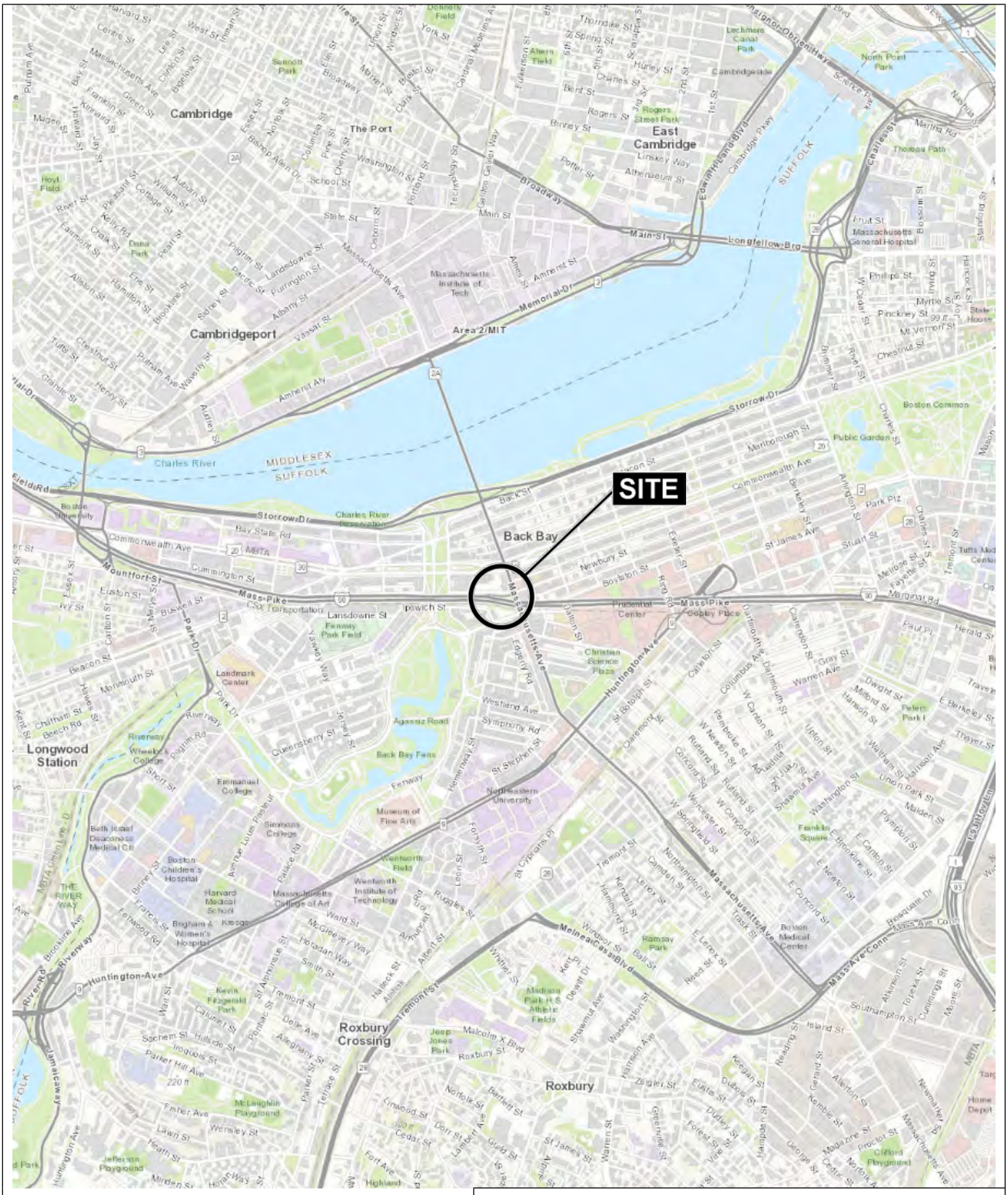
TABLE I
SUMMARY OF GROUNDWATER AND RECEIVING WATER QUALITY DATA
MASSDOT AIR RIGHTS PARCEL 12 - OFFICE BUILDING
BOSTON, MA
FILE NO. 132410

	Action Level		
Location Name		HA14-101	HA20-CHARLES RIVER
Sample Name	2017 NPDES	HA14-101(OW)-20190807	CHARLES_SURF_20191206
Sample Date	RGP Effluent	08/07/2019	12/6/2019
	Limits	L1935412-01	
Lab Sample ID		L2006185-01	L1958577-01
PCBs (mg/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	0.000000064+	ND	-
Other			
Ammonia, Total (mg/L)	Report Only	1.44	0.127
Chloride, Total (mg/L)	Report Only	709	-
Chlorine, residual, Total (mg/L)	0.2	ND (0.02)	-
Hardess, Total (mg/L)	NA	949	75.1
Total phenols (mg/L)	NA	ND (0.03)	-
pH	NA	8.4	7.3
Cyanide, Total	178	ND (0.005)	-
Total Suspended Solids (TSS) (mg/L)	30	ND (5)	-
Pesticides (ug/L)			
4,4'-DDD	NA	ND (0.04)	-
4,4'-DDE	NA	ND (0.04)	-
4,4'-DDT	NA	ND (0.04)	-
Aldrin	NA	ND (0.02)	-
alpha-BHC	NA	ND (0.02)	-
alpha-Chlordane	NA	ND (0.02)	-
beta-BHC	NA	ND (0.02)	-
Chlordane	NA	ND (0.2)	-
delta-BHC	NA	ND (0.02)	-
Dieldrin	NA	ND (0.04)	-
Endosulfan I	NA	ND (0.02)	-
Endosulfan II	NA	ND (0.04)	-
Endosulfan sulfate	NA	ND (0.04)	-
Endrin	NA	ND (0.04)	-
Endrin aldehyde	NA	ND (0.04)	-
Endrin ketone	NA	ND (0.04)	-
gamma-BHC (Lindane)	NA	ND (0.02)	-
gamma-Chlordane	NA	ND (0.02)	-
Heptachlor	NA	ND (0.02)	-
Heptachlor epoxide	NA	ND (0.02)	-
Methoxychlor	NA	ND (0.1)	-
Toxaphene	NA	ND (0.4)	-

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

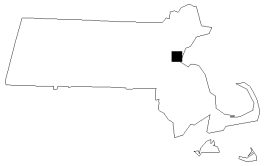
1. Analytes detected in at least one sample are reported herein. For a complete list of analytes see the laboratory data sheets.

FIGURES



MAP SOURCE: ESRI

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



HALEY ALDRICH

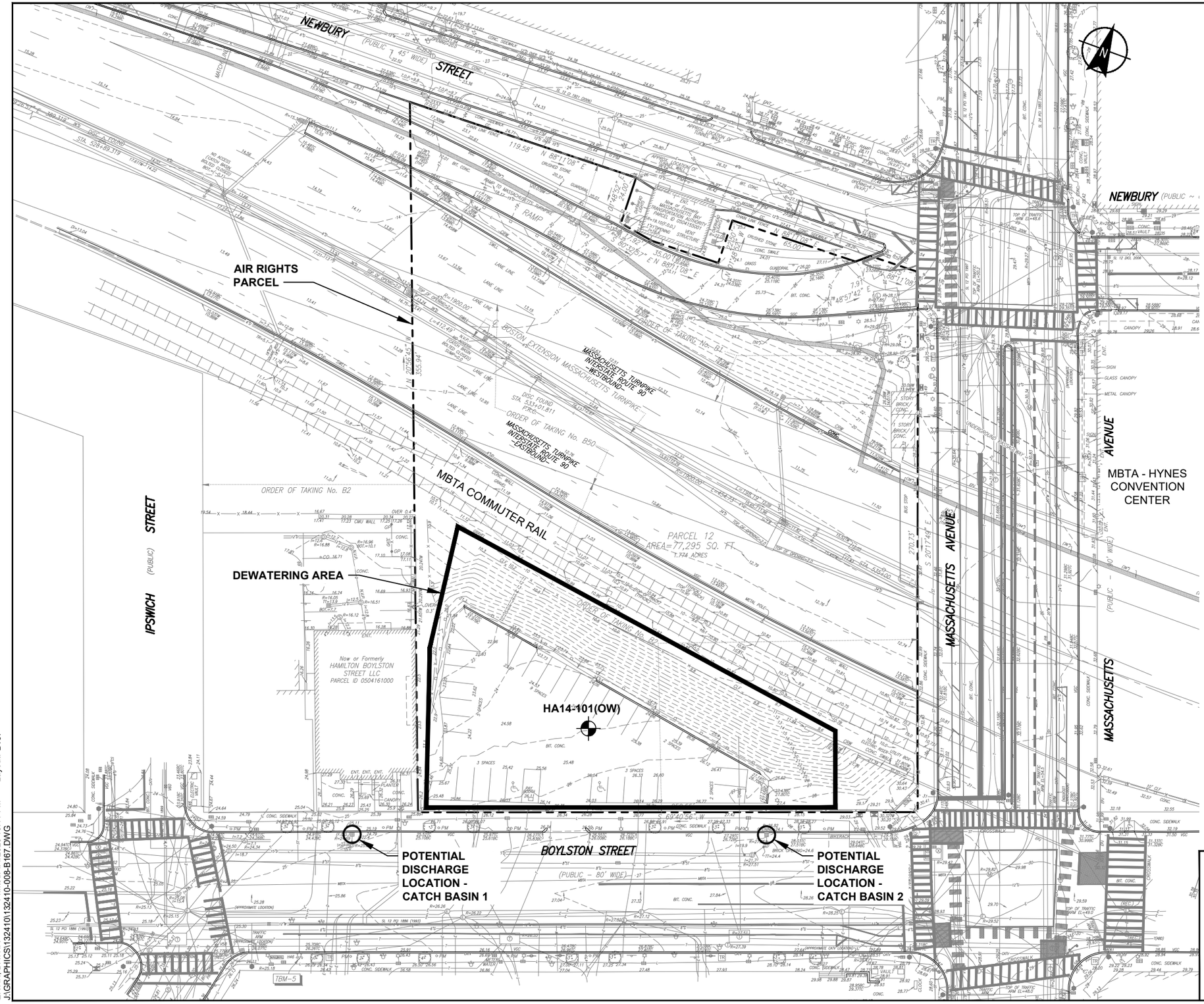
PARCEL 12 AIR RIGHTS
BOSTON, MASSACHUSETTS

PROJECT LOCUS

APPROXIMATE SCALE: 1 IN = 2000 FT
JUNE 2020

FIGURE 1

132410-002_1_LOCUS.PDF



LEGEND:

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.

0 50 100
SCALE IN FEET

HALEY ALDRICH

MASS DOT AIR RIGHTS PARCEL 12
BOSTON, MASSACHUSETTS

SITE PLAN AND SUBSURFACE EXPLORATION LOCATION PLAN

SCALE: AS SHOWN
JUNE 2020

FIGURE 2

ERVIN, DAYNA Printed: 4/4/2020 10:41 PM Layout: B167
J:\GRAPHICS\132410\132410-008-B167.DWG

PROPOSED
OUTFALL
MWRA-CSO023

MWRA-CSO023

CSO018

JAMES J STORROW MEMO DR

BACK ST

BEACON ST

MASSACHUSETTS AV

PUBLIC ALLEY NO. 415

HEREFORD ST

PUBLIC ALLEY NO. 414

MARLBOROUGH ST

PUBLIC ALLEY NO. 908

PUBLIC ALLEY NO. 429

PUBLIC ALLEY NO. 905

COMMONWEALTH AV

PUBLIC ALLEY NO. 430

NEWBURY ST

PUBLIC ALLEY NO. 444

MASSACHUSETTS TNPK

PUBLIC ALLEY NO. 918

IPSWICH ST

CHARLESGATE EAST

CHARLESGATE WEST

CHARLESGATE

BOYLSTON ST

PUBLIC ALLEY NO. 909

HAVILAND ST

STONEHOLM ST

PUBLIC ALLEY NO. 903

EDGERLY RD

NORWAY ST

PUBLIC ALLEY NO. 901

HEMENWAY ST

FENWAY

CAMBRIA ST

SAINT CECILIA ST

MASSACHUSETTS AV

BERKLEE SCHOOL OF MUSIC

BAY STATE RD

MUDDY RIVER

RIVER

SDO1

SDO2

SDO3

SDO43

SDO44

SDO019

MHP1

RECHARGE PIPE

Boston Marginal Conduit

Commonwealth Ave Pumping Station

PARKING

APPROXIMATE
SITE LIMITS

DISCHARGE
TO CHARLES
RIVER

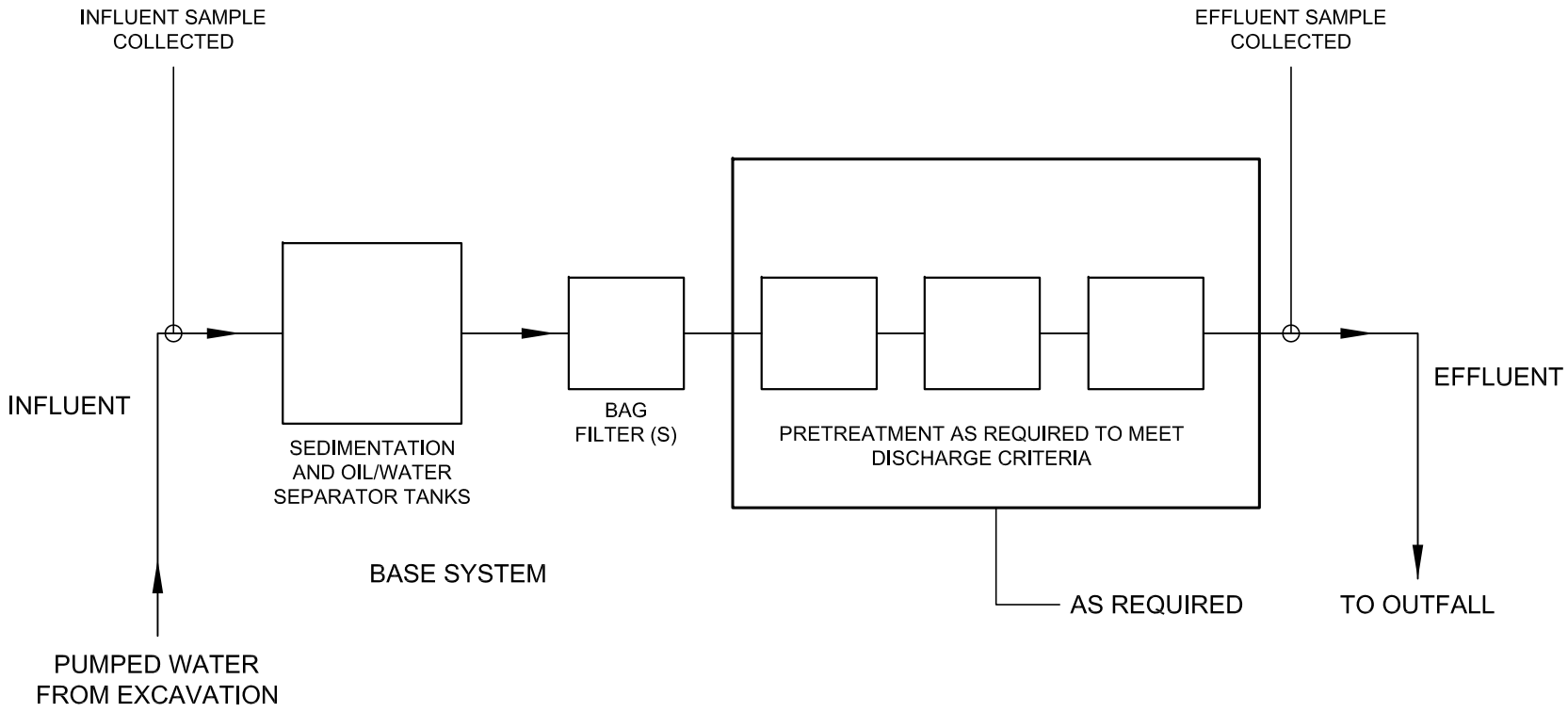
N
W E
S

0 50 100 200 300 400
Feet

Path to Outfalls (2-3)

FIGURE 3 - BWSC PLAN

G:\38625\NPDES\FIGURES\COPY-A142.DWG



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 - OFFICE BUILDING
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 - Office Building	Site address: Street: 1071-1083 Boylston Street		
	City: Boston	State: MA	Zip: 02118
2. Site owner S&A P-12 Property LLC	Contact Person: Abe Menzin, Executive Vice President Development		
	Telephone: 617-603-5412	Email: amenzin@samuelsre.com	
	Mailing address: Street: 136 Brookline Avenue		
Owner is (check one): ☐ Federal ☐ State/Tribal ☒ Private ☐ Other; if so, specify:	City: Boston	State: MA	Zip: 02115
3. Site operator, if different than owner Suffolk	Contact Person: Gregory Sawin, Project Executive		
	Telephone: 617-622-7335	Email:	
	Mailing address: Street: 65 Allerton Street		
	City: Boston	State: MA	Zip: 02119
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): 3-36280 ☐ 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):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
Charles River	MA72-38	B(CSO)

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. TMDLs are available for pathogens and phosphorus.

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.	29.2 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.	88.36

6. Has the operator received confirmation from the appropriate State for the 7Q10and dilution factor indicated? (check one): ☒ Yes ☐ No
If yes, indicate date confirmation received: 3/10/2020

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 ☐ A surface water other than the receiving water; if so, indicate waterbody:	☐ Potable water; if so, indicate municipality or origin: ☐ Other; if so, specify:

2. Source water contaminants: 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 2	Outfall location(s): (Latitude, Longitude) 42 20 50, 71 05 18 42 20 49, 71 05 20
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ☒ Indirect discharge, if so, specify: ☐ A private storm sewer system ☒ A municipal storm sewer system If the discharge enters the receiving water via a private or municipal storm sewer system: Has notification been provided to the owner of this system? (check one): ☒ Yes ☐ No Has the operator has received permission from the owner to use such system for discharges? (check one): ☐ Yes ☒ No, if so, explain, with an estimated timeframe for obtaining permission: BWSC permit application being submitted concurrently with this NOI Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ☒ Yes ☐ No	
Provide the expected start and end dates of discharge(s) (month/year): 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	

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

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

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

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		X	1	4500NH3-BH	75	1440	1440	Report mg/L	---
Chloride		X	1	300.0	25000	709000	709000	Report µg/l	---
Total Residual Chlorine	X		1	4500CL	20	ND	ND	0.2 mg/L	972
Total Suspended Solids	X		1	2540D	5000	ND	ND	30 mg/L	—
Antimony Total		X*	1	200.8	4	ND	ND	206 µg/L	56,551
Arsenic Total		X*	1	200.8	1	3.54	3.54	104 µg/L	884
Cadmium Total		X*	1	200.8	0.2	ND	ND	10.2 µg/L	21.2
Chromium III		X*	1	107	10	ND	ND	323 µg/L	6,665
Chromium VI	X		1	7196A	10	ND	ND	323 µg/L	1,010
Copper Total	X		1	200.8	1	ND	ND	242 µg/L	520
Iron Total		X	1	200.7	50	459	459	5,000 µg/L	44,418
Lead Total		X*	1	200.8	1	ND	ND	160 µg/L	104
Mercury Total		X*	1	245.1	0.2	ND	ND	0.739 µg/L	80
Nickel Total		X*	1	200.8	2	ND	ND	1,450 µg/L	4,016
Selenium Total	X		1	200.8	5	ND	ND	235.8 µg/L	442
Silver Total	X		1	200.8	0.4	ND	ND	35.1 µg/L	252
Zinc Total		X*	1	200.8	10	ND	ND	420 µg/L	7,370
Cyanide Total	X		1	4500CN-CE	5	ND	ND	178 mg/L	460
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	26,508

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	141
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	292
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	194.4
Total Group I PAHs		X*	1	625.1	0.1	ND	ND	1.0 µg/L	---
Benzo(a)anthracene	X	X*	1	625.1	0.1	ND	ND	As Total PAHs	0.3358
Benzo(a)pyrene	X	X*	1	625.1	0.1	ND	ND		0.3358
Benzo(b)fluoranthene	X	X*	1	625.1	0.1	ND	ND		0.3358
Benzo(k)fluoranthene	X	X*	1	625.1	0.1	ND	ND		0.3358
Chrysene	X	X*	1	625.1	0.1	ND	ND		0.3358
Dibenzo(a,h)anthracene	X	X*	1	625.1	0.1	ND	ND		0.3358
Indeno(1,2,3-cd)pyrene	X	X*	1	625.1	0.1	ND	ND		0.3358

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
Total Group II PAHs	X		1	625.1	0.1	ND	ND	100 µg/L	---
Naphthalene	X		1	625.1	0.1	ND	ND	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	X		1	608.3	0.25	ND	ND	0.000064 µg/L	---
Pentachlorophenol	X		1	625.1	1.0	ND	ND	1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons	X		1	1664A	4.00	ND	ND	5.0 mg/L	---
Ethanol	X		1	1671A	2000	ND	ND	Report mg/L	---
Methyl-tert-Butyl Ether	X		1	624.1	10.0	ND	ND	70 µg/L	
tert-Butyl Alcohol	X		1	624.1	100	ND	ND	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	X		1	624.1	20	ND	ND	90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									
pH		X	1			8.4	8.4		
See Attached Table 1									

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
Arsenic
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 seperator), 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. 25 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

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.

See 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 ☐ **BWSC Permit being submitted concurrently with this NOI**
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

Results

Get Results in Report Format
PDF Spreadsheet

Below are the results of your search, using the following search criteria:
Town(s): Boston
Street No: 1081
Street Name: Boylston St
Resource Type(s): Area, Building, Burial Ground, Object, Structure

For more information about this page and how to use it, click here

No Results Found.

New Search | New Search – Same Town(s) | Previous

MHC Home | MACRIS Home

MACRIS MAPS 2.0 beta

About || Help || Disclaimer

1071 Boylston Street, Boston Search

1071 Boylston St, Boston, Massachusetts, 02215

Bing MassDOT Street View

Available Layers

- Base Layer
- Inventory Layers
- MassGIS Layers

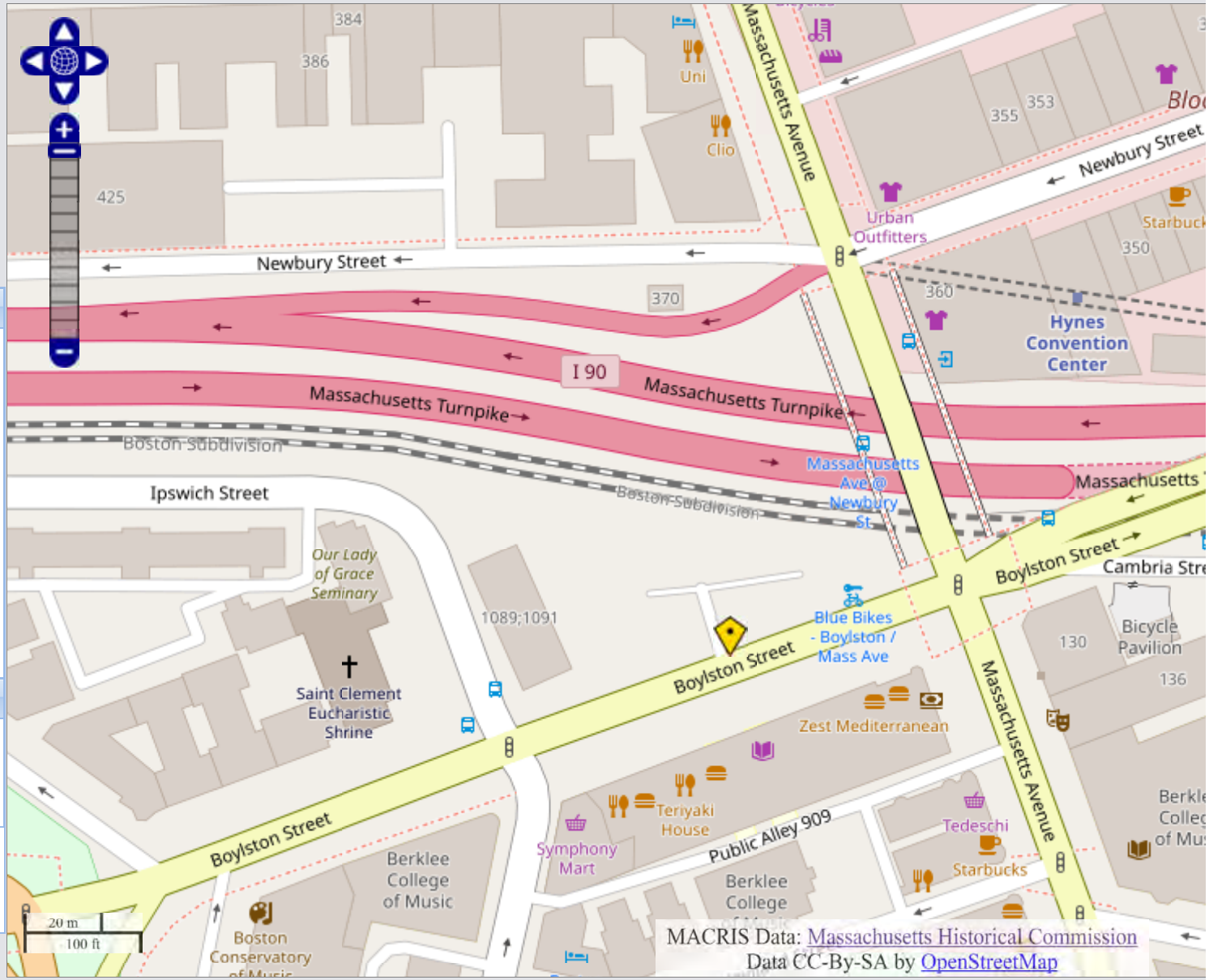
Legend

MHC Inventory Points
MHC Inventory Areas
MHC Towns Completed

Archaeology Login

Username:
Password: Login

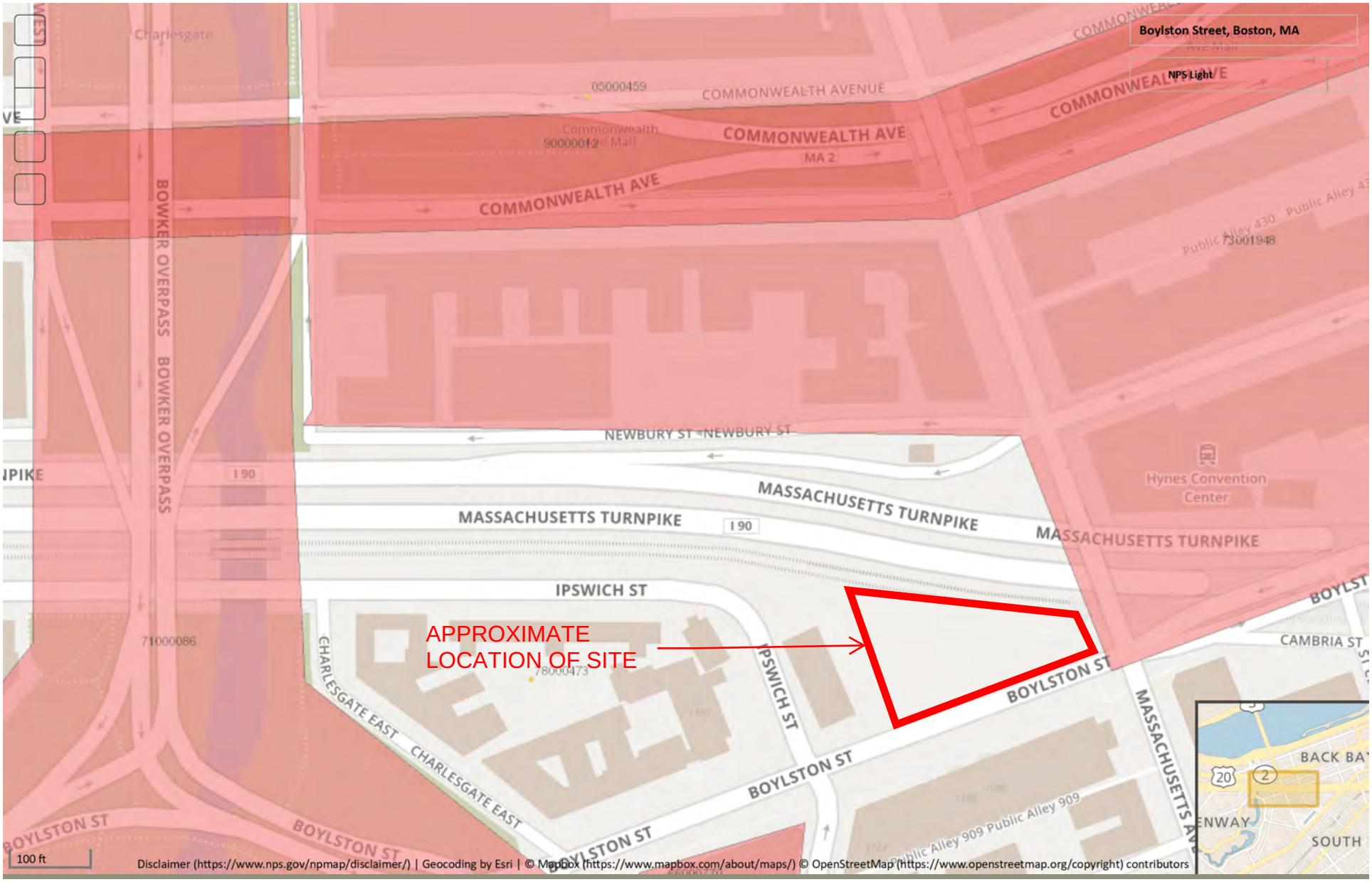
MACRIS Maps Last Updated 09/20/2019



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. Data last updated in April, 2014.



APPENDIX C

ESA Documentation

MassDEP - Bureau of Waste Site Cleanup

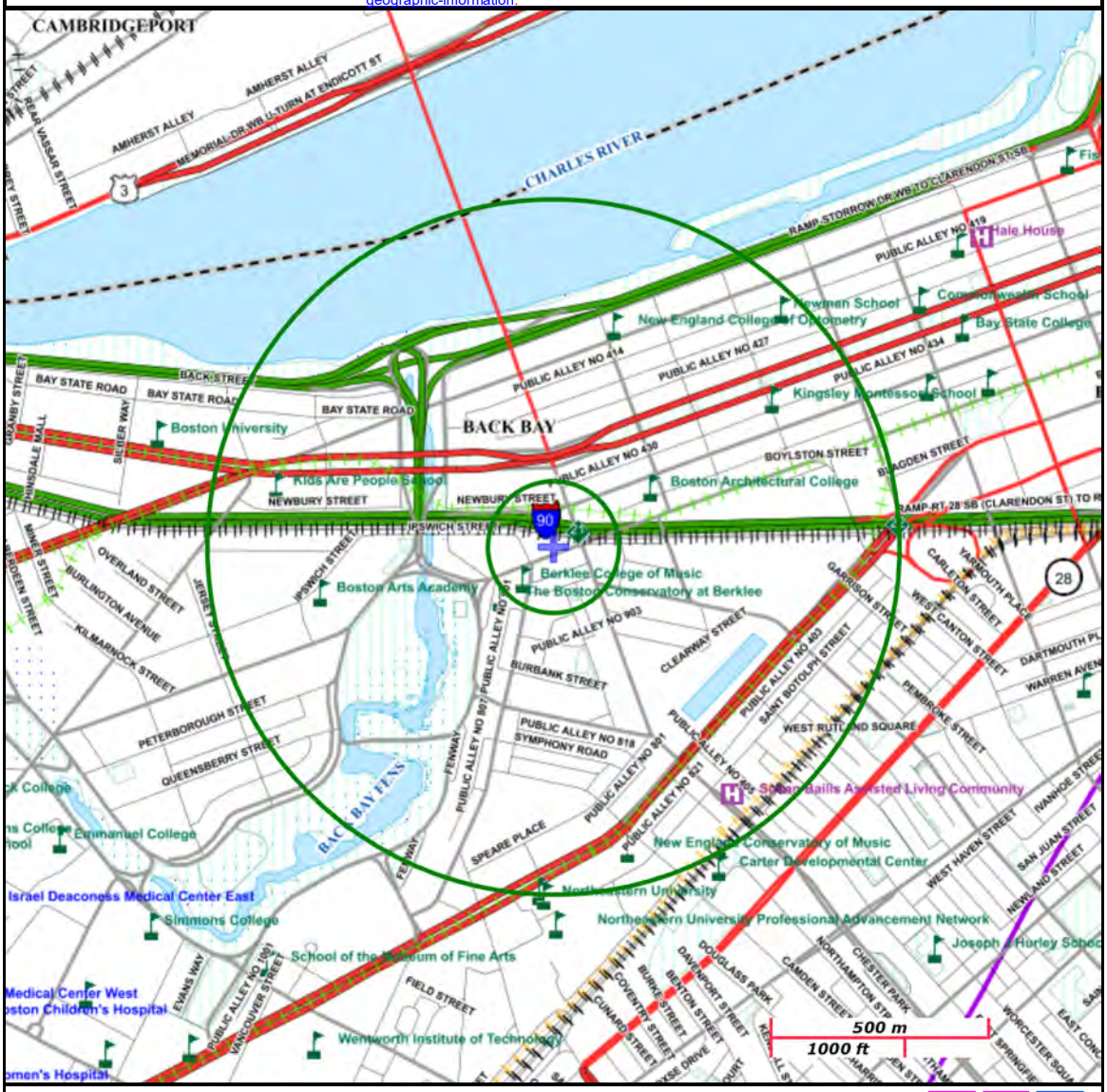
Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:
1071 BOYLSTON STREET
1071 BOYLSTON STREET BOSTON, MA

NAD83 UTM Meters:
4690445mN , 327971mE (Zone: 19)
October 16, 2019

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

MassDEP
Commonwealth of Massachusetts
Department of Environmental Protection



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

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

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

Aquifers: Medium Yield, High Yield, EPA Sole Source

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

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

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

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

United States Department of the Interior

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

In Reply Refer To: December 11, 2019
Consultation Code: 05E1NE00-2020-SLI-0733
Event Code: 05E1NE00-2020-E-01959
Project Name: Parcel 12

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 05E1NE00-2020-SLI-0733

Event Code: 05E1NE00-2020-E-01959

Project Name: Parcel 12

Project Type: DEVELOPMENT

Project Description: The Site will be developed as a 20-story office building (with penthouse level) with a two-level below-grade parking garage at Boylston Street and Massachusetts Avenue, Boston. Dewatering is expected to start in June 2020 and last for one year.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.34729109755648N71.08864943961098W

Counties: Suffolk, MA

Endangered Species Act Species

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

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

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

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

---

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

Critical habitats

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

IPaC Information for Planning and Consultation **U.S. Fish & Wildlife Service**

IPaC resource list

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

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

Location

Suffolk County, Massachusetts

Local office

New England Ecological Services Field Office

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

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

http://www.fws.gov/newengland

Endangered species

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

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

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

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

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

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

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

Migratory birds

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

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Measures for avoiding and minimizing impacts to birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Nationwide conservation measures for birds http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Oct 15 to Aug 31
Black-billed Cuckoo *Coccyzus erythropthalmus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10
Bobolink *Dolichonyx oryzivorus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Canada Warbler *Cardellina canadensis* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10

Cerulean Warbler Dendroica cerulea	Breeds Apr 29 to Jul 20
Dunlin Calidris alpina arcticola This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Evening Grosbeak Coccothraustes vespertinus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Kentucky Warbler Oporornis formosus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 20
Lesser Yellowlegs Tringa flavipes This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9679	Breeds elsewhere
Nelson's Sparrow Ammodramus nelsoni This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 15 to Sep 5
Prairie Warbler Dendroica discolor This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Prothonotary Warbler Protonotaria citrea This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 1 to Jul 31
Red-headed Woodpecker Melanerpes erythrocephalus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Sep 10
Red-throated Loon Gavia stellata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Rusty Blackbird Euphagus carolinus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Semipalmated Sandpiper Calidris pusilla This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Snowy Owl Bubo scandiacus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere

Wood Thrush Hylocichla mustelina
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Breeds May 10 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

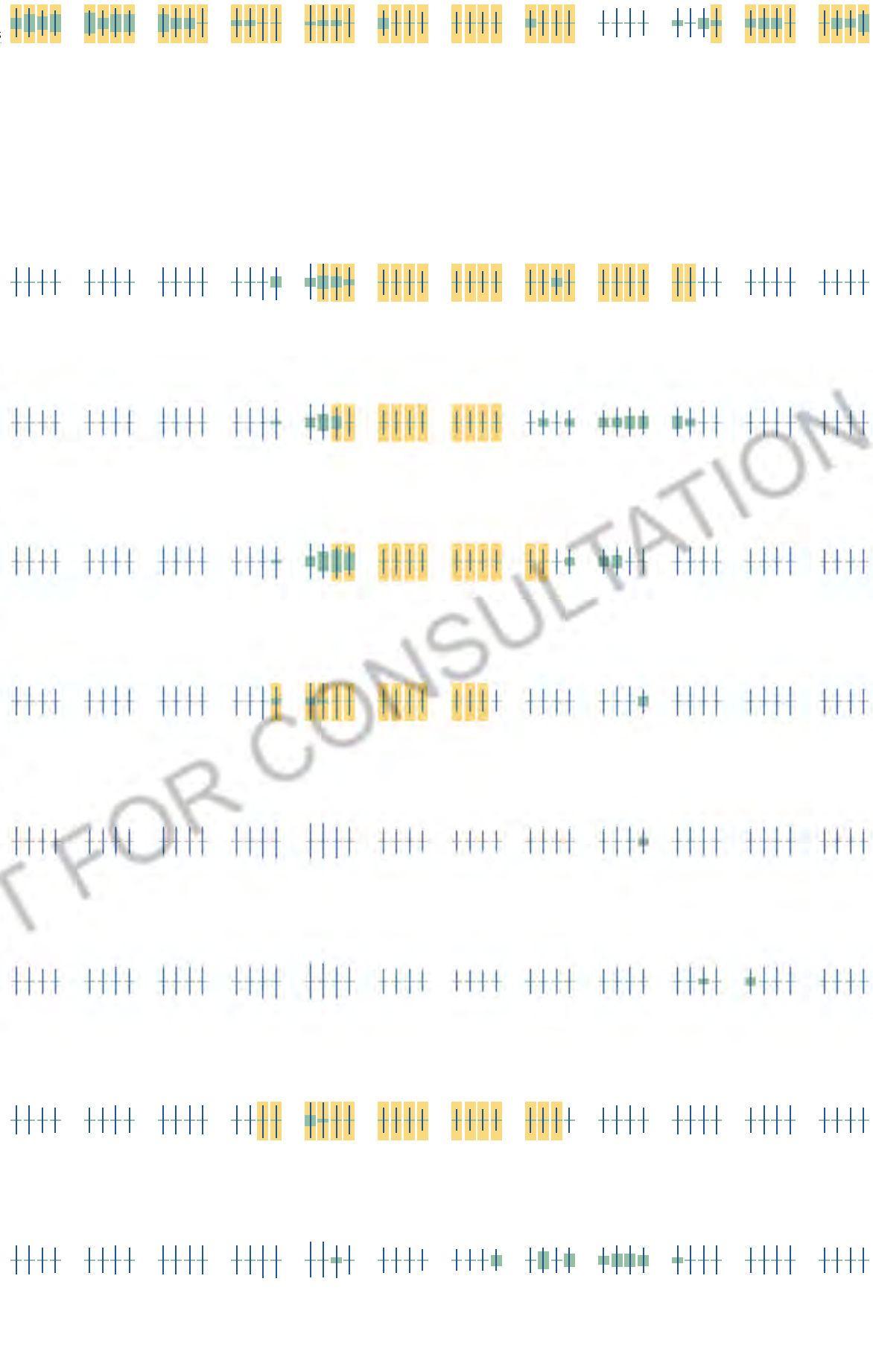
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

■ probability of presence ■ breeding season | survey effort – no data

SPECIES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC



Bald Eagle
Non-BCC Vulnerable (This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.)

Black-billed Cuckoo
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Bobolink
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Canada Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

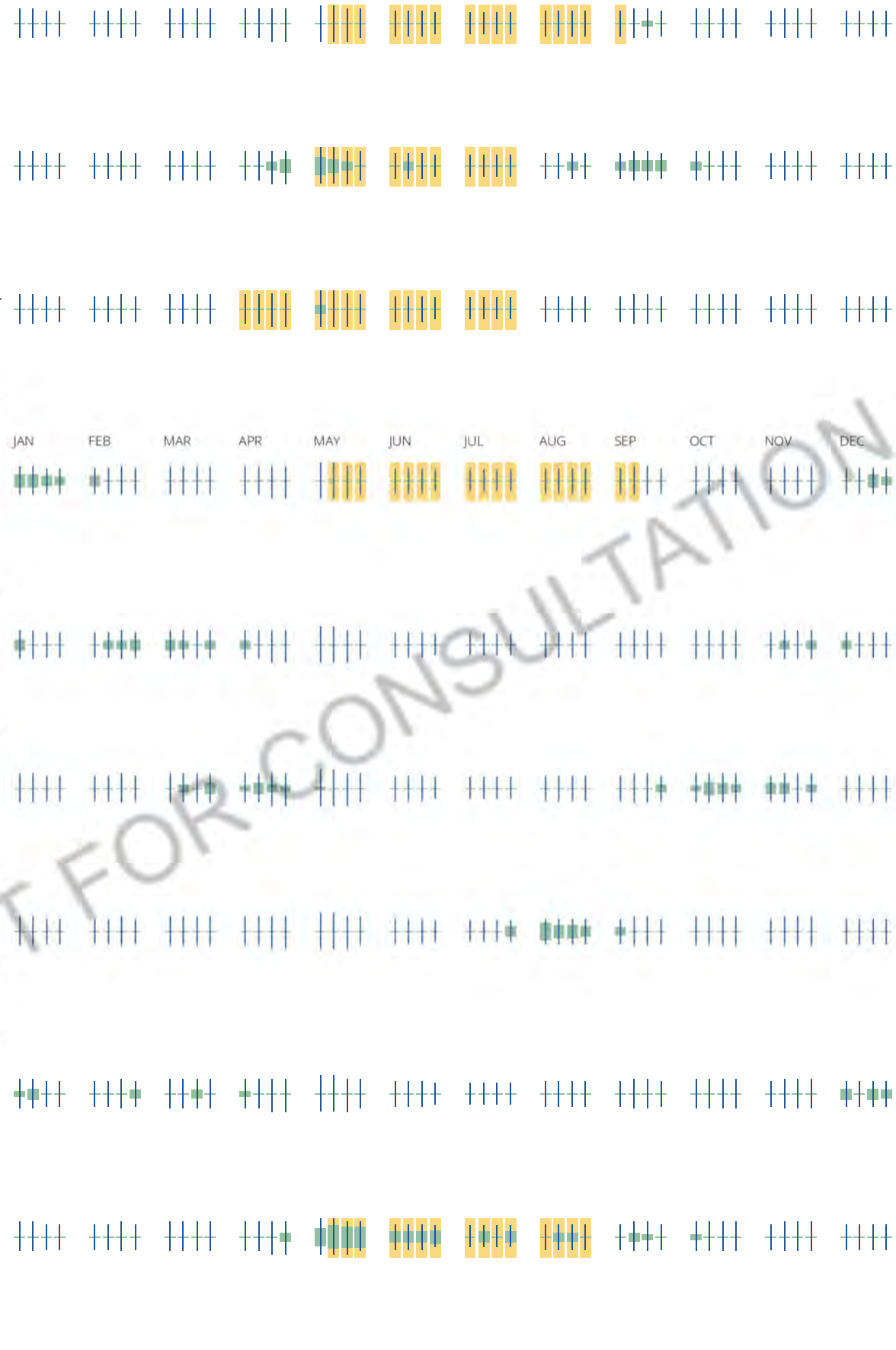
Cerulean Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Dunlin
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

Evening Grosbeak
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Kentucky Warbler
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

Lesser Yellowlegs
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year

round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures and/or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the AKN Phenology Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets .

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: The Cornell Lab of Ornithology All About Birds Bird Guide, or (if you are unsuccessful in locating the bird of interest there), the Cornell Lab of Ornithology Neotropical Birds guide. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

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

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

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

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

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

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

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

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

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

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

Data exclusions

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

Data precautions

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

APPENDIX D

BWSC Permit

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

19 June 2020
File No. 132410-008

Boston Water and Sewer Commission
Engineering Customer Services
900 Harrison Avenue
Boston, MA 02119

Attention: Jodi Dobay

Subject: Request for Approval of Temporary Construction Dewatering
MassDOT Air Rights Parcel 12 – Office Building
Boston, Massachusetts

Ladies and Gentlemen,

On behalf of our client, S&A P12 Property LLC c/o Samuels & Associates, this letter submits the Dewatering Discharge Permit Application for the proposed hotel building located at 1001 Boylston Street, Boston, Massachusetts.

Dewatering is necessary for basement excavation and construction to be conducted in-the-dry and is anticipated to begin in June 2020 and continue for up to 12 months. Prior to discharge, collected water will be routed through a sedimentation tank and bag filter at minimum to remove suspended solids and un-dissolved chemical constituents. The proposed dewatering discharge catch basin is shown on Figure 1 and the BWSC sewer system maps with discharge route.

A Notice of Intent to discharge under the 2017 NPDES Remediation General Permit (RGP) has been submitted to the Environmental Protection Agency (EPA). A copy of the submitted application is attached. If you have any questions, please feel free to contact the undersigned at 617-886-7400.

Sincerely yours,
HALEY & ALDRICH, INC.

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

Attachments:

Dewatering Discharge Permit Application
Figure 1 – Proposed Discharge Route
Copy of NPDES RGP Application

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

DEWATERING DISCHARGE PERMIT APPLICATION

OWNER / AUTHORIZED APPLICANT PROVIDE INFORMATION HERE:

Company Name: S&A P12 Property LLC Address: 136 Brookline Avenue, Boston MA 02115

Phone Number: 617-603-5412 Fax number: _____

Contact person name: Abe Menzin Title: Executive Vice President Development

Cell number: 617-603-5412 Email address: amenzin@samuelsre.com

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

Owner's Information (if different from above):

Owner of property being dewatered: _____

Owner's mailing address: _____ Phone number: _____

Location of Discharge & Proposed Treatment System(s):

Street number and name: MassDOT Air Rights Parcel 12 Office Neighborhood Back Bay

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

Describe Proposed Pre-Treatment System(s): Sedimentation Tank, Bag Filter, pH neutralization, and any other components as necessary (refer to attached RGP Application)

BWSC Outfall No. MWRA-CSO023 Receiving Waters Charles River

Temporary Discharges (Provide Anticipated Dates of Discharge): From June 2020 To June 2021

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

Permanent Discharges

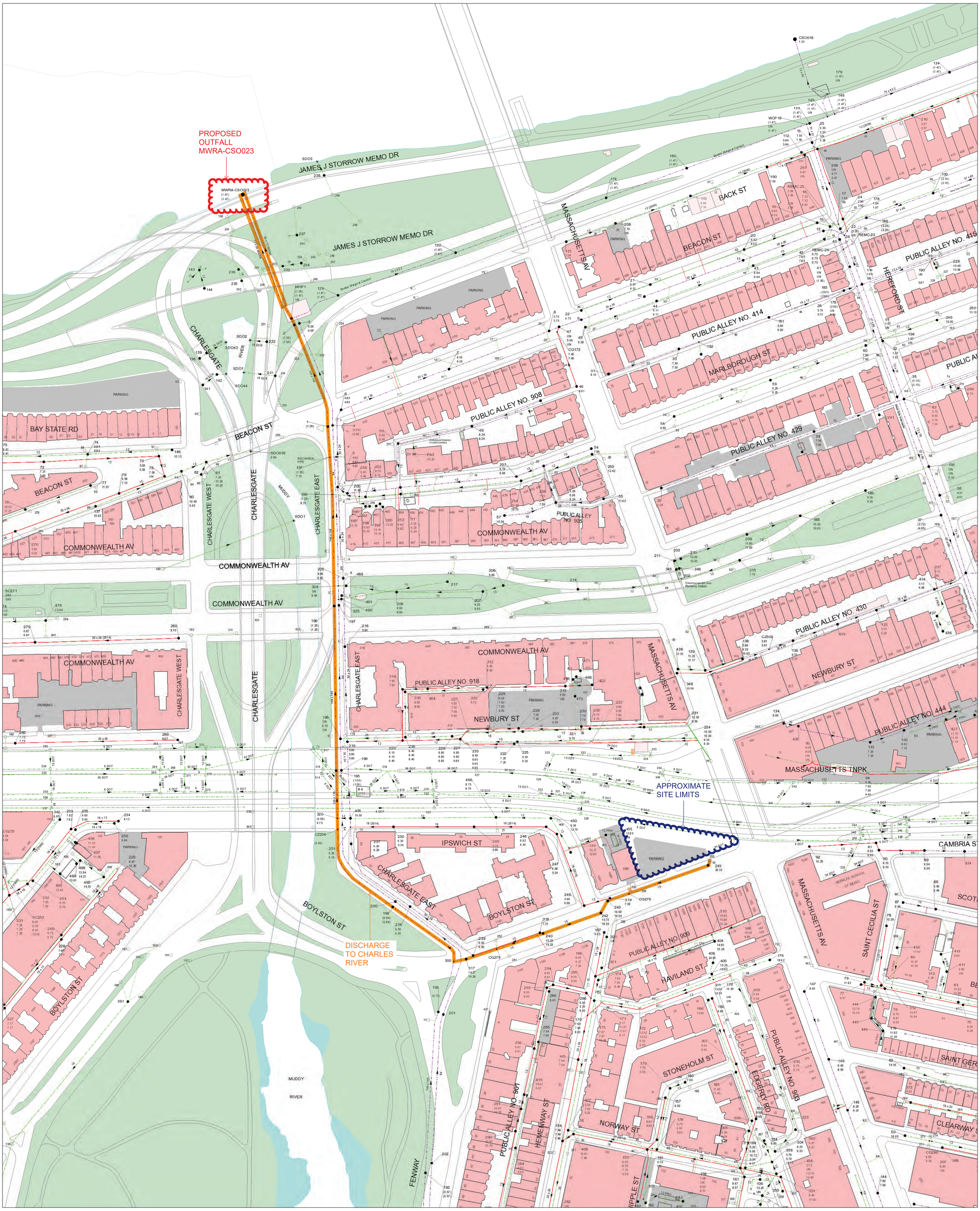
☐ Foundation Drainage	☐ Crawl Space/Footing Drain
☐ Accumulated Surface Water	☐ Non-contact/Uncontaminated Cooling
☐ Non-contact/Uncontaminated Process	☐ Other; _____

---

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

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

Signature of Authorized Representative for Property Owner: DocuSigned by: Joel Sklar 4080F2B6F90C478... Date: 6/23/2020



BOSTON WATER AND SEWER

N
W E
S

0 50 100 200 300 400
Feet

Path to Outfalls (2-3)

FIGURE 1 - BWSC PLAN

APPENDIX E

Laboratory Data Reports

ANALYTICAL REPORT

Lab Number:	L1935412
Client:	Haley & Aldrich, Inc. 465 Medford Street, Suite 2200 Charlestown, MA 02129-1400
ATTN:	Scott Bamford
Phone:	(617) 886-7420
Project Name:	MASSDOT AIR RIGHTS PARCEL 12
Project Number:	132410-005
Report Date:	08/15/19

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

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

Project Name: MASSDOT AIR RIGHTS PARCEL 12
Project Number: 132410-005

Lab Number: L1935412
Report Date: 08/15/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1935412-01	HA14-101(OW)	WATER	BOSTON, MA	08/07/19 09:45	08/07/19

Project Name:	MASSDOT AIR RIGHTS PARCEL 12	**Lab Number:**	L1935412
Project Number:	132410-005	**Report Date:**	08/15/19

Case Narrative

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

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

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

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

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

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

Project Name:	MASSDOT AIR RIGHTS PARCEL 12	**Lab Number:**	L1935412
Project Number:	132410-005	**Report Date:**	08/15/19

Case Narrative (continued)

Report Submission

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

Sample Receipt

L1935412-01 (HA14-101(OW)): The collection date and time on the chain of custody was 07-AUG-19 10:00; however, the collection date/time on the container label was 07-AUG-19 09:45. At the client's request, the collection date/time is reported as 07-AUG-19 09:45.

Volatile Organics by Method 624

The WG1271705-3 LCS recovery, associated with L1935412-01 (HA14-101(OW)), is above the acceptance criteria for tert-butyl alcohol (160%); however, the associated sample is non-detect for this target analyte. The results of the original analysis are reported.

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

Authorized Signature: Cristin Walker

Title: Technical Director/Representative Date: 08/15/19

ORGANICS

VOLATILES

Project Name: MASSDOT AIR RIGHTS PARCEL 12 **Lab Number:** L1935412

Project Number: 132410-005 **Report Date:** 08/15/19

SAMPLE RESULTS

Lab ID: L1935412-01 Date Collected: 08/07/19 09:45
Client ID: HA14-101(OW) Date Received: 08/07/19
Sample Location: BOSTON, MA Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 08/12/19 13:17
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: MASSDOT AIR RIGHTS PARCEL 12 **Lab Number:** L1935412

Project Number: 132410-005 **Report Date:** 08/15/19

SAMPLE RESULTS

Lab ID: L1935412-01 Date Collected: 08/07/19 09:45

Client ID: HA14-101(OW) Date Received: 08/07/19

Sample Location: BOSTON, MA Field Prep: Refer to COC

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	109		60-140
Fluorobenzene	116		60-140
4-Bromofluorobenzene	103		60-140

Project Name: MASSDOT AIR RIGHTS PARCEL 12 **Lab Number:** L1935412

Project Number: 132410-005 **Report Date:** 08/15/19

SAMPLE RESULTS

Lab ID: L1935412-01
Client ID: HA14-101(OW)
Sample Location: BOSTON, MA

Date Collected: 08/07/19 09:45
Date Received: 08/07/19
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1-SIM
Analytical Date: 08/12/19 13:17
Analyst: GT

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	112		60-140
4-Bromofluorobenzene	119		60-140

Project Name: MASSDOT AIR RIGHTS PARCEL 12 **Lab Number:** L1935412

Project Number: 132410-005 **Report Date:** 08/15/19

SAMPLE RESULTS

Lab ID: L1935412-01
Client ID: HA14-101(OW)
Sample Location: BOSTON, MA

Date Collected: 08/07/19 09:45
Date Received: 08/07/19
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 08/15/19 15:06
Analyst: AWS

Extraction Method: EPA 504.1
Extraction Date: 08/15/19 11:00

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

Project Name: MASSDOT AIR RIGHTS PARCEL 12 **Lab Number:** L1935412

Project Number: 132410-005 **Report Date:** 08/15/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 08/12/19 11:07
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1271705-4					
Methylene chloride	ND		ug/l	1.0	--
1,1-Dichloroethane	ND		ug/l	1.5	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.5	--
Tetrachloroethene	ND		ug/l	1.0	--
1,2-Dichloroethane	ND		ug/l	1.5	--
1,1,1-Trichloroethane	ND		ug/l	2.0	--
Benzene	ND		ug/l	1.0	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Vinyl chloride	ND		ug/l	1.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--
1,2-Dichlorobenzene	ND		ug/l	5.0	--
1,3-Dichlorobenzene	ND		ug/l	5.0	--
1,4-Dichlorobenzene	ND		ug/l	5.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-xylene	ND		ug/l	1.0	--
Xylenes, Total	ND		ug/l	1.0	--
Acetone	ND		ug/l	10	--
Methyl tert butyl ether	ND		ug/l	10	--
Tert-Butyl Alcohol	ND		ug/l	100	--
Tertiary-Amyl Methyl Ether	ND		ug/l	20	--

Project Name: MASSDOT AIR RIGHTS PARCEL 12 **Lab Number:** L1935412

Project Number: 132410-005 **Report Date:** 08/15/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 08/12/19 11:07
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1271705-4					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	113		60-140
Fluorobenzene	114		60-140
4-Bromofluorobenzene	101		60-140

Project Name: MASSDOT AIR RIGHTS PARCEL 12 **Lab Number:** L1935412

Project Number: 132410-005 **Report Date:** 08/15/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1-SIM
Analytical Date: 08/12/19 11:07
Analyst: GT

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1271730-4					
1,4-Dioxane	ND		ug/l	50	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	111		60-140
4-Bromofluorobenzene	117		60-140

Project Name: MASSDOT AIR RIGHTS PARCEL 12 **Lab Number:** L1935412

Project Number: 132410-005 **Report Date:** 08/15/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 08/15/19 14:33
Analyst: AWS

Extraction Method: EPA 504.1
Extraction Date: 08/15/19 11:00

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westborough Lab for sample(s): 01 Batch: WG1272861-1						
1,2-Dibromoethane	ND		ug/l	0.010	--	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: MASSDOT AIR RIGHTS PARCEL 12

Project Number: 132410-005

Lab Number: L1935412

Report Date: 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1271705-3								
Methylene chloride	100		-		60-140	-		28
1,1-Dichloroethane	90		-		50-150	-		49
Carbon tetrachloride	90		-		70-130	-		41
1,1,2-Trichloroethane	100		-		70-130	-		45
Tetrachloroethene	105		-		70-130	-		39
1,2-Dichloroethane	115		-		70-130	-		49
1,1,1-Trichloroethane	125		-		70-130	-		36
Benzene	120		-		65-135	-		61
Toluene	105		-		70-130	-		41
Ethylbenzene	105		-		60-140	-		63
Vinyl chloride	95		-		5-195	-		66
1,1-Dichloroethene	120		-		50-150	-		32
cis-1,2-Dichloroethene	120		-		60-140	-		30
Trichloroethene	120		-		65-135	-		48
1,2-Dichlorobenzene	105		-		65-135	-		57
1,3-Dichlorobenzene	100		-		70-130	-		43
1,4-Dichlorobenzene	100		-		65-135	-		57
p/m-Xylene	102		-		60-140	-		30
o-xylene	100		-		60-140	-		30
Acetone	114		-		40-160	-		30
Methyl tert butyl ether	125		-		60-140	-		30
Tert-Butyl Alcohol	**160**	Q	-		60-140	-		30
Tertiary-Amyl Methyl Ether	120		-		60-140	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: MASSDOT AIR RIGHTS PARCEL 12

Project Number: 132410-005

Lab Number: L1935412

Report Date: 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1271705-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	114				60-140
Fluorobenzene	114				60-140
4-Bromofluorobenzene	99				60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: MASSDOT AIR RIGHTS PARCEL 12

Project Number: 132410-005

Lab Number: L1935412

Report Date: 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1271730-3								
1,4-Dioxane	100		-		60-140	-		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Fluorobenzene	111				60-140
4-Bromofluorobenzene	102				60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: MASSDOT AIR RIGHTS PARCEL 12

Project Number: 132410-005

Lab Number: L1935412

Report Date: 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab	Associated sample(s): 01		Batch: WG1272861-2						
1,2-Dibromoethane	104		-		80-120	-			A

Matrix Spike Analysis

Batch Quality Control

Project Name: MASSDOT AIR RIGHTS PARCEL 12 ***Lab Number:*** L1935412

Project Number: 132410-005 ***Report Date:*** 08/15/19

Parameter	*Native Sample*	*MS Added*	*MS Found*	*MS %Recovery*	*Qual*	*MSD Found*	*MSD %Recovery*	*Qual*	*Recovery Limits*	*RPD*	*Qual*	*RPD Limits*	*Column*
Microextractables by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1272861-3 QC Sample: L1935658-01 Client ID: MS Sample													
1,2-Dibromoethane	ND	0.249	0.266	107		-	-		80-120	-		20	A
1,2-Dibromo-3-chloropropane	ND	0.249	0.282	113		-	-		80-120	-		20	A
1,2,3-Trichloropropane	ND	0.249	0.446	**179**	Q	-	-		80-120	-		20	A

SEMIVOLATILES

Project Name: MASSDOT AIR RIGHTS PARCEL 12 **Lab Number:** L1935412

Project Number: 132410-005 **Report Date:** 08/15/19

SAMPLE RESULTS

Lab ID: L1935412-01
Client ID: HA14-101(OW)
Sample Location: BOSTON, MA

Date Collected: 08/07/19 09:45
Date Received: 08/07/19
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 08/11/19 19:53
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 08/10/19 15:52

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	74		42-122
2-Fluorobiphenyl	59		46-121
4-Terphenyl-d14	77		47-138

Project Name: MASSDOT AIR RIGHTS PARCEL 12 **Lab Number:** L1935412

Project Number: 132410-005 **Report Date:** 08/15/19

SAMPLE RESULTS

Lab ID: L1935412-01
Client ID: HA14-101(OW)
Sample Location: BOSTON, MA

Date Collected: 08/07/19 09:45
Date Received: 08/07/19
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 08/11/19 13:46
Analyst: DV

Extraction Method: EPA 625.1
Extraction Date: 08/10/19 15:52

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		25-87
Phenol-d6	30		16-65
Nitrobenzene-d5	84		42-122
2-Fluorobiphenyl	88		46-121
2,4,6-Tribromophenol	87		45-128
4-Terphenyl-d14	87		47-138

Project Name: MASSDOT AIR RIGHTS PARCEL 12 **Lab Number:** L1935412

Project Number: 132410-005 **Report Date:** 08/15/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1-SIM
Analytical Date: 08/11/19 11:14
Analyst: DV

Extraction Method: EPA 625.1
Extraction Date: 08/10/19 13:30

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1270981-1					
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	41		25-87
Phenol-d6	28		16-65
Nitrobenzene-d5	69		42-122
2-Fluorobiphenyl	67		46-121
2,4,6-Tribromophenol	58		45-128
4-Terphenyl-d14	65		47-138

Project Name: MASSDOT AIR RIGHTS PARCEL 12 **Lab Number:** L1935412

Project Number: 132410-005 **Report Date:** 08/15/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1
Analytical Date: 08/11/19 18:12
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 08/10/19 13:30

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1271005-1					
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	60		42-122
2-Fluorobiphenyl	49		46-121
4-Terphenyl-d14	60		47-138

Lab Control Sample Analysis
Batch Quality Control

Project Name: MASSDOT AIR RIGHTS PARCEL 12
Project Number: 132410-005

Lab Number: L1935412
Report Date: 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1270981-2								
Acenaphthene	68		-		60-132	-		30
Fluoranthene	82		-		43-121	-		30
Naphthalene	68		-		36-120	-		30
Benzo(a)anthracene	88		-		42-133	-		30
Benzo(a)pyrene	75		-		32-148	-		30
Benzo(b)fluoranthene	78		-		42-140	-		30
Benzo(k)fluoranthene	75		-		25-146	-		30
Chrysene	75		-		44-140	-		30
Acenaphthylene	75		-		54-126	-		30
Anthracene	84		-		43-120	-		30
Benzo(ghi)perylene	79		-		1-195	-		30
Fluorene	72		-		70-120	-		30
Phenanthrene	79		-		65-120	-		30
Dibenzo(a,h)anthracene	79		-		1-200	-		30
Indeno(1,2,3-cd)pyrene	86		-		1-151	-		30
Pyrene	81		-		70-120	-		30
Pentachlorophenol	69		-		38-152	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: MASSDOT AIR RIGHTS PARCEL 12

Project Number: 132410-005

Lab Number: L1935412

Report Date: 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits

Semivolatile Organics by GC/MS-SIM - Westborough Lab Associated sample(s): 01 Batch: WG1270981-2

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	47				25-87
Phenol-d6	34				16-65
Nitrobenzene-d5	82				42-122
2-Fluorobiphenyl	73				46-121
2,4,6-Tribromophenol	75				45-128
4-Terphenyl-d14	79				47-138

Lab Control Sample Analysis
Batch Quality Control

Project Name: MASSDOT AIR RIGHTS PARCEL 12
Project Number: 132410-005

Lab Number: L1935412
Report Date: 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01 Batch: WG1271005-2								
Bis(2-ethylhexyl)phthalate	122		-		29-137	-		82
Butyl benzyl phthalate	108		-		1-140	-		60
Di-n-butylphthalate	109		-		8-120	-		47
Di-n-octylphthalate	118		-		19-132	-		69
Diethyl phthalate	96		-		1-120	-		100
Dimethyl phthalate	80		-		1-120	-		183

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	82				42-122
2-Fluorobiphenyl	68				46-121
4-Terphenyl-d14	90				47-138

PCBS

Project Name: MASSDOT AIR RIGHTS PARCEL 12 **Lab Number:** L1935412

Project Number: 132410-005 **Report Date:** 08/15/19

SAMPLE RESULTS

Lab ID: L1935412-01
Client ID: HA14-101(OW)
Sample Location: BOSTON, MA

Date Collected: 08/07/19 09:45
Date Received: 08/07/19
Field Prep: Refer to COC

Sample Depth:
Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 08/14/19 02:53
Analyst: WR

Extraction Method: EPA 608.3
Extraction Date: 08/11/19 01:09
Cleanup Method: EPA 3665A
Cleanup Date: 08/13/19
Cleanup Method: EPA 3660B
Cleanup Date: 08/13/19

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		37-123	B
Decachlorobiphenyl	78		38-114	B
2,4,5,6-Tetrachloro-m-xylene	77		37-123	A
Decachlorobiphenyl	80		38-114	A

Project Name: MASSDOT AIR RIGHTS PARCEL 12 **Lab Number:** L1935412

Project Number: 132410-005 **Report Date:** 08/15/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 127,608.3
Analytical Date: 08/14/19 04:05
Analyst: WR

Extraction Method: EPA 608.3
Extraction Date: 08/11/19 01:09
Cleanup Method: EPA 3665A
Cleanup Date: 08/13/19
Cleanup Method: EPA 3660B
Cleanup Date: 08/13/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG1271055-1						
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	65		37-123	B
Decachlorobiphenyl	68		38-114	B
2,4,5,6-Tetrachloro-m-xylene	64		37-123	A
Decachlorobiphenyl	71		38-114	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: MASSDOT AIR RIGHTS PARCEL 12

Project Number: 132410-005

Lab Number: L1935412

Report Date: 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG1271055-2									
Aroclor 1016	79		-		50-140	-		36	A
Aroclor 1260	75		-		8-140	-		38	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	67				37-123	B
Decachlorobiphenyl	81				38-114	B
2,4,5,6-Tetrachloro-m-xylene	67				37-123	A
Decachlorobiphenyl	83				38-114	A

METALS

Project Name: MASSDOT AIR RIGHTS PARCEL 12 **Lab Number:** L1935412

Project Number: 132410-005 **Report Date:** 08/15/19

SAMPLE RESULTS

Lab ID: L1935412-01 Date Collected: 08/07/19 09:45

Client ID: HA14-101(OW) Date Received: 08/07/19

Sample Location: BOSTON, MA Field Prep: Refer to COC

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	08/08/19 09:32	08/08/19 14:05	EPA 3005A	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	08/08/19 09:32	08/08/19 14:05	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	08/08/19 09:32	08/08/19 14:05	EPA 3005A	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	08/08/19 09:32	08/08/19 14:05	EPA 3005A	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	08/08/19 09:32	08/08/19 14:05	EPA 3005A	3,200.8	AM
Iron, Total	0.459		mg/l	0.050	--	1	08/08/19 09:32	08/12/19 21:39	EPA 3005A	19,200.7	AB
Lead, Total	ND		mg/l	0.00100	--	1	08/08/19 09:32	08/08/19 14:05	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	08/12/19 16:36	08/13/19 12:20	EPA 245.1	3,245.1	GD
Nickel, Total	ND		mg/l	0.00200	--	1	08/08/19 09:32	08/08/19 14:05	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	08/08/19 09:32	08/08/19 14:05	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	08/08/19 09:32	08/08/19 14:05	EPA 3005A	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	08/08/19 09:32	08/08/19 14:05	EPA 3005A	3,200.8	AM
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		08/08/19 14:05	NA	107,-	

Project Name: MASSDOT AIR RIGHTS PARCEL 12 **Lab Number:** L1935412

Project Number: 132410-005 **Report Date:** 08/15/19

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: WG1270017-1										
Antimony, Total	ND		mg/l	0.00400	--	1	08/08/19 09:32	08/08/19 13:52	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	08/08/19 09:32	08/08/19 13:52	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	08/08/19 09:32	08/08/19 13:52	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	08/08/19 09:32	08/08/19 13:52	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	08/08/19 09:32	08/08/19 13:52	3,200.8	AM
Lead, Total	ND		mg/l	0.00100	--	1	08/08/19 09:32	08/08/19 13:52	3,200.8	AM
Nickel, Total	ND		mg/l	0.00200	--	1	08/08/19 09:32	08/08/19 13:52	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	08/08/19 09:32	08/08/19 13:52	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	08/08/19 09:32	08/08/19 13:52	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	08/08/19 09:32	08/08/19 13:52	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: WG1270193-1										
Iron, Total	ND		mg/l	0.050	--	1	08/08/19 09:32	08/12/19 21:01	19,200.7	AB

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1271441-1										
Mercury, Total	ND		mg/l	0.00020	--	1	08/12/19 16:36	08/13/19 11:44	3,245.1	GD

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: MASSDOT AIR RIGHTS PARCEL 12

Project Number: 132410-005

Lab Number: L1935412

Report Date: 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1270017-2								
Antimony, Total	88		-		85-115	-		
Arsenic, Total	107		-		85-115	-		
Cadmium, Total	109		-		85-115	-		
Chromium, Total	102		-		85-115	-		
Copper, Total	99		-		85-115	-		
Lead, Total	111		-		85-115	-		
Nickel, Total	103		-		85-115	-		
Selenium, Total	102		-		85-115	-		
Silver, Total	105		-		85-115	-		
Zinc, Total	109		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1270193-2								
Iron, Total	105		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1271441-2								
Mercury, Total	100		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: MASSDOT AIR RIGHTS PARCEL 12
Project Number: 132410-005

Lab Number: L1935412
Report Date: 08/15/19

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: WG1270017-3 QC Sample: L1935411-01 Client ID: MS Sample												
Antimony, Total	ND	0.5	0.5454	109		-	-		70-130	-		20
Arsenic, Total	0.00435	0.12	0.1364	110		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.05848	115		-	-		70-130	-		20
Chromium, Total	ND	0.2	0.2015	101		-	-		70-130	-		20
Copper, Total	0.00420	0.25	0.2574	101		-	-		70-130	-		20
Lead, Total	ND	0.51	0.5691	112		-	-		70-130	-		20
Nickel, Total	0.00235	0.5	0.5251	104		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1353	113		-	-		70-130	-		20
Silver, Total	ND	0.05	0.05180	104		-	-		70-130	-		20
Zinc, Total	0.01143	0.5	0.5699	112		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1270193-3 QC Sample: L1935411-01 Client ID: MS Sample												
Iron, Total	0.127	1	1.18	105		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1271441-3 QC Sample: L1935359-01 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00430	86		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1271441-5 QC Sample: L1935359-02 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00406	81		-	-		70-130	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: MASSDOT AIR RIGHTS PARCEL 12

Project Number: 132410-005

Lab Number: L1935412

Report Date: 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1270017-4 QC Sample: L1935411-01 Client ID: DUP Sample						
Antimony, Total	ND	ND	mg/l	NC		20
Arsenic, Total	0.00435	0.00454	mg/l	4		20
Cadmium, Total	ND	ND	mg/l	NC		20
Chromium, Total	ND	ND	mg/l	NC		20
Copper, Total	0.00420	0.00462	mg/l	9		20
Lead, Total	ND	ND	mg/l	NC		20
Nickel, Total	0.00235	0.00231	mg/l	2		20
Selenium, Total	ND	ND	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	0.01143	0.01185	mg/l	4		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1270193-4 QC Sample: L1935411-01 Client ID: DUP Sample						
Iron, Total	0.127	0.128	mg/l	1		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1271441-4 QC Sample: L1935359-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1271441-6 QC Sample: L1935359-02 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: MASSDOT AIR RIGHTS PARCEL 12
Project Number: 132410-005
Lab Number: L1935412
Report Date: 08/15/19

SAMPLE RESULTS

Lab ID: L1935412-01
Client ID: HA14-101(OW)
Sample Location: BOSTON, MA
Sample Depth:
Matrix: Water

Date Collected: 08/07/19 09:45
Date Received: 08/07/19
Field Prep: Refer to COC

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	08/09/19 12:15	121,2540D	DR
Cyanide, Total	ND		mg/l	0.005	--	1	08/09/19 11:10	08/09/19 14:36	121,4500CN-CE	LH
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	08/08/19 06:33	121,4500CL-D	MR
Nitrogen, Ammonia	1.44		mg/l	0.075	--	1	08/08/19 17:05	08/08/19 20:47	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.00	--	1	08/09/19 16:55	08/09/19 23:30	74,1664A	MM
Phenolics, Total	ND		mg/l	0.030	--	1	08/12/19 01:14	08/12/19 05:49	4,420.1	BR
Chromium, Hexavalent	ND		mg/l	0.010	--	1	08/08/19 01:15	08/08/19 03:47	1,7196A	MA
Anions by Ion Chromatography - Westborough Lab										
Chloride	709.		mg/l	25.0	--	50	-	08/08/19 21:54	44,300.0	AT

Project Name: MASSDOT AIR RIGHTS PARCEL 12 **Lab Number:** L1935412

Project Number: 132410-005 **Report Date:** 08/15/19

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: WG1269880-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	08/08/19 01:15	08/08/19 03:36	1,7196A	MA
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1269934-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	08/08/19 06:33	121,4500CL-D	MR
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1270103-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	08/08/19 17:05	08/08/19 20:43	121,4500NH3-BH	AT
Anions by Ion Chromatography - Westborough Lab for sample(s): 01 Batch: WG1270500-1										
Chloride	ND		mg/l	0.500	--	1	-	08/08/19 18:36	44,300.0	AT
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1270505-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	08/09/19 12:15	121,2540D	DR
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1270580-1										
Cyanide, Total	ND		mg/l	0.005	--	1	08/09/19 11:10	08/09/19 14:27	121,4500CN-CE	LH
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1270781-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	08/09/19 16:55	08/09/19 23:30	74,1664A	MM
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1271199-1										
Phenolics, Total	ND		mg/l	0.030	--	1	08/12/19 01:14	08/12/19 05:39	4,420.1	BR

Lab Control Sample Analysis

Batch Quality Control

Project Name: MASSDOT AIR RIGHTS PARCEL 12

Project Number: 132410-005

Lab Number: L1935412

Report Date: 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1269880-2								
Chromium, Hexavalent	100		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1269934-2								
Chlorine, Total Residual	92		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1270103-2								
Nitrogen, Ammonia	102		-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 Batch: WG1270500-2								
Chloride	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1270580-2								
Cyanide, Total	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1270781-2								
TPH	84		-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1271199-2								
Phenolics, Total	90		-		70-130	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: MASSDOT AIR RIGHTS PARCEL 12
Project Number: 132410-005

Lab Number: L1935412
Report Date: 08/15/19

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: WG1269880-4 QC Sample: L1935412-01 Client ID: HA14-101(OW)												
Chromium, Hexavalent	ND	0.1	0.098	98		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1269934-4 QC Sample: L1935412-01 Client ID: HA14-101(OW)												
Chlorine, Total Residual	ND	0.25	0.27	108		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1270103-4 QC Sample: L1935201-01 Client ID: MS Sample												
Nitrogen, Ammonia	ND	4	3.47	87		-	-		80-120	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1270500-3 QC Sample: L1935247-02 Client ID: MS Sample												
Chloride	473	100	587	**114**	Q	-	-		90-110	-		18
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1270580-4 QC Sample: L1935658-02 Client ID: MS Sample												
Cyanide, Total	0.006	0.2	0.205	99		-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1270781-4 QC Sample: L1934232-02 Client ID: MS Sample												
TPH	ND	20	15.1	76		-	-		64-132	-		34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1271199-4 QC Sample: L1935412-01 Client ID: HA14-101(OW)												
Phenolics, Total	ND	0.4	0.32	80		-	-		70-130	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: MASSDOT AIR RIGHTS PARCEL 12
Project Number: 132410-005

Lab Number: L1935412
Report Date: 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1269880-3 QC Sample: L1935412-01 Client ID: HA14-101(OW)						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1269934-3 QC Sample: L1935152-01 Client ID: DUP Sample						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1270103-3 QC Sample: L1935201-01 Client ID: DUP Sample						
Nitrogen, Ammonia	ND	ND	mg/l	NC		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1270500-4 QC Sample: L1935247-02 Client ID: DUP Sample						
Chloride	473	473	mg/l	0		18
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1270505-2 QC Sample: L1900008-73 Client ID: DUP Sample						
Solids, Total Suspended	2100	1100	mg/l	**63**	Q	29
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1270580-3 QC Sample: L1935658-01 Client ID: DUP Sample						
Cyanide, Total	0.361	0.366	mg/l	1		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1270781-3 QC Sample: L1934232-01 Client ID: DUP Sample						
TPH	ND	ND	mg/l	NC		34
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1271199-3 QC Sample: L1935412-01 Client ID: HA14-101(OW)						
Phenolics, Total	ND	ND	mg/l	NC		20

Project Name: MASSDOT AIR RIGHTS PARCEL 12
Project Number: 132410-005

Lab Number: L1935412
Report Date: 08/15/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
B	Absent
C	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1935412-01A	Vial Na2S2O3 preserved	B	NA		4.5	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L1935412-01A1	Vial Na2S2O3 preserved	B	NA		4.5	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L1935412-01A2	Vial Na2S2O3 preserved	B	NA		4.5	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L1935412-01A3	Vial Na2S2O3 preserved	B	NA		4.5	Y	Absent		624.1-RGP(7),624.1-SIM-RGP(7)
L1935412-01B	Vial Na2S2O3 preserved	B	NA		4.5	Y	Absent		504(14)
L1935412-01B1	Vial Na2S2O3 preserved	B	NA		4.5	Y	Absent		504(14)
L1935412-01B2	Vial Na2S2O3 preserved	B	NA		4.5	Y	Absent		504(14)
L1935412-01B3	Vial Na2S2O3 preserved	B	NA		4.5	Y	Absent		504(14)
L1935412-01C	Vial HCl preserved	B	NA		4.5	Y	Absent		SUB-ETHANOL(14)
L1935412-01D	Vial HCl preserved	B	NA		4.5	Y	Absent		SUB-ETHANOL(14)
L1935412-01E	Vial HCl preserved	B	NA		4.5	Y	Absent		SUB-ETHANOL(14)
L1935412-01F	Plastic 250ml NaOH preserved	B	>12	>12	4.5	Y	Absent		HOLD-WETCHEM(),TCN-4500(14)
L1935412-01G	Plastic 250ml HNO3 preserved	B	<2	<2	4.5	Y	Absent		HOLD-METAL-DISSOLVED(180)
L1935412-01H	Plastic 250ml HNO3 preserved	B	<2	<2	4.5	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),AG-2008T(180),AS-2008T(180),HG-U(28),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L1935412-01I	Plastic 500ml H2SO4 preserved	B	<2	<2	4.5	Y	Absent		NH3-4500(28)
L1935412-01J	Plastic 950ml unpreserved	B	7	7	4.5	Y	Absent		CL-300(28),HEXCR-7196(1),TRC-4500(1)
L1935412-01K	Plastic 950ml unpreserved	B	7	7	4.5	Y	Absent		TSS-2540(7)
L1935412-01L	Amber 1000ml H2SO4 preserved	B	<2	<2	4.5	Y	Absent		TPHENOL-420(28)
L1935412-01M	Amber 1000ml Na2S2O3	B	7	7	4.5	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L1935412-01N	Amber 1000ml Na2S2O3	B	7	7	4.5	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)

*Values in parentheses indicate holding time in days

Project Name: MASSDOT AIR RIGHTS PARCEL 12
Project Number: 132410-005

Lab Number: L1935412
Report Date: 08/15/19

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1935412-01O	Amber 1000ml Na2S2O3	B	7	7	4.5	Y	Absent		PCB-608.3(7)
L1935412-01O1	Amber 1000ml Na2S2O3	C	7	7	5.3	Y	Absent		PCB-608.3(7)
L1935412-01O2	Amber 1000ml Na2S2O3	C	7	7	5.3	Y	Absent		PCB-608.3(7)
L1935412-01P	Amber 1000ml Na2S2O3	B	7	7	4.5	Y	Absent		PCB-608.3(7)
L1935412-01P1	Amber 1000ml Na2S2O3	C	7	7	5.3	Y	Absent		PCB-608.3(7)
L1935412-01P2	Amber 1000ml Na2S2O3	C	7	7	5.3	Y	Absent		PCB-608.3(7)
L1935412-01Q	Amber 1000ml HCl preserved	B	N/A	N/A	4.5	Y	Absent		TPH-1664(28)
L1935412-01Q1	Amber 1000ml HCl preserved	C	N/A	N/A	5.3	Y	Absent		TPH-1664(28)
L1935412-01Q2	Amber 1000ml HCl preserved	C	N/A	N/A	5.3	Y	Absent		TPH-1664(28)
L1935412-01R	Amber 1000ml HCl preserved	B	N/A	N/A	4.5	Y	Absent		TPH-1664(28)
L1935412-01R1	Amber 1000ml HCl preserved	C	N/A	N/A	5.3	Y	Absent		TPH-1664(28)
L1935412-01R2	Amber 1000ml HCl preserved	C	N/A	N/A	5.3	Y	Absent		TPH-1664(28)

Container Comments

L1935412-01O	Chlorine Check
L1935412-01O1	Chlorine Check
L1935412-01O2	Chlorine Check
L1935412-01P	Chlorine Check
L1935412-01P1	Chlorine Check
L1935412-01P2	Chlorine Check

*Values in parentheses indicate holding time in days

Project Name:	MASSDOT AIR RIGHTS PARCEL 12	**Lab Number:**	L1935412
Project Number:	132410-005	**Report Date:**	08/15/19

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.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

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

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:	MASSDOT AIR RIGHTS PARCEL 12	**Lab Number:**	L1935412
Project Number:	132410-005	**Report Date:**	08/15/19

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.

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

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

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

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

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

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

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

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

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

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

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: Data Usability Report

Project Name:	MASSDOT AIR RIGHTS PARCEL 12	**Lab Number:**	L1935412
Project Number:	132410-005	**Report Date:**	08/15/19

REFERENCES

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

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

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

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

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

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

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

107 Alpha Analytical - In-house calculation method.

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

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

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

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

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

ALPHA

CHAIN OF CUSTODY

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

Page 1 of 1

Date Rec'd in Lab: 8/7/19

ALPHA Job #: L1935412

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

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

Project Information
Project Name: 150 Seaport Boulevard
Project Location: Boston, MA
Project #: 132470-002
(Use Project name as Project #)
Project Manager: Lee Vanzler
ALPHAQuote #:

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

H&A Information
H&A Client: The Cronin Group, LLC
H&A Address: 465 Medford St
Boston, MA 0212-1400
H&A Phone: 617-886-7400
H&A Fax: echristmas@haleyaldrich.com
H&A Email: lvanzler@haleyaldrich.com

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

Billing Information
☑ Same as Client Info
PO #

Regulatory Requirements (Program/Criteria)
Note: Select State from menu & identify criteria.

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

These samples have been previously analyzed by Alpha

Other project specific requirements/comments:
3. HOLD PACN & ACN 13. Dissolved Metals ON HOLD (Field Filtered)
Please sample per EPA Approved 2017 RGP Permit methods

Please specify Metals or TAL.

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	1. TSS - 2540	2. THC-4500	3. TCN-4500 HOLD PACN & ACN	4. 504	5. 8260 & 8260 SIM for Dioxane, or applicable	6. HEXCR-3500 & Trivalent Chromium	7. TPHENOL-420	8. 8270TCL (including Diethylhexylphthalate)	9. 8270TCL-SIM, or applicable method	10. CL-300	11. Total Metals - Ag, As, Cd, Cr, Cu, Ni, Pb, Sb, Se, Zn, Fe, Hg	12. Ammonia	13.Diss. Metals-Ag,As,Cd,Cr, Cu,Ni,Pb,Sb,Se,Zn,Fe,Hg	14. A2-ALCOHOL (Ethanol)	15. TPH-1664	16. PCB-608	Sample Specific Comments
35412-01	HA19-101(ow)	080719	09:00	AQ	SBL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
			10:00																			

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

Preservative Code:
A = None
B = HCl
C = HNO_3
D = H_2SO_4
E = NaOH
F = MeOH
G = $NaHSO_3$
H = $Na_2S_2O_3$
K/E = Zn Ac/NaOH
O = Other

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

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

Container Type
Preservative

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

Relinquished By:	Date/Time	Received By:	Date/Time
Sean Larkin	080719 / 12:30	Mid Tan	8/7/19 1230
Mid Tan	8/7/19 16:30	MIDTAN	8-7-19 1643
MIDTAN	8-7-19 1829	[illegible]	8/7/19 1829

Document ID: 20455 Rev 1 (1/29/2016)

ALPHA ANALYTICAL
World Class Chemistry

Subcontract Chain of Custody

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

Alpha Job Number
L1935412

Client Information

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

Phone: 603.319.5010
Email: mgulli@alphalab.com

Project Information

Project Location: MA
Project Manager: Melissa Gulli

Turnaround & Deliverables Information

Due Date: 08/16/19 (RUSH)
Deliverables:

Regulatory Requirements/Report Limits

State/Federal Program:
Regulatory Criteria: RCS-1-14;S1/G1-14

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L1935412

Report to include Method Blank, LCS/LCSD:

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

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	HA14-101(OW)	08-07-19 10:00	WATER	Ethanol by EPA 1671 Revision A	

	Relinquished By:	Date/Time:	Received By:	Date/Time:
	[signature]	8/12/19		
Form No: AL_subcoc				

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

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

Laboratory Job ID: 490-177600-1
Client Project/Site: L1935412

For:
Alpha Analytical Inc
8 Walkup Drive
Westboro, Massachusetts 01581

Attn: Melissa Gulli

Authorized for release by:
8/14/2019 3:55:52 PM

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

Table of Contents

Sample Summary

Client: Alpha Analytical Inc
Project/Site: L1935412

Job ID: 490-177600-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
490-177600-1	HA14-101(OW)	Water	08/07/19 10:00	08/13/19 09:00	

Case Narrative

Client: Alpha Analytical Inc
Project/Site: L1935412

Job ID: 490-177600-1

Job ID: 490-177600-1

Laboratory: Eurofins TestAmerica, Nashville

Narrative

Job Narrative
490-177600-1

Comments
No additional comments.

Receipt
The sample was received on 8/13/2019 9:00 AM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 6.0º C.

GC Semi VOA
Method 1671A: The continuing calibration verification (CCV) associated with batch 490-609494 recovered above the upper control limit for Ethanol. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following sample is impacted: HA14-101(OW) (490-177600-1).

Method 1671A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 490-609494.

Method 1671A: The laboratory control sample (LCS) for analytical batch 490-609494 recovered outside control limits for the following analyte: Ethanol. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

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

Definitions/Glossary

Client: Alpha Analytical Inc
Project/Site: L1935412

Job ID: 490-177600-1

Qualifiers

GC VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

Glossary

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

Client Sample Results

Client: Alpha Analytical Inc
Project/Site: L1935412

Job ID: 490-177600-1

Client Sample ID: HA14-101(OW)

Date Collected: 08/07/19 10:00
Date Received: 08/13/19 09:00

Lab Sample ID: 490-177600-1

Matrix: Water

Method: 1671A - Ethanol (GC/FID)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND	*	2000	500	ug/L			08/14/19 11:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Isopropyl acetate (Surr)	*80*		*70 - 130*		*08/14/19 11:47*	*1*

QC Sample Results

Client: Alpha Analytical Inc
Project/Site: L1935412

Job ID: 490-177600-1

Method: 1671A - Ethanol (GC/FID)

Lab Sample ID: MB 490-609494/4
Matrix: Water
Analysis Batch: 609494

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethanol	ND		2000	500	ug/L			08/14/19 11:29	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Isopropyl acetate (Surr)	*76*		*70 - 130*		*08/14/19 11:29*	*1*

Lab Sample ID: LCS 490-609494/5
Matrix: Water
Analysis Batch: 609494

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ethanol			50200	70950	*	ug/L		141	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Isopropyl acetate (Surr)	*82*		*70 - 130*

Lab Sample ID: LCSD 490-609494/6
Matrix: Water
Analysis Batch: 609494

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethanol			50200	62740		ug/L		125	70 - 130	12	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Isopropyl acetate (Surr)	*85*		*70 - 130*

QC Association Summary

Client: Alpha Analytical Inc
Project/Site: L1935412

Job ID: 490-177600-1

GC VOA

Analysis Batch: 609494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
490-177600-1	HA14-101(OW)	Total/NA	Water	1671A	
MB 490-609494/4	Method Blank	Total/NA	Water	1671A	
LCS 490-609494/5	Lab Control Sample	Total/NA	Water	1671A	
LCSD 490-609494/6	Lab Control Sample Dup	Total/NA	Water	1671A	

Lab Chronicle

Client: Alpha Analytical Inc
Project/Site: L1935412

Job ID: 490-177600-1

Client Sample ID: HA14-101(OW)
Date Collected: 08/07/19 10:00
Date Received: 08/13/19 09:00

Lab Sample ID: 490-177600-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	1671A		1			609494	08/14/19 11:47	AAB	TAL NSH

Laboratory References:

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

Method Summary

Client: Alpha Analytical Inc
Project/Site: L1935412

Job ID: 490-177600-1

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

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

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

Accreditation/Certification Summary

Client: Alpha Analytical Inc
Project/Site: L1935412

Job ID: 490-177600-1

Laboratory: Eurofins TestAmerica, Nashville

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

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2938	06-30-20

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

Analysis Method	Prep Method	Matrix	Analyte
1671A		Water	Ethanol

Maine	State Program	1	TN00032	11-03-19

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

Analysis Method	Prep Method	Matrix	Analyte
1671A		Water	Ethanol

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
Nashville, TN

COOLER RECEIPT FORM

490-177600 Chain of Custody

Cooler Received/Opened On 08-13-2019 @ 09:00

Time Samples Removed From Cooler _____ Time Samples Placed In Storage _____ (2 Hour Window)

1. Tracking # 1ZE306540192431329 (last 4 digits, FedEx) Courier: UPS NDA

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

2. Temperature of rep. sample or temp blank when opened: 6.0 *Degrees Celsius*

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

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

If yes, how many and where: _____

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

6. Were custody papers inside cooler? YES NO NA

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

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

Were these signed and dated correctly? YES NO NA

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

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

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

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

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

13a. Were VOA vials received? YES NO NA

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

Larger than this.

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

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

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

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

16. Was residual chlorine present? YES NO NA

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

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

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

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

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

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

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

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

BIS = Broken in shipment
Cooler Receipt Form.doc

LF-1
End of Form

Revised 8/23/17

Subcontract Chain of Custody

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

Alpha Job Number
L1935412

Client Information	Project Information	Regulatory Requirements/Report Limits
Client: Alpha Analytical Labs Address: Eight Walkup Drive Westborough, MA 01581-1019 Phone: 603.319.5010 Email: mgulli@alphalab.com	Project Location: MA Project Manager: Melissa Gulli **Turnaround & Deliverables Information** Due Date: 08/16/19 (RUSH) Deliverables:	State/Federal Program: Regulatory Criteria: RCS-1-14;S1/G1-14

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L1935412

Report to include Method Blank, LCS/LCSD:

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

Lab ID	Client ID	Collection Date/Time	Sample Matrix	Analysis	Batch QC
	HA14-101(OW)	08-07-19 10:00	WATER	Ethanol by EPA 1671 Revision A	

Loc: 490
177600

Relinquished By:	Date/Time:	Received By:	Date/Time:
	8/12/19	THAS	08-13-2019 09:00

Form No: AL_subcoc

6.0

ANALYTICAL REPORT

Lab Number:	L1958577
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 6.1
Report Date:	12/12/19

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

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

Project Name: AIR RIGHTS PARCEL 12
Project Number: 132410-007 SID 6.1

Lab Number: L1958577
Report Date: 12/12/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1958577-01	CHARLES_SURF_20191206	WATER	BACK BAY, BOSTON, MA	12/06/19 14:05	12/06/19

Project Name:	AIR RIGHTS PARCEL 12	**Lab Number:**	L1958577
Project Number:	132410-007 SID 6.1	**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:** L1958577

Project Number: 132410-007 SID 6.1 **Report Date:** 12/12/19

SAMPLE RESULTS

Lab ID: L1958577-01 Date Collected: 12/06/19 14:05

Client ID: CHARLES_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 10:57	EPA 3005A	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	12/11/19 01:13	12/11/19 10:57	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	12/11/19 01:13	12/11/19 10:57	EPA 3005A	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	12/11/19 01:13	12/11/19 10:57	EPA 3005A	3,200.8	AM
Copper, Total	0.00226		mg/l	0.00100	--	1	12/11/19 01:13	12/11/19 10:57	EPA 3005A	3,200.8	AM
Iron, Total	0.503		mg/l	0.050	--	1	12/11/19 01:13	12/11/19 09:30	EPA 3005A	19,200.7	LC
Lead, Total	0.00143		mg/l	0.00100	--	1	12/11/19 01:13	12/11/19 10:57	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	12/10/19 15:27	12/10/19 21:51	EPA 245.1	3,245.1	AL
Nickel, Total	ND		mg/l	0.00200	--	1	12/11/19 01:13	12/11/19 10:57	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	12/11/19 01:13	12/11/19 10:57	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	12/11/19 01:13	12/11/19 10:57	EPA 3005A	3,200.8	AM
Zinc, Total	0.02122		mg/l	0.01000	--	1	12/11/19 01:13	12/11/19 10:57	EPA 3005A	3,200.8	AM
Total Hardness by SM 2340B - Mansfield Lab											
Hardness	75.1		mg/l	0.660	NA	1	12/11/19 01:13	12/11/19 09:30	EPA 3005A	19,200.7	LC

Project Name: AIR RIGHTS PARCEL 12 **Lab Number:** L1958577

Project Number: 132410-007 SID 6.1 **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:** L1958577

Project Number: 132410-007 SID 6.1 **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 6.1

Lab Number: L1958577

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 6.1

Lab Number: L1958577
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: MS Sample												
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: MS Sample												
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: MS Sample												
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 6.1

Lab Number: L1958577

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: DUP Sample						
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: DUP Sample						
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: DUP Sample						
Hardness	84.4	84.4	mg/l	0		20

INORGANICS
&
MISCELLANEOUS

Project Name: AIR RIGHTS PARCEL 12
Project Number: 132410-007 SID 6.1

Lab Number: L1958577
Report Date: 12/12/19

SAMPLE RESULTS

Lab ID: L1958577-01
Client ID: CHARLES_SURF_20191206
Sample Location: BACK BAY, BOSTON, MA

Date Collected: 12/06/19 14:05
Date Received: 12/06/19
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)	7.3		SU	-	NA	1	-	12/07/19 01:50	121,4500H+-B	JA
Nitrogen, Ammonia	0.127		mg/l	0.075	--	1	12/10/19 08:59	12/11/19 21:54	121,4500NH3-BH	AT
Chromium, Hexavalent	ND		mg/l	0.010	--	1	12/07/19 00:06	12/07/19 01:12	1,7196A	AS

Project Name: AIR RIGHTS PARCEL 12 **Lab Number:** L1958577

Project Number: 132410-007 SID 6.1 **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 6.1

Lab Number: L1958577

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
Project Number: 132410-007 SID 6.1

Lab Number: L1958577
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: MS Sample												
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

Lab Duplicate Analysis

Batch Quality Control

Project Name: AIR RIGHTS PARCEL 12

Project Number: 132410-007 SID 6.1

Lab Number: L1958577

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: CHARLES_SURF_20191206						
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
Project Number: 132410-007 SID 6.1

Lab Number: L1958577
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(*)
L1958577-01A	Plastic 250ml unpreserved	A	7	7	2.0	Y	Absent		HEXCR-7196(1),PH-4500(.01)
L1958577-01B	Plastic 250ml HNO3 preserved	A	<2	<2	2.0	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),FE-UI(180),CU-2008T(180),HARDU(180),AG-2008T(180),HG-U(28),SE-2008T(180),AS-2008T(180),PB-2008T(180),SB-2008T(180),CR-2008T(180)
L1958577-01C	Plastic 500ml H2SO4 preserved	A	<2	<2	2.0	Y	Absent		NH3-4500(28)

*Values in parentheses indicate holding time in days

Project Name:	AIR RIGHTS PARCEL 12	**Lab Number:**	L1958577
Project Number:	132410-007 SID 6.1	**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.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

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

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:**	L1958577
Project Number:	132410-007 SID 6.1	**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:**	L1958577
Project Number:	132410-007 SID 6.1	**Report Date:**	12/12/19

Data Qualifiers

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

Report Format: Data Usability Report

Project Name:	AIR RIGHTS PARCEL 12	**Lab Number:**	L1958577
Project Number:	132410-007 SID 6.1	**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.

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.

CHAIN OF CUSTODY

ALPHA

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

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

Page 1 of 1

Date Rec'd in Lab: 12/06/19

ALPHA Job #: L1958577

H&A Information
- H&A Client: Samuels Associates
- H&A Address: 465 Medford St, Boston, MA 02129-1400
- H&A Phone: 617-886-7400
- H&A Fax: ewhite@haleyaldrich.com
- H&A Email: kalepidis@haleyaldrich.com

Project Information
- Project Name: Air Rights Parcel 12
- Project Location: Back Bay, Boston, MA
- Project #: 132410-007 SID 6.1
- (Use Project name as Project #)
- Project Manager: S. Barnford
- ALPHAQuote #:

Turn-Around Time
- Standard ☑ — Due Date:
- (only if pre approved) ☐ — # of Days: 5 Day

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

Regulatory Requirements (Program/Criteria)
- MA NPDES RGP

Note: Select State from menu & identify criteria

Billing Information
- ☑ Same as Client Info
- PO #

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

These samples have been previously analyzed by Alpha

Other project specific requirements/comments:

2. Total Ag, An, As, Cd, Cr, Cu, Ni, Pb, Sb, Se, Zn, Hg, Fe.
Analyze using the EPA 2017 RGP Approved Testing Methods

Please specify Metals or TAL.

ANALYSIS

Sample Filtration
- ☐ Done
- ☐ Lab to do

Preservation
- ☐ Lab to do

(Please Specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	1. Ammonia (NH3-4500)	2. Total Metals (See note)	3. Hex Cr	4.Hardness	5. pH	Sample Specific Comments	Total # Bottles
L1958577-01	CHARLES_SURF_20191206	12/6/19	1405	AQ	MSD	X	X	X	X	X	pH 7.76	3
Container Type						P	P	P	P	P		
Preservative						D	C	A	C	A		

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

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
	12/6/19	Matt	12/6/19 1645
Matt	12/6/19 1645		12/6/19 1645
	12/6/19 1833		12/6/19 1833

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

Document ID: 20455 Rev 1 (1/28/2016)

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

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	**Lab Number:**	L2006185
Project Number:	132410-008 SID 7.1	**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	**Lab Number:**	L2006185
Project Number:	132410-008 SID 7.1	**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
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: 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
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	50	--	1

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
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								

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

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-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
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-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
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								

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
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
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
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

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,-	

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
Project Number: 132410-008 SID 7.1
Lab Number: L2006185
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
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

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
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
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
Project Number: 132410-008 SID 7.1

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

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)

*Values in parentheses indicate holding time in days

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

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

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)

*Values in parentheses indicate holding time in days

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

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.

LCSD - Laboratory Control Sample Duplicate: Refer to LCS.

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

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

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

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

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.

Report Format: Data Usability Report

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

REFERENCES

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

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

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

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

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

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

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

107 Alpha Analytical - In-house calculation method.

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

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

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

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

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

L2006185

CHAIN OF CUSTODY

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

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

Page 1 of 1

Date Rec'd in Lab: 2/11/20

ALPHA Job #: L2006185

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: kalepidis@haleyaldrich.com

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 (only if pre approved)
Due Date:
# of Days: 5

Deliverables
Email
Fax
EQuIS (1 File)
EQuIS (4 File)
Other:

Regulatory Requirements (Program/Criteria)
EPA NPDES RGP

Note: Select State from menu & identify criteria

Billing Information
Same as Client Info
PO #

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

These samples have been previously analyzed by Alpha

Other project specific requirements/comments:

13. Dissolved Metals ON HOLD (Field Filtered) Dissolved Hardness on HOLD (FF)

Please sample per EPA Approved 2017 RGP Permit methods

Please specify Metals or TAL.

ANALYSIS

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	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 Diethylhexylphthalate)	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,Hg	14. Hardness total + Dissolved	15. TPH-1664	16. PCB-608	Total Bottles
06185-01	SP-HA20-D5(OW)_02112020	2/11	1215	AQ	SP	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	28

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

Sample Specific Comments

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

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

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

Container Type
Preservative

Relinquished By:	Date/Time	Received By:	Date/Time
	2/11/20		2/11/20 16:50
	2/11/20 16:54		2/11/20 1630
	2/11/20 1700		2/11/20 1700

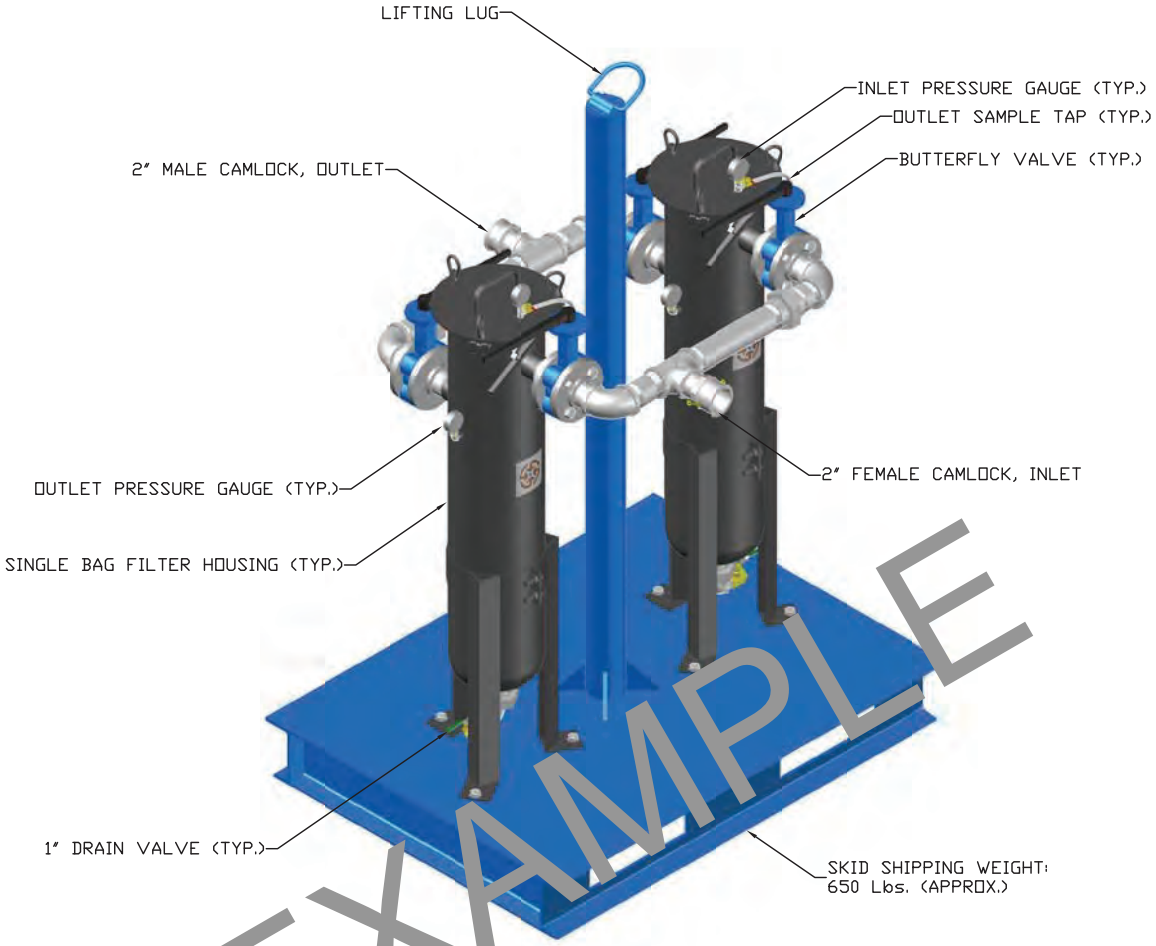
Please print clearly, legibly and completely. Samples can not be logged in and turnaround time clock will not start until any ambiguities are resolved. Alpha Analytical's services under this Chain of Custody shall be performed in accordance with terms and conditions within Blanket Service Agreement#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

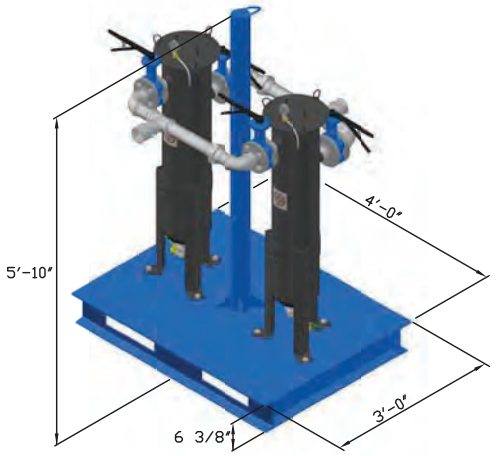
Document ID: 20455 Rev 1 (1/28/2016)

APPENDIX F

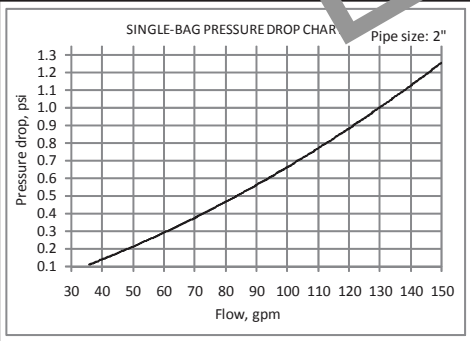
Contractor Dewatering Submittal

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.

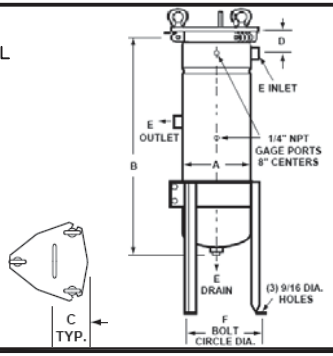


SINGLE BAG FILTER SPECIFICATIONS

- 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"



NO.	REVISIONS	DATE
C	ADDED SKID WEIGHT	02/18/09

DUPLEX 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

DWG SIZE:	SHEET:	DRAWING NUMBER:	
A	1 OF 1	ST-0002-SPC	C

TENCATE Mirafi®

Mirafi® 140N

	Test Method	Unit	Minimum Average Roll Value	
			MD	CD
Grab Tensile Strength	ASTM D4632	lb (N)	120 (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 a 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)

Disclaimer: TenCate assumes no liability for the accuracy or completeness of this information or for the ultimate use by the purchaser. TenCate disclaims any and all express, implied, or statutory standards, warranties or guarantees, including without limitation any implied warranty as to merchantability or fitness for a particular purpose or arising from a course of dealing or usage of trade as to any equipment, materials, or information furnished herewith. This document should not be construed as engineering advice.

Made in USA

TENCATE materials that make a difference