HALEY & ALDRICH, INC.
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23 January 2019
File No. 132190-005

U.S. Environmental Protection Agency
Office of Ecosystem Protection
EPA/OEP RGP Coordinator
5 Post Office Square, Suite 100 (OEP06-01)
Boston, Massachusetts 02109-3912

Attention: Ms. Shelley Puleo

Subject: NPDES RGP NOI Application
Temporary Construction Dewatering
21-35 West Second Street Development
South Boston, Massachusetts

Dear Ms. Puleo:

On behalf of the project owner, Zero Athens, LLC, c/o Transom Real Estate, LLC, and in accordance with the 2017 National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP) in Massachusetts, MAG910000, Haley & Aldrich, Inc. (Haley & Aldrich) submits this Notice of Intent (NOI) and the applicable documentation as required by the U.S. Environmental Protection Agency (EPA) for discharge of temporary construction site dewatering effluent under the NPDES RGP. As defined in Table 1 of the NPDES RGP, the Activity Category is III.G (Contaminated Site Dewatering, Sites with Known Contamination).

Haley & Aldrich has prepared this submission to facilitate off-site discharge of temporary construction dewatering effluent planned in support of the proposed 21-35 West Second Street development located in South Boston, Massachusetts. Refer to Figure 1 for a Project Locus. We anticipate temporary construction dewatering will be conducted, as necessary, during below-grade construction. A copy of the completed NOI form is enclosed as Appendix A.

EXISTING SITE CONDITIONS

The project site consists of an approximately 10,000 square foot (sf) triangular-shaped parcel of land located at 21-35 West Second Street in South Boston, Massachusetts, as shown on Figure 2. The site is abutted to the east by a 4-story residential building at 41 West Second Street; to the north by West Second Street, beyond which are several 6- to 8-story buildings owned and operated by the Gillette Corporation (Gillette); to the south by Athens Street, beyond which is the recently constructed residential building at 14-20 West Broadway and hotel building at 6 West Broadway; and to the west by the intersection of West Second Street and Athens Street. The site is currently a surface parking lot and

was most recently utilized as a staging area for construction of the adjacent hotel located at 6 West Broadway. Site grades slope gradually downward from east to west from approximately El. 23 to El. 19[1].

PROPOSED CONSTRUCTION

The proposed development includes construction of a new 6-story building, consisting of 5 floors of residential units above a ground floor level consisting of lobby, retail, and building service spaces. The ground floor is planned to be finished at about El. 20. No below-grade space is planned.

Excavation to construct the proposed building's foundations, anticipated to consist of reinforced concrete spread footings bearing on natural, inorganic clay soils underlying the site, is anticipated to range from approximately 5 to 14 ft below existing site grades, corresponding to about El. 6 to El. 17, and several feet below site groundwater levels, anticipated to be encountered at about El. 10 to El. 15. As a result, dewatering will be necessary to control groundwater, seepage, precipitation, surface water runoff, and construction-generated water to enable below-grade construction activities in-the-dry. Temporary construction dewatering is anticipated to start in March 2020 and continue for an estimated six (6) months or through approximately September 2020.

SITE HISTORY

The subject site was originally part of tidal flats in Boston Harbor, known as the South Boston Flats, which were filled in the mid- to late-1800s. The site was occupied by tenement housing and stores from the late 1880s through about the 1920s to the 1930s, at which time the buildings had been demolished and the site used for paved surface parking. In approximately 1969, a concrete 50,000-gallon underground storage tank (UST) was installed at the site, owned by Gillette at the time, for storage and supply of No. 6 fuel oil to the Gillette buildings located on West Second Street. The UST is reportedly about 40 ft in diameter and was decommissioned and closed-in-place (filled with sand) in 1996.

ENVIRONMENTAL CONDITIONS AND REGULATORY BACKGROUND

The site is a Disposal Site under the Massachusetts Contingency Plan (MCP), 310 CMR 40.0000. Reportable concentrations of trichloroethene (TCE) were identified in urban fill soil and groundwater during the sampling and testing programs conducted at the site by Haley & Aldrich in March, May, and June 2019. Accordingly, on 29 July 2019, a BWSC103 Release Notification Form (RNF) was submitted to the Massachusetts Department of Environmental Protection (MassDEP). MassDEP subsequently assigned Release Tracking Number (RTN) 3-35721 to the site. No on-site sources of the TCE contamination have been identified. A Release Abatement Measure (RAM) Plan will be submitted prior to the start of construction for the management of soil and groundwater at the site under RTN 3-35721.

Additionally, as mentioned previously, the concrete 50,000-gallon UST was used for the storage and supply of No. 6 fuel oil until it was decommissioned and closed-in-place (filled with sand) in 1996. Environmental Assessment and Management (EAM) oversaw the closure of the UST and collected soil

[1] Elevations reported herein are in feet and reference the Boston City Base (BCB) Datum which is 5.65 ft below the National Geodetic Vertical Datum of 1929 (NGVD 29).

samples for analytical testing as part of a subsurface investigation associated with the UST closure. The results indicated soil impacts exceeding applicable MCP reporting criteria, and EAM concluded the contamination was limited to the area near the fill pipe and was likely the result of surface spills associated with historic overfilling.

EAM performed a Limited Removal Action (LRA) to remove oil impacted soil in the vicinity of the fill pipe. During the LRA, EAM collected soil and groundwater samples from the open test pit excavation. The results indicated residual soil contamination remained in-place. On 7 November 1996, MassDEP was notified of the release and assigned RTN 3-14624 to the site. Subsequent subsurface investigations were conducted at the site by GEI Consultants, Inc. (GEI) including installation of groundwater monitoring wells and analysis of soil and groundwater samples. Based on the results, a Class A-3 Response Action Outcome (RAO) was submitted for the release, including the implementation of an Activity and Use Limitation (AUL) to limit exposure to impacted site soil associated with RTN 3-14624.

TEMPORARY CONSTRUCTION DEWATERING NOTICE OF INTENT (NOI)

Five (5) groundwater samples were obtained from observation wells HA19-1(OW), HA19-2(OW), and HA19-3(OW) on 19 March, 30 May, and 24 November 2019. The locations of the observation wells are shown on Figure 2. The samples were submitted to Alpha Analytical (Alpha) of Westborough, Massachusetts for analysis of one or more of the following NPDES RGP parameters, as well as extractable petroleum hydrocarbon (EPH) carbon ranges: volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), total and dissolved metals (including antimony, arsenic, cadmium, chromium, copper, iron, lead, mercury, nickel, selenium, silver and zinc), hexavalent and trivalent chromium, total petroleum hydrocarbons (TPH), ethanol, polychlorinated biphenyls (PCBs), total suspended solids (TSS), total chloride, total cyanide, total phenols, total residual chlorine (TRC), and ammonia. Measurements of pH and temperature were obtained in the field on the sampling dates indicated above.

Refer to Table I for a summary of the groundwater analytical data. The results did not indicate any concentrations of constituents above applicable MCP RCGW-2 Reportable Concentrations with the exception of TCE, as noted above. TCE was also detected at concentrations above the applicable NPDES RGP Effluent Limitations. As such, construction dewatering effluent that will be discharged off-site will need to be managed under the NPDES RGP. Alternatively, and when feasible, the project may use on-site recharge to manage dewatering effluent.

When excavation to construct proposed foundations and other site improvements extend beneath site groundwater levels, dewatering will be necessary to control groundwater, seepage, precipitation, surface water runoff, and construction-generated water to enable below-grade construction activities in-the-dry. We estimate effluent discharge rates of a maximum of 50 gallons per minute (gpm).

Temporary construction dewatering will be conducted from sumps located within excavations. Prior to discharge, collected water will be routed through a baffled sedimentation tank and bag filters (with pH control as necessary) to remove suspended solids and undissolved chemical constituents and adjust the pH to within the limits established by the permit. Total flow will be measured with a flow meter/totalizer. If necessary to meet NPDES RGP Effluent Limitations, supplemental pre-treatment may

include oil/water separators and/or other components as required; refer to Figure 3 for a schematic of the proposed treatment system.

Discharge of dewatering effluent will be to the local storm drain operated by the Boston Water and Sewer Commission (BWSC) beneath West Second Street and Athens Street, after which the effluent will flow beneath Dorchester Avenue and Gillette Park before discharging at outfall CSO 072 to the Fort Point Channel, which ultimately reaches Boston Inner Harbor. The proposed discharge route is shown on Figure 2 and Figures 4A through 4C. Appendix B includes a copy of the BWSC Dewatering Discharge Permit Application.

RECEIVING WATER QUALITY INFORMATION AND DILUTION FACTOR

On 13 September 2019, Haley & Aldrich collected a receiving water sample from the Fort Point Channel at discharge location CSO 072 shown on Figure 4C using a disposable polyethylene bailer. The surface water sample was submitted to Alpha for chemical analysis of pH, ammonia, and salinity. The temperature of the Fort Point Channel was obtained from water temperature measurements at the National Oceanic and Atmospheric Administration (NOAA) station 8443970 located on the Seaport Boulevard bridge over the Fort Point Channel. The temperature was taken as the average temperature measured from 26 September to 8 January 2020. The results of the receiving water quality data are included in Table I.

Measurements of pH and temperature were used to calculate the site Water Quality Based Effluent Limitations (WQBELs). It is our understanding that since the receiving water is a saltwater body, hardness does not need to be analyzed on either the effluent water or receiving water. Additionally, it is our understanding (based on confirmation from MassDEP) that the dilution factor for a saltwater receiving water is 1.

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 were 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. Copies of the "EnterData" and "SaltwaterResults" tabs from the Microsoft Excel file are included in Appendix C.

DETERMINATION OF ENDANGERED SPECIES ACT ELIGIBILITY

According to the Endangered Species Act (ESA) 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, Planning, and Conservation (IPaC) online system; a copy of the determination is attached in Appendix D. 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. Additionally, a MassDEP Phase 1 Site Assessment Map is included as Figure 5 which confirms that no critical habitats are present at the subject site.

It is our understanding that listed species under the jurisdiction of the National Marine Fisheries Service (NMFS) are the Atlantic Sturgeon and the Shortnose Sturgeon, as well as two species of whales (North Atlantic Right Whale and Fin Whale) and four species of sea turtles (Loggerhead Sea Turtle, Kemp's Ridley Sea Turtle, Leatherback Sea Turtle and Green Sea Turtle) in the marine environment. Based upon our review of NOAA Protected Resources Section 7 Program Species Information and Maps, accessed by Haley & Aldrich on 10 January 2020, no listed species under the jurisdiction of NMFS have been established to be present within the project action area. Tables providing the regions and nearshore areas of importance for each of the NMFS listed species are provided in Appendix D.

DOCUMENTATION OF NATIONAL HISTORIC PRESERVATION ACT ELIGIBILITY REQUIREMENTS

Based on a review of the resources provided by the U.S. National Register of Historic Places and a review of the Massachusetts Cultural Resource Information System (MACRIS), no historic properties have been established to be present at the project site, and discharges and discharge-related activities are not considered to have the potential to affect historic properties. The discharge is considered to meet Criterion A. Documentation is included in Appendix E.

OWNER AND OPERATOR INFORMATION

Owner:
Zero Athens, LLC
c/o Transom Real Estate, LLC
527 Albany Street, Suite #100
Boston, Massachusetts 02116
Attn: Neal Howard
Title: Principal

Operator:
TBD

The Owner (Zero Athens, LLC, c/o Transom Real Estate, LLC) will select a General Contractor, and an earthwork subcontractor (Site Contractor) will be hired by the General Contractor to conduct the site work, including dewatering activities. The General Contractor will be listed as the operator of the dewatering system. This information will be provided to the EPA when available.

Haley & Aldrich will be on-site to monitor the Contractors' site and foundation work on behalf of the Owner and will conduct sampling and testing of the dewatering system influent and effluent in accordance with the NPDES RGP compliance requirements.

APPENDICES

The completed "Suggested Format for the Remediation General Permit Notice of Intent (NOI)" form is enclosed in Appendix A. Appendix B provides a copy of the BWSC Dewatering Discharge Permit Application submitted to the BWSC. Appendix C includes tabs from the WQBEL calculation spreadsheet for reference. Appendices D and E include the Endangered Species Act Documentation and National Register of Historic Places and Massachusetts Historical Commission Documentation, respectively. The groundwater and receiving water laboratory data reports are provided in Appendix F.

The Site Contractor has not yet submitted their construction dewatering submittal, which will include details of the proposed dewatering system along with Safety Data Sheets (SDSs) and fact sheets for possible chemical additives (if needed to adjust pH or reduce suspended sediments). A Best Management Practices Plan (BMPP), which outlines the proposed discharge operations covered under the RGP, will be available at the site.

CLOSING

Thank you for considering this NPDES RGP NOI. Please feel free to contact the undersigned should you require additional information or have questions.

Sincerely yours,
HALEY & ALDRICH, INC.

Jonathan M. Thibault
Technical Specialist

Joel S. Mooney, P.E., L.S.P.
Principal | Senior Vice President

Attachments:

Table I – Summary of Water Quality Data
Figure 1 – Project Locus
Figure 2 – Subsurface Exploration and Discharge Location Plan
Figure 3 – Proposed Treatment System Schematic
Figure 4A – Proposed Discharge Route (Figure 1 of 3)
Figure 4B – Proposed Discharge Route (Figure 2 of 3)
Figure 4C – Proposed Discharge Route (Figure 3 of 3)
Figure 5 – MassDEP Phase 1 Site Assessment Map
Appendix A – Remediation General Permit NOI
Appendix B – BWSC Dewatering Discharge Permit Application
Appendix C – Effluent Limit Calculations
Appendix D – Endangered Species Act Documentation
Appendix E – National Register of Historic Places and Massachusetts Historical Commission Documentation
Appendix F – Laboratory Data Reports

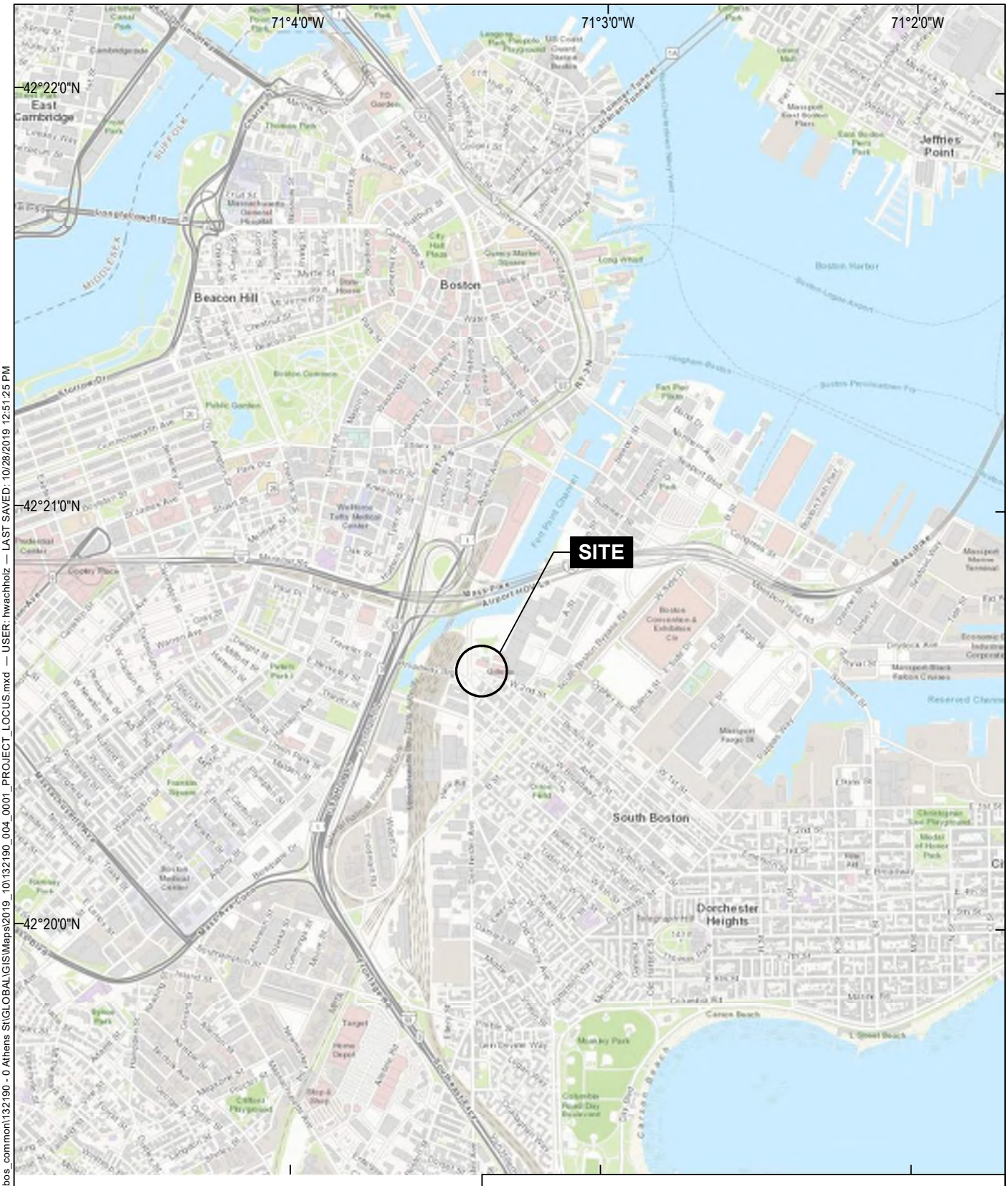
c: Zero Athens, LLC, c/o Transom Real Estate, LLC, Attn: Neal Howard
Boston Water and Sewer Commission; Attn: Matthew Tuttle

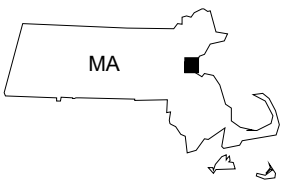
TABLE I
SUMMARY OF WATER QUALITY DATA
21-35 WEST SECOND STREET
SOUTH BOSTON, MASSACHUSETTS
FILE NO. 132190-005

Location Name			HA19-1(OW)	HA19-1(OW)	HA19-2(OW)	HA19-2(OW)	HA19-3(OW)	FORT POINT CHANNEL
Sample Name	2017	2014	HA19-1(OW)-20190319	HA19-1(OW)-20190530	HA19-2(OW)-20190319	HA19-2-20191224	HA19-3(OW)-20190319	CSO-072
Sample Date	NPDES RGP	MassDEP MCP	03/19/2019	05/30/2019	03/19/2019	12/24/2019	03/19/2019	09/13/2019
Lab Sample ID	Project-Specific	RCGW-2	L1910844-03	L1922956-01	L1910844-02	L1961616-01	L1910844-01	L2002682-01
Well Screen Interval (ft, BCB)	Effluent	Reportable	14 to 3	14 to 3	18 to 7.5	18 to 7.5	16.5 to 6.5	NA
Groundwater Elevation (ft, BCB) (Note 4)	Limitations	Concentrations	10.3	9.9	15.3	15.1	14.1	NA
Sample Type			Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Receiving Water
Volatile Organic Compounds (ug/L)								
1,1,1-Trichloroethane	200	4000	ND (1)	ND (1)	ND (1)	ND (2)	ND (1)	-
1,1,2-Trichloroethane	5	900	ND (1)	ND (1)	ND (1)	ND (1.5)	ND (1)	-
1,1-Dichloroethane	70	2000	ND (1)	ND (1)	ND (1)	ND (1.5)	ND (1)	-
1,1-Dichloroethene	3.2	80	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	-
1,2-Dibromoethane (Ethylene Dibromide)	0.05	2	**ND (2)**	**ND (2)**	**ND (2)**	ND (0.01)	**ND (2)**	-
1,2-Dichlorobenzene	600	2000	ND (1)	ND (1)	ND (1)	ND (5)	ND (1)	-
1,2-Dichloroethane	5	5	ND (1)	ND (1)	ND (1)	ND (1.5)	ND (1)	-
1,3-Dichlorobenzene	320	6000	ND (1)	ND (1)	ND (1)	ND (5)	ND (1)	-
1,4-Dichlorobenzene	5	60	ND (1)	ND (1)	ND (1)	**ND (5)**	ND (1)	-
Acetone	7970	50000	ND (5)	ND (5)	ND (5)	ND (10)	26	-
Benzene	5	1000	ND (0.5)	ND (0.5)	ND (0.5)	ND (1)	ND (0.5)	-
Carbon tetrachloride	4.4	2	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	-
cis-1,2-Dichloroethene	70	20	13	12	ND (1)	ND (1)	ND (1)	-
Ethylbenzene	NA	5000	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	-
m,p-Xylenes	NA	3000	-	-	-	ND (2)	-	-
Methyl Tert Butyl Ether	70	5000	ND (2)	ND (2)	ND (2)	ND (10)	ND (2)	-
Methylene chloride	4.6	2000	ND (2)	ND (2)	ND (2)	ND (1)	ND (2)	-
o-Xylene	NA	3000	-	-	-	ND (1)	-	-
Tert-Amyl Methyl Ether (TAME)	90	NA	ND (2)	ND (2)	ND (2)	ND (20)	ND (2)	-
Tert-Butyl Alcohol (tert-Butanol)	120	NA	-	-	-	ND (100)	-	-
Tetrachloroethene	5	50	2.5	2.4	ND (1)	ND (1)	ND (1)	-
Toluene	NA	40000	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	-
Trichloroethene	5	5	**92**	**100**	ND (1)	ND (1)	ND (1)	-
Vinyl chloride	2	2	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	-
Xylene (total)	NA	3000	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	-
Total BTEX	100	NA	ND	ND	ND	ND	ND	-
SUM of Volatile Organic Compounds	NA	NA	107.5	114.4	ND	ND	26	-
Volatile Organic Compounds SIM (ug/L)								
1,4-Dioxane	200	6000	-	-	-	ND (50)	-	-
Semi-Volatile Organic Compounds (ug/L)								
bis(2-Ethylhexyl)phthalate	101	50000	-	-	-	ND (2.2)	-	-
Butyl benzylphthalate	NA	10000	-	-	-	ND (5)	-	-
Diethyl phthalate	NA	9000	-	-	-	ND (5)	-	-
Dimethyl phthalate	NA	50000	-	-	-	ND (5)	-	-
Di-n-butylphthalate	NA	5000	-	-	-	ND (5)	-	-
Di-n-octyl phthalate	NA	100000	-	-	-	ND (5)	-	-
Total Phthalates	190	NA	-	-	-	ND	-	-
SUM of Semi-Volatile Organic Compounds	NA	NA	-	-	-	ND	-	-
Semi-Volatile Organic Compounds (SIM) (ug/L)								
Acenaphthene	NA	6000	-	-	-	ND (0.1)	-	-
Acenaphthylene	NA	40	-	-	-	ND (0.1)	-	-
Anthracene	NA	30	-	-	-	ND (0.1)	-	-
Benzo(a)anthracene	1	1000	-	-	-	ND (0.1)	-	-
Benzo(a)pyrene	1	500	-	-	-	ND (0.1)	-	-
Benzo(b)fluoranthene	1	400	-	-	-	ND (0.1)	-	-
Benzo(g,h,i)perylene	NA	20	-	-	-	ND (0.1)	-	-
Benzo(k)fluoranthene	1	100	-	-	-	ND (0.1)	-	-
Chrysene	1	70	-	-	-	ND (0.1)	-	-
Dibenz(a,h)anthracene	1	40	-	-	-	ND (0.1)	-	-
Fluoranthene	NA	200	-	-	-	ND (0.1)	-	-
Fluorene	NA	40	-	-	-	ND (0.1)	-	-
Indeno(1,2,3-cd)pyrene	1	100	-	-	-	ND (0.1)	-	-
Naphthalene	20	700	-	-	-	ND (0.1)	-	-
Pentachlorophenol	1	200	-	-	-	**ND (1)**	-	-
Phenanthrene	NA	10000	-	-	-	ND (0.1)	-	-
Pyrene	NA	20	-	-	-	ND (0.1)	-	-
Total Group I Polycyclic Aromatic Hydrocarbons	1	NA	-	-	-	ND	-	-
Total Group II Polycyclic Aromatic Hydrocarbons	100	NA	-	-	-	ND	-	-
SUM of Semi-Volatile Organic Compounds (SIM)	NA	NA	-	-	-	ND	-	-
Ethanol (mg/L)	Report	NA	-	-	-	ND (20)	-	-
Total Petroleum Hydrocarbons (mg/L)	5	5	-	-	-	ND (4)	-	-
Extractable Petroleum Hydrocarbons (ug/L)								
MADEP C11-C22 Aromatic Hydrocarbons, Adjusted	NA	5000	ND (100)	-	ND (100)	-	ND (100)	-
MADEP C19-C36 Aliphatic Hydrocarbons	NA	50000	ND (100)	-	ND (100)	-	ND (100)	-
MADEP C9-C18 Aliphatic Hydrocarbons	NA	5000	ND (100)	-	ND (100)	-	ND (100)	-
Dissolved Metals (mg/L)								
Antimony, Dissolved	NA	8	-	-	-	ND (0.004)	-	-
Arsenic, Dissolved	NA	0.9	-	-	-	0.0019	-	-
Cadmium, Dissolved	NA	0.004	-	-	-	ND (0.0002)	-	-
Chromium, Dissolved	NA	0.3	-	-	-	ND (0.001)	-	-
Copper, Dissolved	NA	100	-	-	-	0.0017	-	-
Iron, Dissolved	NA	NA	-	-	-	ND (0.05)	-	-
Lead, Dissolved	NA	0.01	-	-	-	ND (0.001)	-	-
Mercury, Dissolved	NA	0.02	-	-	-	ND (0.0002)	-	-
Nickel, Dissolved	NA	0.2	-	-	-	ND (0.002)	-	-
Selenium, Dissolved	NA	0.1	-	-	-	ND (0.005)	-	-
Silver, Dissolved	NA	0.007	-	-	-	ND (0.0004)	-	-
Zinc, Dissolved	NA	0.9	-	-	-	ND (0.01)	-	-
Total Metals (mg/L)								
Antimony, Total	0.206	8	-	-	-	ND (0.004)	-	-
Arsenic, Total	0.104	0.9	-	-	-	0.00232	-	-
Cadmium, Total	0.0102	0.004	-	-	-	ND (0.0002)	-	-
Chromium, Total	0.323	0.3	-	-	-	0.00103	-	-
Chromium III (Trivalent), Total	0.323	0.6	-	-	-	ND (0.01)	-	-
Chromium VI (Hexavalent), Total	0.323	0.3	-	-	-	ND (0.01)	-	-
Copper, Total	0.242	100	-	-	-	0.00161	-	-
Iron, Total	5	NA	-	-	-	ND (0.05)	-	-
Lead, Total	0.16	0.01	-	-	-	ND (0.001)	-	-
Mercury, Total	0.000739	0.02	-	-	-	ND (0.0002)	-	-
Nickel, Total	1.45	0.2	-	-	-	ND (0.002)	-	-
Selenium, Total	0.2358	0.1	-	-	-	ND (0.005)	-	-
Silver, Total	0.0351	0.007	-	-	-	ND (0.0004)	-	-
Zinc, Total	0.42	0.9	-	-	-	ND (0.01)	-	-
Polychlorinated Biphenyls (ug/L)								
Aroclor-1016	NA	5	-	-	-	ND (0.25)	-	-
Aroclor-1221	NA	5	-	-	-	ND (0.25)	-	-
Aroclor-1232	NA	5	-	-	-	ND (0.25)	-	-
Aroclor-1242	NA	5	-	-	-	ND (0.25)	-	-
Aroclor-1248	NA	5	-	-	-	ND (0.25)	-	-
Aroclor-1254	NA	5	-	-	-	ND (0.25)	-	-
Aroclor-1260	NA	5	-	-	-	ND (0.2)	-	-
SUM of Polychlorinated Biphenyls	0.000064	NA	-	-	-	ND	-	-
Other								
Ammonia, Total (mg/L)	Report	NA	-	-	-	0.161	-	ND (0.075)
Chloride, Total (mg/L)	Report	NA	-	-	-	20.6	-	-
Chlorine, Total Residual (mg/L)	0.0075	NA	-	-	-	**ND (0.02)**	-	-
Total Phenols (mg/L)	1.08	NA	-	-	-	ND (0.03)	-	-
Total Suspended Solids (TSS) (mg/L)	30	NA	-	-	-	ND (5)	-	-
Cyanide, Total (mg/L)	178	0.03	-	-	-	ND (0.005)	-	-
pH (Note 5)	6.5 to 8.5	NA	6.9	6.9	8.2	7.7	7.4	7.8
Temperature (°C) (Note 6)	29.5	NA	6.1	13.9	3.1	12.8	3.9	9.0
Salinity, Total (SU)	NA	NA	-	-	-	-	-	28

ABBREVIATIONS:
-: Not Analyzed
µg/L: micrograms per liter
BCB: Boston City Base Datum
MassDEP: Massachusetts Department of Environmental Protection
MCP: 310 CMR 40.0000 Massachusetts Contingency Plan effective 25 April 2014; revisions 23 May 2014
mg/L: milligrams per liter
NA: Not Applicable
ND (2.5): Not detected, number in parentheses is the laboratory reporting limit
NPDES RGP: National Pollutant Discharge Elimination System Remediation General Permit
SU: Standard units

NOTES:
1. This table includes only those Volatile and Semi-Volatile Organic Compounds detected on the sampling dates indicated and/or listed in Table 2 of the 2017 NPDES RGP. For a complete list of analytes, refer to the laboratory data reports.
2. **BOLD** values indicate an exceedance of the applicable NPDES RGP Effluent Limitation.
3. **BOLD ND** values indicate the laboratory reporting limit exceeds the applicable NPDES RGP Effluent Limitation.
4. Groundwater elevation measured in the field on the sampling dates indicated.
5. Groundwater pH measured in the field on the sampling dates indicated. Receiving water pH measured in the laboratory.
6. Groundwater temperature measured in the field in the sampling dates indicated. Receiving water temperature obtained from NOAA station 8443970 located on Seaport Boulevard bridge over Fort Point Channel; taken as average temperature measured from 09/26/2019 to 01/08/2020.





MAP SOURCE: ESRI
SITE COORDINATES: 42°20'36"N, 71°3'23"W

HALEY ALDRICH

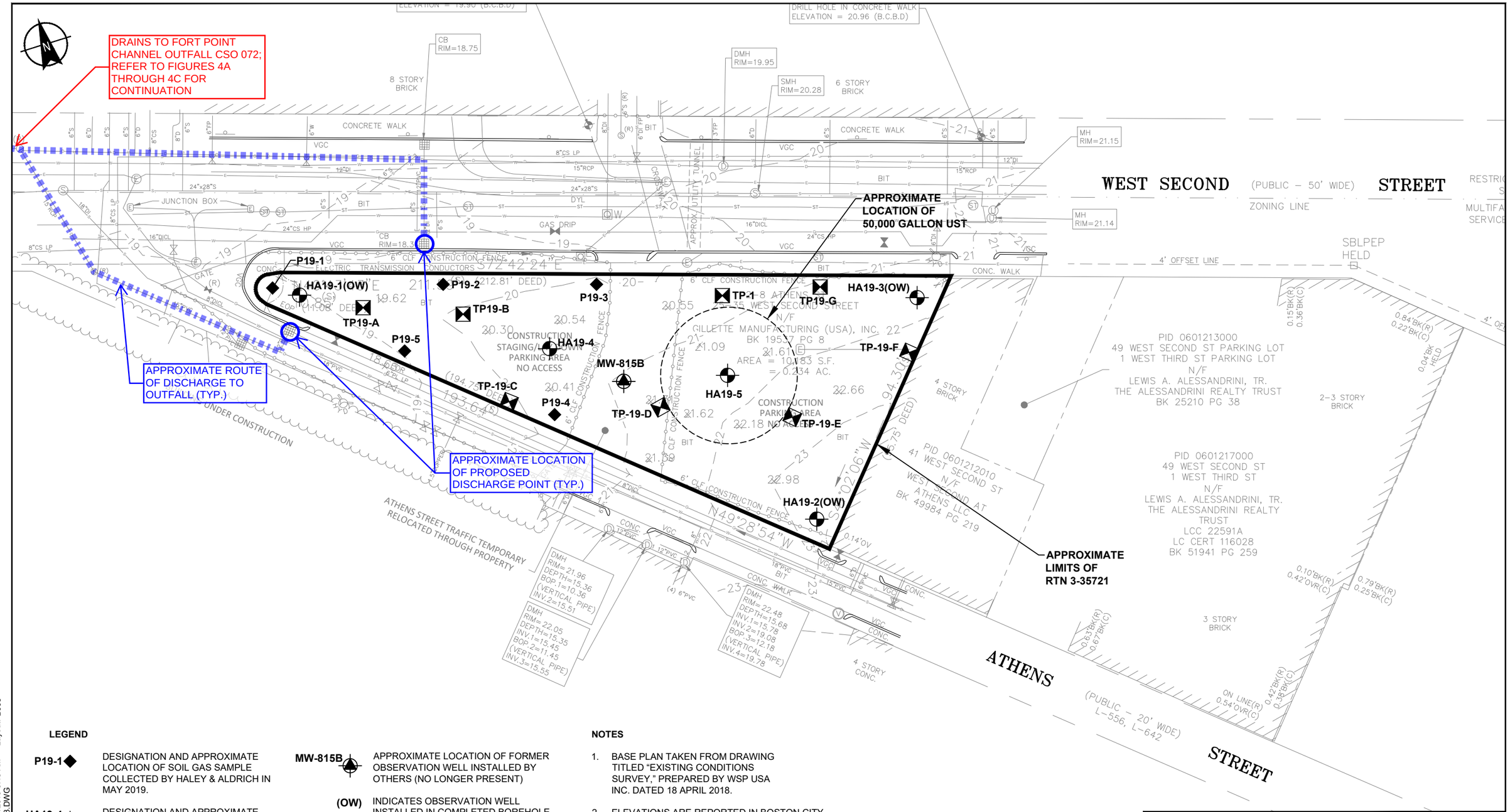
21-35 WEST SECOND STREET
SOUTH BOSTON, MASSACHUSETTS

PROJECT LOCUS

APPROXIMATE SCALE: 1 IN = 2000 FT
JANUARY 2020

FIGURE 1

GIS FILE PATH: \\haleyaldrich.com\shared\bos_common\132190 - 0 Athens St\GLOBAL\GIS\Maps\2019_10\132190_004_0001_PROJECT_LOCUS.mxd — USER: hwachholz — LAST SAVED: 10/28/2019 12:51:25 PM



LEGEND

P19-1 ◆ DESIGNATION AND APPROXIMATE LOCATION OF SOIL GAS SAMPLE COLLECTED BY HALEY & ALDRICH IN MAY 2019.

HA19-4 ⊕ DESIGNATION AND APPROXIMATE LOCATION OF TEST BORING CONDUCTED BY NEW ENGLAND BORING CONTRACTORS AND MONITORED BY HALEY & ALDRICH, INC. BETWEEN 5 AND 11 MARCH 2019.

TP-1 ⊠ DESIGNATION AND APPROXIMATE LOCATION OF TEST PIT CONDUCTED BY EARTHWORK INDUSTRIES AND MONITORED BY HALEY & ALDRICH, INC. IN MARCH AND JUNE 2019.

MW-815B ⊕ APPROXIMATE LOCATION OF FORMER OBSERVATION WELL INSTALLED BY OTHERS (NO LONGER PRESENT)

(OW) INDICATES OBSERVATION WELL INSTALLED IN COMPLETED BOREHOLE

NOTES

1. BASE PLAN TAKEN FROM DRAWING TITLED "EXISTING CONDITIONS SURVEY," PREPARED BY WSP USA INC. DATED 18 APRIL 2018.
2. ELEVATIONS ARE REPORTED IN BOSTON CITY BASE (BCB) DATUM.
3. EXPLORATION LOCATIONS ARE APPROXIMATE AND WERE DETERMINED IN FIELD USING TAPE MEASUREMENTS REFERENCED TO EXISTING FEATURES IDENTIFIED AT THE TIME OF THE EXPLORATION.

0 30 60
SCALE IN FEET

HALEY ALDRICH

21-35 WEST SECOND STREET
SOUTH BOSTON, MASSACHUSETTS

SUBSURFACE EXPLORATION AND DISCHARGE LOCATION PLAN

SCALE: AS SHOWN
JANUARY 2020

FIGURE 2

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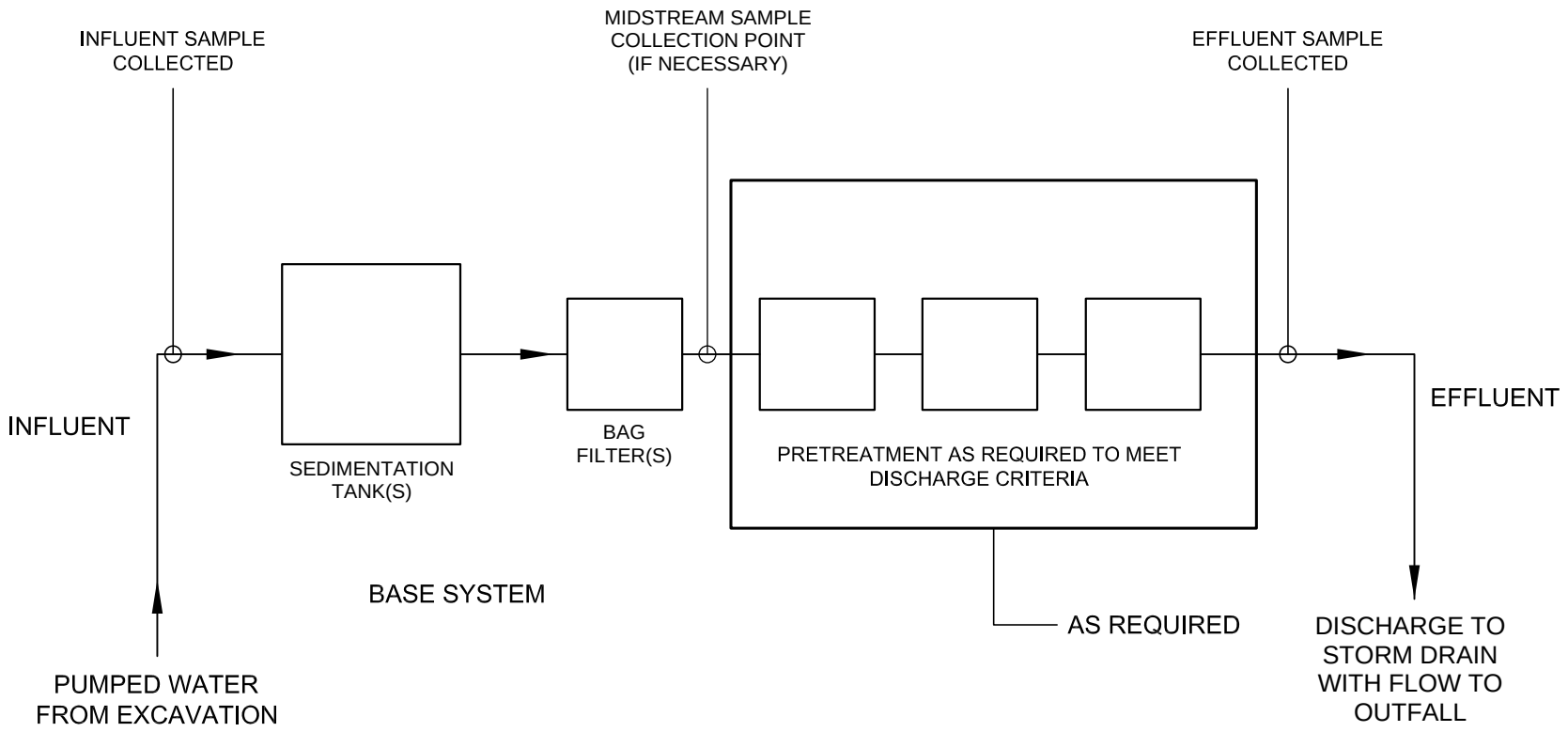
\\haleyaldrich.com\share\bos_common\132190 - 0 Athens St\Permitting\NPDES RGP\NOI Application\Figures



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

21-35 WEST SECOND STREET
SOUTH BOSTON, MASSACHUSETTS

PROPOSED TREATMENT SYSTEM SCHEMATIC

SCALE: NONE
JANUARY 2020

FIGURE 3

REFER TO FIGURE 4B FOR CONTINUATION

APPROXIMATE ROUTE OF DISCHARGE TO OUTFALL (TYP.)

APPROXIMATE LOCATION OF PROPOSED DISCHARGE POINT (TYP.)

APPROXIMATE LIMITS OF 21-35 WEST SECOND STREET

WEST SECOND ST

ATHENS ST

PARKING

POWER HOUSE

GILLETTE HEADQUARTERS

SOUTH DOCK

F DOCK

A BUILD

B BUILD

C BUILD

C BUILD ANNEX

D BUILD

E BUILD

G BUILD

K BUILD

L BUILD

U BUILD

SH 8 DICL 2006

SH 12 DICL 2006

SH 16 DICL 2006

SH 12 DICL 2014

SL 16 DICL 2014

SL 8 DICL 1998 (2014)

SL 10 DICL 1964

SL 16 DICL 1984

SH 12 DICL 1984

PRIV SH 8 DICL 2010

N W E S

0 30 60 120 180 240 Feet

HALEY ALDRICH

21-35 WEST SECOND STREET
SOUTH BOSTON, MASSACHUSETTS

PROPOSED DISCHARGE ROUTE (FIGURE 1 OF 3)

SCALE: AS SHOWN
JANUARY 2020

FIGURE 4A

REFER TO FIGURE 4C FOR CONTINUATION

APPROXIMATE ROUTE OF DISCHARGE TO OUTFALL (TYP.)

APPROXIMATE LOCATION OF PROPOSED DISCHARGE POINT (TYP.)

APPROXIMATE LIMITS OF 21-35 WEST SECOND STREET

GILLETTE PARK

FOUNDRY ST

WEST SEC

PARKING

POWER HOUSE

GILLETTE HEADQUARTERS

TANK

F. DOCK

N W E S

0 30 60 120 180 240 Feet

HALEY ALDRICH

21-35 WEST SECOND STREET
SOUTH BOSTON, MASSACHUSETTS

PROPOSED DISCHARGE ROUTE (FIGURE 2 OF 3)

SCALE: AS SHOWN
JANUARY 2020

FIGURE 4B

FORT POINT CHANNEL
OUTFALL CSO 072

APPROXIMATE ROUTE
OF DISCHARGE TO
OUTFALL (TYP.)

REFER TO FIGURE 4B
FOR CONTINUATION

PARKING

GILLETTE PARK

SDO308
3.85
CSO072
SDO303
10.95
SDO307
9.95
PA2
10.95
11.25
PA3
10.45
PA4
10.50
PA5
396
11.35
417
11.25
11.25
TG072-1
3.47
3.47
416
11.55
418
4.99
3.47
11.35
419
11.45
H802
H124P
H128P
H154P
H152P
H150P
H146P
H136
V250
V252
V248
V262
V341
V342
V343
V583
V254
V244
V271P
414
(0.25)
221
231
6.48
392
UN
6.13
325
4.99
UN
571
13.15
UN
573
13.61
UN
572
13.61
570
12.85
569
12.51
12.81
12.51
568
6.31
6.31
242
(2.40)
(2.30)
241
(2.20)
(2.20)
240
(2.10)
574
14.53
322
(2.40)
321
(2.00)
(2.00)
259
258
256
255
254
253
10 PRIV
48 PRIV
FP6
FP10
SP6
PRV SH 8
SH 8 DRAIN
SL 10-PCI 1991 (2006)
SL 12-PCI 2014
SL 10-PCI 2014
GILLETTE HEADQUARTERS
POWER HOUSE

N W E S

0 30 60 120 180 240 Feet

HALEY ALDRICH

21-35 WEST SECOND STREET
SOUTH BOSTON, MASSACHUSETTS

PROPOSED DISCHARGE ROUTE (FIGURE 3 OF 3)

SCALE: AS SHOWN
JANUARY 2020

FIGURE 4C

MassDEP - Bureau of Waste Site Cleanup

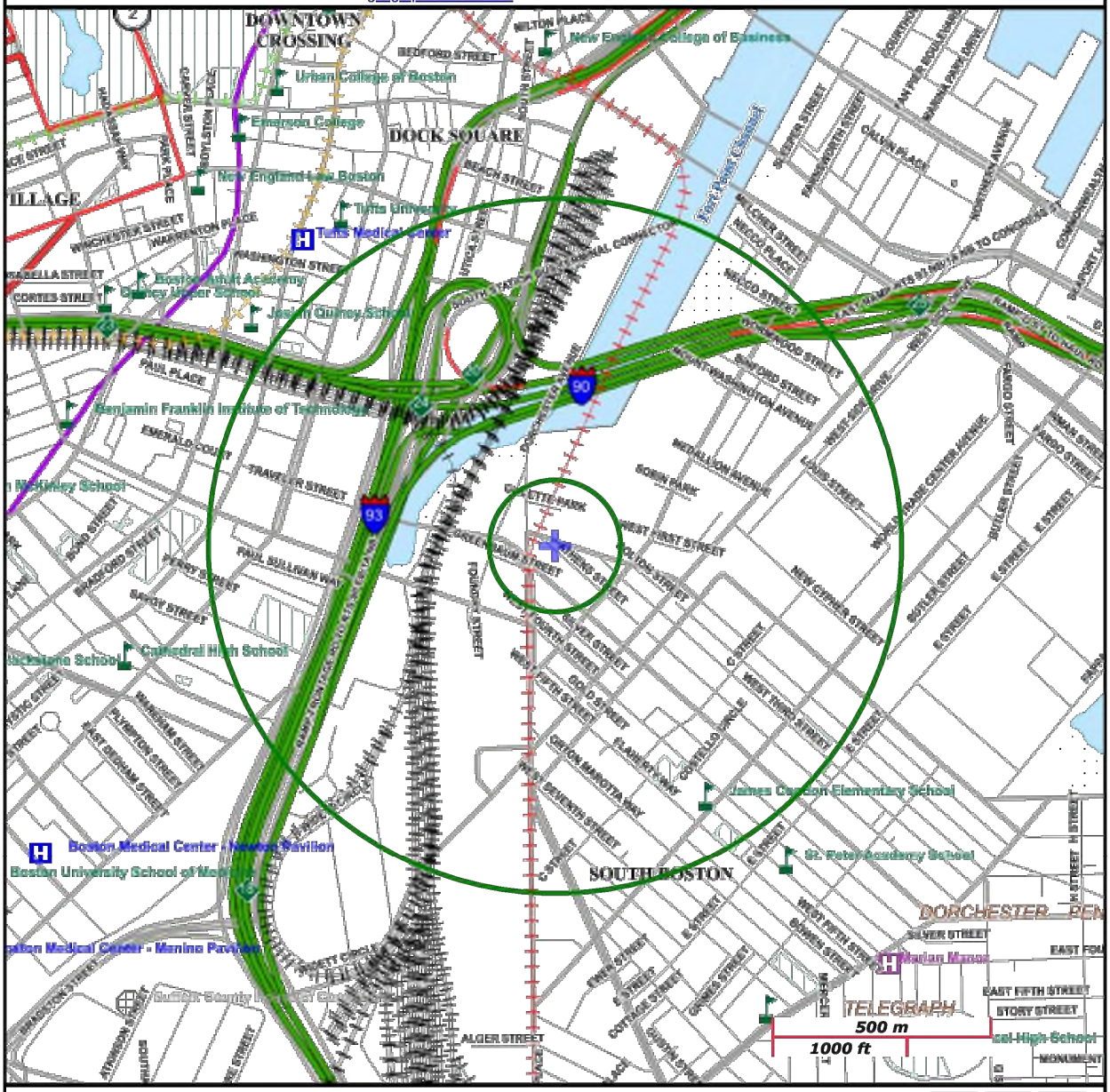
Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:
21-35 WEST SECOND STREET
21-35 WEST SECOND STREET BOSTON, MA
3-000035721

NAD83 UTM Meters:
4689935mN , 330607mE (Zone: 19)
January 10, 2020

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



HALEY ALDRICH

21-35 WEST SECOND STREET
SOUTH BOSTON, MASSACHUSETTS

MassDEP PHASE 1
SITE ASSESSMENT MAP

SCALE: AS SHOWN
JANUARY 2020

FIGURE 5

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APPENDIX A

Remediation General Permit NOI

APPENDIX B

BWSC Dewatering Discharge Permit Application

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

A. General site information:

<table>
<tr><td rowspan="2">1. Name of site:
21-35 WEST SECOND STREET</td><td colspan="3">Site address:
Street: 21-35 WEST SECOND STREET</td></tr>
<tr><td>City: SOUTH BOSTON</td><td>State: MA</td><td>Zip: 02127</td></tr>
<tr><td rowspan="4">2. Site owner
ZERO ATHENS, LLC
C/O TRANSOM REAL ESTATE, LLC

Owner is (check one): ☐ Federal ☐ State/Tribal ■ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: NEAL HOWARD</td></tr>
<tr><td colspan="2">Telephone: (617) 504-4995</td><td>Email: NHOWARD@TRANSOMREALES</td></tr>
<tr><td colspan="3">Mailing address:
Street: 527 ALBANY STREET, SUITE #100</td></tr>
<tr><td>City: BOSTON</td><td>State: MA</td><td>Zip: 02116</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
TBD</td><td colspan="3">Contact Person: TBD</td></tr>
<tr><td colspan="2">Telephone:</td><td>Email:</td></tr>
<tr><td colspan="3">Mailing address:
Street:</td></tr>
<tr><td>City:</td><td>State:</td><td>Zip:</td></tr>
<tr><td>4. NPDES permit number assigned by EPA:

NPDES permit is (check all that apply: ■ RGP ☐ DGP ☐ CGP
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td><td colspan="3">5. Other regulatory program(s) that apply to the site (check all that apply):
■ MA Chapter 21e; list RTN(s): 3-35721, 3-14624
☐ NH Groundwater Management Permit or Groundwater Release Detection Permit:
☐ CERCLA
☐ UIC Program
☐ POTW Pretreatment
☐ CWA Section 404</td></tr>
</table>

B. Receiving water information:

1. Name of receiving water(s):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
FORT POINT CHANNEL (BOSTON INNER HARBOR)	MA70-02	SB

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

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

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

3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP. CATEGORY 5 - WATERS REQUIRING A TMDL PER MASSACHUSETTS YEAR 2014 INTEGRATED LIST OF WATERS, IMPAIRMENT

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.	NA (SALTWATER RECEIVING WATER)
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.	1 (SALTWATER)

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:

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: SEEPAGE, PRECIPITATION, SURFACE WATER RUNOFF

2. Source water contaminants: TRICHLOROETHENE ABOVE EFFLUENT LIMITATIONS	
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 CSO 072 TO THE FORT POINT CHANNEL (BOSTON INNER HARBOR)	Outfall location(s): (Latitude, Longitude) (42° 20' 44" N, 71° 3' 26" W)
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 DEWATERING DISCHARGE 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): MARCH 2020 TO SEPTEMBER 2020 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="5">☐ I – Petroleum-Related Site Remediation
☐ II – Non-Petroleum-Related Site Remediation
■ III – Contaminated Site Dewatering
☐ IV – Dewatering of Pipelines and Tanks
☐ V – Aquifer Pump Testing
☐ VI – Well Development/Rehabilitation
☐ VII – Collection Structure Dewatering/Remediation
☐ VIII – Dredge-Related Dewatering</td><td colspan="2">a. If Activity Category I or II: (check all that apply)

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

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

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✓	1	SM 4500	75	161	-	Report mg/L	---
Chloride		✓	1	300.0	500	20600	-	Report µg/l	---
Total Residual Chlorine	✓		1	SM 4500	20	ND	-	0.2 mg/L	7.5 µg/L
Total Suspended Solids	✓		1	2540D	5000	ND	-	30 mg/L	---
Antimony	✓		1	200	4	ND	-	206 µg/L	640 µg/L
Arsenic		✓	1	200	1	2.32	-	104 µg/L	36 µg/L
Cadmium	✓		1	200	0.2	ND	-	10.2 µg/L	8.9 µg/L
Chromium III	✓		1	107	10	ND	-	323 µg/L	100 µg/L
Chromium VI	✓		1	7196A	10	ND	-	323 µg/L	50 µg/L
Copper		✓	1	200	1	1.61	-	242 µg/L	3.7 µg/L
Iron	✓		1	200	50	ND	-	5,000 µg/L	---
Lead	✓		1	200	1	ND	-	160 µg/L	8.5 µg/L
Mercury	✓		1	245	0.2	ND	-	0.739 µg/L	1.11 µg/L
Nickel	✓		1	200	2	ND	-	1,450 µg/L	8.3 µg/L
Selenium	✓		1	200	5	ND	-	235.8 µg/L	71 µg/L
Silver	✓		1	200	0.4	ND	-	35.1 µg/L	2.2 µg/L
Zinc	✓		1	200	10	ND	-	420 µg/L	86 µg/L
Cyanide	✓		1	4500 CN	5	ND	-	178 mg/L	1 µg/L
B. Non-Halogenated VOCs									
Total BTEX	✓		5	624	0.5	ND	-	100 µg/L	---
Benzene	✓		5	624	0.5	ND	-	5.0 µg/L	---
1,4 Dioxane	✓		1	624 SIM	50	ND	-	200 µg/L	---
Acetone		✓	5	624	5	26	-	7.97 mg/L	---
Phenol	✓		1	420	30	ND	-	1,080 µg/L	300 µg/L

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✓		5	624	1	ND	-	4.4 µg/L	1.6 µg/L
1,2 Dichlorobenzene	✓		5	624	1	ND	-	600 µg/L	---
1,3 Dichlorobenzene	✓		5	624	1	ND	-	320 µg/L	---
1,4 Dichlorobenzene	✓		5	624	1	ND	-	5.0 µg/L	---
Total dichlorobenzene	✓		5	624	1	ND	-	763 µg/L in NH	---
1,1 Dichloroethane	✓		5	624	1	ND	-	70 µg/L	---
1,2 Dichloroethane	✓		5	624	1	ND	-	5.0 µg/L	---
1,1 Dichloroethylene	✓		5	624	1	ND	-	3.2 µg/L	---
Ethylene Dibromide	✓		5	504.1	0.01	ND	-	0.05 µg/L	---
Methylene Chloride	✓		5	624	1	ND	-	4.6 µg/L	---
1,1,1 Trichloroethane	✓		5	624	1	ND	-	200 µg/L	---
1,1,2 Trichloroethane	✓		5	624	1	ND	-	5.0 µg/L	---
Trichloroethylene		✓	5	624	1	100	-	5.0 µg/L	---
Tetrachloroethylene		✓	5	624	1	2.5	-	5.0 µg/L	3.3 µg/L
cis-1,2 Dichloroethylene		✓	5	624	1	13	-	70 µg/L	---
Vinyl Chloride	✓		5	624	1	ND	-	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✓		1	625	2.2	ND	-	190 µg/L	---
Diethylhexyl phthalate	✓		1	625	2.2	ND	-	101 µg/L	2.2 µg/L
Total Group I PAHs	✓		1	625 SIM	0.1	ND	-	1.0 µg/L	---
Benzo(a)anthracene	✓		1	625 SIM	0.1	ND	-	As Total PAHs	0.0038 µg/L
Benzo(a)pyrene	✓		1	625 SIM	0.1	ND	-		0.0038 µg/L
Benzo(b)fluoranthene	✓		1	625 SIM	0.1	ND	-		0.0038 µg/L
Benzo(k)fluoranthene	✓		1	625 SIM	0.1	ND	-		0.0038 µg/L
Chrysene	✓		1	625 SIM	0.1	ND	-		0.0038 µg/L
Dibenzo(a,h)anthracene	✓		1	625 SIM	0.1	ND	-		0.0038 µg/L
Indeno(1,2,3-cd)pyrene	✓		1	625 SIM	0.1	ND	-		0.0038 µg/L

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs	✔		1	625 SIM	0.1	ND	-	100 µg/L	---
Naphthalene	✔		1	625 SIM	0.1	ND	-	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✔		1	608	0.25	ND	-	0.000064 µg/L	---
Pentachlorophenol	✔		1	625 SIM	1	ND	-	1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons	✔		1	1664A	4000	ND	-	5.0 mg/L	---
Ethanol	✔		1	1671	20000	ND		Report mg/L	---
Methyl-tert-Butyl Ether	✔		5	624	2	ND	-	70 µg/L	20 µg/L
tert-Butyl Alcohol	✔		1	624	100	ND	-	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✔		5	624	2	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 (SU)		✔	5	FIELD	-	8.2	-		
Temperature (°C)		✔	5	FIELD	-	13.9	-		
Total Chromium		✔	1	200	1	1.03	-		

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:
TREATMENT AS REQUIRED TO MEET EFFLUENT LIMITATIONS

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 SEDIMENTATION TANK AND BAG FILTERS (WITH pH CONTROL AS NECESSARY) TO REMOVE SUSPENDED SOLIDS AND UNDISSOLVED CHEMICAL CONSTITUENTS AND ADJUST pH TO WITHIN LIMITS ESTABLISHED BY PERMIT. TOTAL FLOW WILL BE MEASURED WITH FLOW METER/ TOTALIZER. SUPPLEMENTAL PRE-TREATMENT MAY BE REQUIRED TO MEET NPDES RGP EFFLUENT LIMITATIONS AND MAY INCLUDE OIL/WATER SEPARATORS AND/OR OTHER COMPONENTS AS REQUIRED; REFER TO FIGURE 3 OF THE NPDES RGP NOI 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: BAG FILTERS Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	50 GPM
Provide the proposed maximum effluent flow in gpm.	50 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:	NA

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:
THE SITE CONTRACTOR HAS NOT YET SUBMITTED THEIR CONSTRUCTION DEWATERING SUBMITTAL WHICH WILL INCLUDE DETAILS OF THE PROPOSED

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

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

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

G. Endangered Species Act eligibility determination

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

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

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

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

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

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

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

H. National Historic Preservation Act eligibility determination

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

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

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

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

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

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

I. Supplemental information

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

Refer to attached Haley & Aldrich, Inc. letter

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

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

J. Certification requirement

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

BMPP certification statement:	A BMPP MEETING THE REQUIREMENTS OF THIS GENERAL PERMIT WILL BE DEVELOPED AND IMPLEMENTED UPON INITIATION OF DISCHARGE.
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ☐ No ■
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐ NA ☐
Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.	Check one: Yes ☐ No ■ NA ☐
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Check one: Yes ☐ No ☐ NA ■
Signature: Neal Howards	Date: 1/23/20
Print Name and Title: Neal Howards, Authorized Signatory	

Haley & Aldrich, Inc.
465 Medford St.
Suite 2200
Boston, MA 02129
617.886.7400

23 January 2020
File No. 132190-005

Boston Water and Sewer Commission
Engineering Customer Services
980 Harrison Avenue
Boston, Massachusetts 02119

Attention: Matthew Tuttle

Subject: Request for Approval of Temporary Construction Dewatering
21-35 West Second Street Development
South Boston, Massachusetts

Dear Mr. Tuttle:

On behalf of our client, Zero Athens, LLC, c/o Transom Real Estate, LLC, this letter submits the Boston Water and Sewer Commission (BWSC) Dewatering Discharge Permit Application in support of the proposed 21-35 West Second Street development in South Boston, Massachusetts.

Dewatering is necessary to enable construction in-the-dry and is anticipated to begin in March 2020 and continue for approximately six (6) months. Prior to discharge, collected water will be routed through at minimum a sedimentation tank and bag filters (with pH control as necessary) to remove suspended solids and undissolved chemical constituents and adjust the pH to within the limits established by the permit. Other pre-treatment may be conducted as necessary to comply with National Pollutant Discharge Elimination System (NPDES) Remediation General Permit (RGP) effluent limitations. The proposed dewatering discharge route and BWSC outfall location are shown on Figures 4A through 4C of the submitted NPDES RGP Notice of Intent (NOI), attached for reference and currently under review by the U.S. Environmental Protection Agency (EPA) under the NPDES RGP.

If you have any questions, please feel free to contact the undersigned at 617-886-7400.

Sincerely yours,
HALEY & ALDRICH, INC.

Jonathan M. Thibault
Technical Specialist

Joel S. Mooney, P.E., L.S.P.
Principal | Senior Vice President

Attachments:
BWSC Dewatering Discharge Permit Application
Copy of NPDES RGP NOI Application

\\haleyaldrich.com\share\bos_common\132190 - 0 Athens St\Permitting\NPDES RGP\NOI Application\Appendix B - BWSC Permit Application\2020-0123-HAI-21-35 West Second Street_BWSC Letter-F.docx

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

DEWATERING DISCHARGE PERMIT APPLICATION

OWNER / AUTHORIZED APPLICANT PROVIDE INFORMATION HERE:

Company Name: ZERO ATHENS, LLC C/O TRANSOM REAL ESTATE, LLC Address: 527 ALBANY STREET, SUITE #100, BOSTON, MA 02116

Phone Number: (617) 504-4995 Fax number: _____

Contact person name: NEAL HOWARD Title: PRINCIPAL

Cell number: (617) 504-4995 Email address: NHOWARD@TRANSOMREALESTATE.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: 21-35 WEST SECOND STREET Neighborhood SOUTH BOSTON

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

Describe Proposed Pre-Treatment System(s): SEDIMENTATION TANK, BAG FILTERS, pH CONTROL AND OTHER COMPONENTS AS NECESSARY (REFER TO ATTACHED NPDES RGP NOI APPLICATION)

BWSC Outfall No. CSO 072 Receiving Waters FORT POINT CHANNEL (BOSTON INNER HARBOR)

Temporary Discharges (Provide Anticipated Dates of Discharge): From MARCH 2020 To SEPTEMBER 2020

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

Permanent Discharges

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

---

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

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

Signature of Authorized Representative for Property Owner: _____ Date: 1/23/20

APPENDIX C

Effluent Limit Calculations

Enter number values in green boxes below

Enter values in the units specified

↓

0	Q_R = Enter upstream flow in **MGD**
0.072	Q_P = Enter discharge flow in **MGD**
0	Downstream 7Q10

Enter a dilution factor, if other than zero

↓

0

Enter values in the units specified

↓

0	C_d = Enter influent hardness in **mg/L** $CaCO_3$
0	C_s = Enter receiving water hardness in **mg/L** $CaCO_3$

Enter **receiving water** concentrations in the units specified

↓

7.8	pH in **Standard Units**
9	Temperature in **°C**
0	Ammonia in **mg/L**
0	Hardness in **mg/L** $CaCO_3$
28	Salinity in **ppt**
0	Antimony in **µg/L**
0	Arsenic in **µg/L**
0	Cadmium in **µg/L**
0	Chromium III in **µg/L**
0	Chromium VI in **µg/L**
0	Copper in **µg/L**
0	Iron in **µg/L**
0	Lead in **µg/L**
0	Mercury in **µg/L**
0	Nickel in **µg/L**
0	Selenium in **µg/L**
0	Silver in **µg/L**
0	Zinc in **µg/L**

Enter **influent** concentrations in the units specified

↓

0	TRC in **µg/L**
0.161	Ammonia in **mg/L**
0	Antimony in **µg/L**
2.32	Arsenic in **µg/L**
0	Cadmium in **µg/L**
0	Chromium III in **µg/L**
0	Chromium VI in **µg/L**
1.61	Copper in **µg/L**
0	Iron in **µg/L**
0	Lead in **µg/L**
0	Mercury in **µg/L**
0	Nickel in **µg/L**
0	Selenium in **µg/L**
0	Silver in **µg/L**
0	Zinc in **µg/L**
0	Cyanide in **µg/L**
0	Phenol in **µg/L**
0	Carbon Tetrachloride in **µg/L**
2.5	Tetrachloroethylene in **µg/L**
0	Total Phthalates in **µg/L**
0	Diethylhexylphthalate in **µg/L**
0	Benzo(a)anthracene in **µg/L**
0	Benzo(a)pyrene in **µg/L**
0	Benzo(b)fluoranthene in **µg/L**
0	Benzo(k)fluoranthene in **µg/L**
0	Chrysene in **µg/L**
0	Dibenzo(a,h)anthracene in **µg/L**
0	Indeno(1,2,3-cd)pyrene in **µg/L**
0	Methyl-tert butyl ether in **µg/L**

Notes:

Freshwater: Q_R equal to the 7Q10; enter alternate Q_R if approved by the State; enter 0 if no dilution factor approved

Saltwater (estuarine and marine): enter Q_R if approved by the State; enter 0 if no entry

Discharge flow is equal to the design flow or 1 MGD, whichever is less

Only if approved by State as the entry for Q_R; leave 0 if no entry

Saltwater (estuarine and marine): only if approved by the State

Leave 0 if no entry

Freshwater only

pH, temperature, and ammonia required for all discharges

Hardness required for freshwater

Salinity required for saltwater (estuarine and marine)

Metals required for all discharges if present and if dilution factor is > 1

Enter 0 if non-detect or testing not required

if >1 sample, enter maximum

if >10 samples, may enter 95th percentile

Enter 0 if non-detect or testing not required

Dilution Factor	0.0					
A. Inorganics	TBEL applies if bolded		WQBEL applies if bolded		Compliance Level applies if shown	
Ammonia	**Report**	mg/L	---			
Chloride	**Report**	µg/L	---			
Total Residual Chlorine	0.2	mg/L	**7.5**	µg/L	50	µg/L
Total Suspended Solids	**30**	mg/L	---			
Antimony	**206**	µg/L	640	µg/L		
Arsenic	**104**	µg/L	36	µg/L		
Cadmium	**10.2**	µg/L	8.9	µg/L		
Chromium III	**323**	µg/L	100.0	µg/L		
Chromium VI	**323**	µg/L	50	µg/L		
Copper	**242**	µg/L	3.7	µg/L		
Iron	**5000**	µg/L	---	µg/L		
Lead	**160**	µg/L	8.5	µg/L		
Mercury	**0.739**	µg/L	1.11	µg/L		
Nickel	**1450**	µg/L	8.3	µg/L		
Selenium	**235.8**	µg/L	71	µg/L		
Silver	**35.1**	µg/L	2.2	µg/L		
Zinc	**420**	µg/L	86	µg/L		
Cyanide	**178**	mg/L	1.0	µg/L	---	µg/L
B. Non-Halogenated VOCs						
Total BTEX	**100**	µg/L	---			
Benzene	**5.0**	µg/L	---			
1,4 Dioxane	**200**	µg/L	---			
Acetone	**7.97**	mg/L	---			
Phenol	**1,080**	µg/L	300	µg/L		
C. Halogenated VOCs						
Carbon Tetrachloride	**4.4**		1.6	µg/L		
1,2 Dichlorobenzene	**600**	µg/L	---			
1,3 Dichlorobenzene	**320**	µg/L	---			
1,4 Dichlorobenzene	**5.0**	µg/L	---			
Total dichlorobenzene	**---**	µg/L	---			
1,1 Dichloroethane	**70**	µg/L	---			
1,2 Dichloroethane	**5.0**	µg/L	---			
1,1 Dichloroethylene	**3.2**	µg/L	---			
Ethylene Dibromide	**0.05**	µg/L	---			
Methylene Chloride	**4.6**	µg/L	---			
1,1,1 Trichloroethane	**200**	µg/L	---			
1,1,2 Trichloroethane	**5.0**	µg/L	---			
Trichloroethylene	**5.0**	µg/L	---			
Tetrachloroethylene	**5.0**	µg/L	3.3	µg/L		
cis-1,2 Dichloroethylene	**70**	µg/L	---			
Vinyl Chloride	**2.0**	µg/L	---			
D. Non-Halogenated SVOCs						
Total Phthalates	**190**	µg/L	---	µg/L		
Diethylhexyl phthalate	**101**	µg/L	2.2	µg/L		
Total Group I Polycyclic Aromatic Hydrocarbons	**1.0**	µg/L	---			
Benzo(a)anthracene	**1.0**	µg/L	0.0038	µg/L	---	µg/L
Benzo(a)pyrene	**1.0**	µg/L	0.0038	µg/L	---	µg/L
Benzo(b)fluoranthene	**1.0**	µg/L	0.0038	µg/L	---	µg/L
Benzo(k)fluoranthene	**1.0**	µg/L	0.0038	µg/L	---	µg/L
Chrysene	**1.0**	µg/L	0.0038	µg/L	---	µg/L
Dibenzo(a,h)anthracene	**1.0**	µg/L	0.0038	µg/L	---	µg/L
Indeno(1,2,3-cd)pyrene	**1.0**	µg/L	0.0038	µg/L	---	µg/L
Total Group II Polycyclic Aromatic Hydrocarbons	**100**	µg/L	---			
Naphthalene	**20**	µg/L	---			
E. Halogenated SVOCs						
Total Polychlorinated Biphenyls	**0.000064**	µg/L	---		0.5	µg/L
Pentachlorophenol	**1.0**	µg/L	---			
F. Fuels Parameters						
Total Petroleum Hydrocarbons	**5.0**	mg/L	---			
Ethanol	**Report**	mg/L	---			
Methyl-tert-Butyl Ether	**70**	µg/L	20	µg/L		
tert-Butyl Alcohol	**120**	µg/L	---			
tert-Amyl Methyl Ether	**90**	µg/L	---			

APPENDIX D

Endangered Species Act Documentation

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: January 10, 2020
Consultation Code: 05E1NE00-2020-SLI-0970
Event Code: 05E1NE00-2020-E-02709
Project Name: 21-35 West Second Street Project Site

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-0970

Event Code: 05E1NE00-2020-E-02709

Project Name: 21-35 West Second Street Project Site

Project Type: DEVELOPMENT

Project Description: The project site is located at 21-35 West Second Street in South Boston, Massachusetts. The approximately 10,000 sf site is currently occupied by an at-grade paved parking lot which will be replaced by a new 6-story building. Construction is anticipated to take place in 2020. Temporary construction dewatering will be necessary to complete below-grade construction activities in-the-dry.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.343161717618656N71.05612342453702W

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 **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.

Project information

NAME

21-35 West Second Street Project Site

LOCATION

Suffolk County, Massachusetts

DESCRIPTION

The project site is located at 21-35 West Second Street in South Boston, Massachusetts. The approximately 10,000 sf site is currently occupied by an at-grade paved parking lot which will be replaced by a new 6-story building. Construction is anticipated to take place in 2020. Temporary construction dewatering will be necessary to complete below-grade construction activities in-the-dry.

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. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. 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.)
American Oystercatcher Haematopus palliatus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8935	Breeds Apr 15 to Aug 31
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 Skimmer Rynchops niger This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5234	Breeds May 20 to Sep 15
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
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
Hudsonian Godwit Limosa haemastica This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Least Tern Sterna antillarum This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Apr 20 to Sep 10

Lesser Yellowlegs Tringa flavipes — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9679

Nelson's Sparrow Ammodramus nelsoni — Breeds May 15 to Sep 5
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Prairie Warbler Dendroica discolor — Breeds May 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Purple Sandpiper Calidris maritima — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Red-throated Loon Gavia stellata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Ruddy Turnstone Arenaria interpres morinella — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Rusty Blackbird Euphagus carolinus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Semipalmated Sandpiper Calidris pusilla — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Snowy Owl Bubo scandiacus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Whimbrel Numenius phaeopus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9483

Willet Tringa semipalmata — Breeds Apr 20 to Aug 5
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Wood Thrush Hylocichla mustelina — Breeds May 10 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

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.

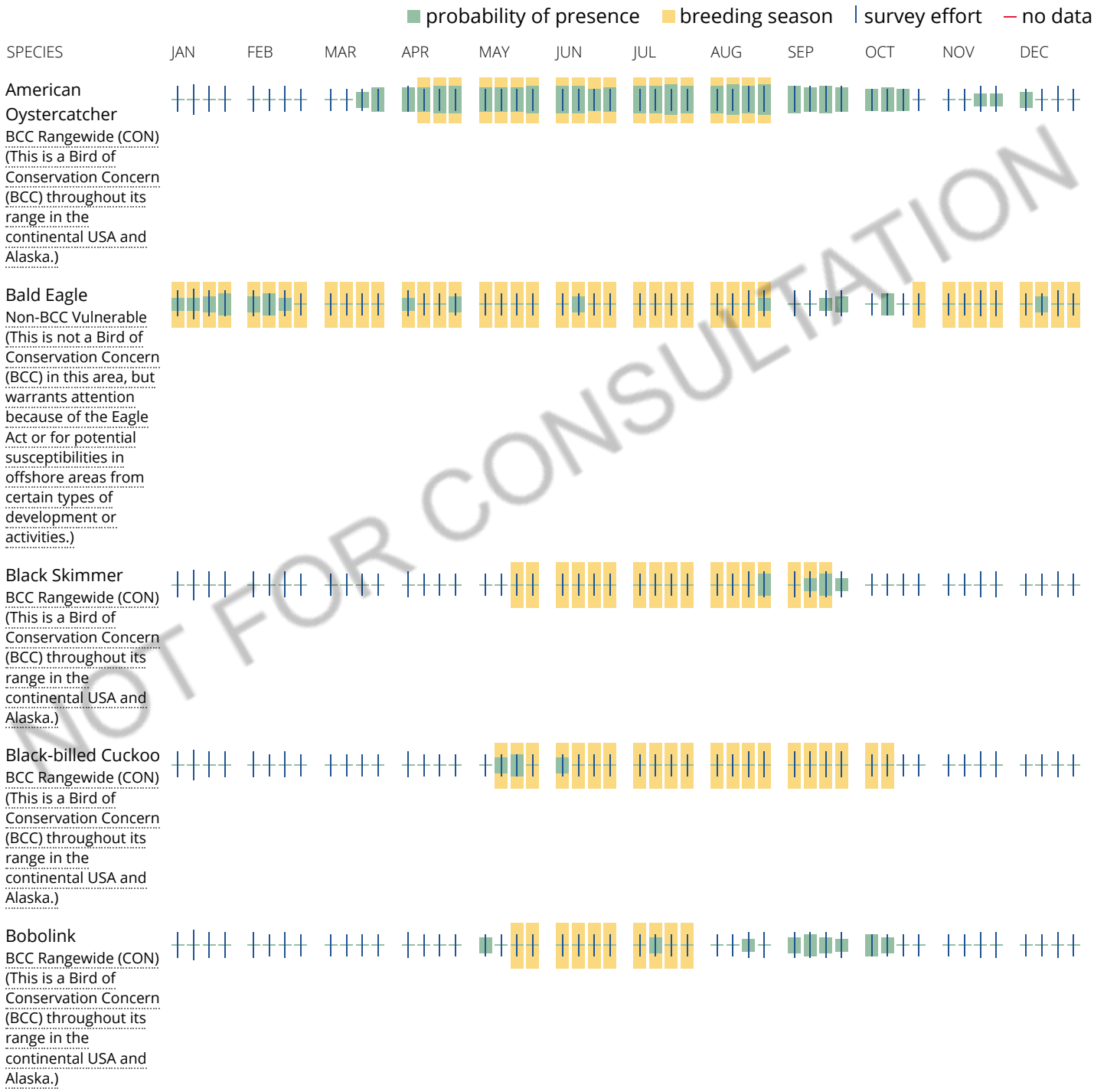
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

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.



Canada 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)

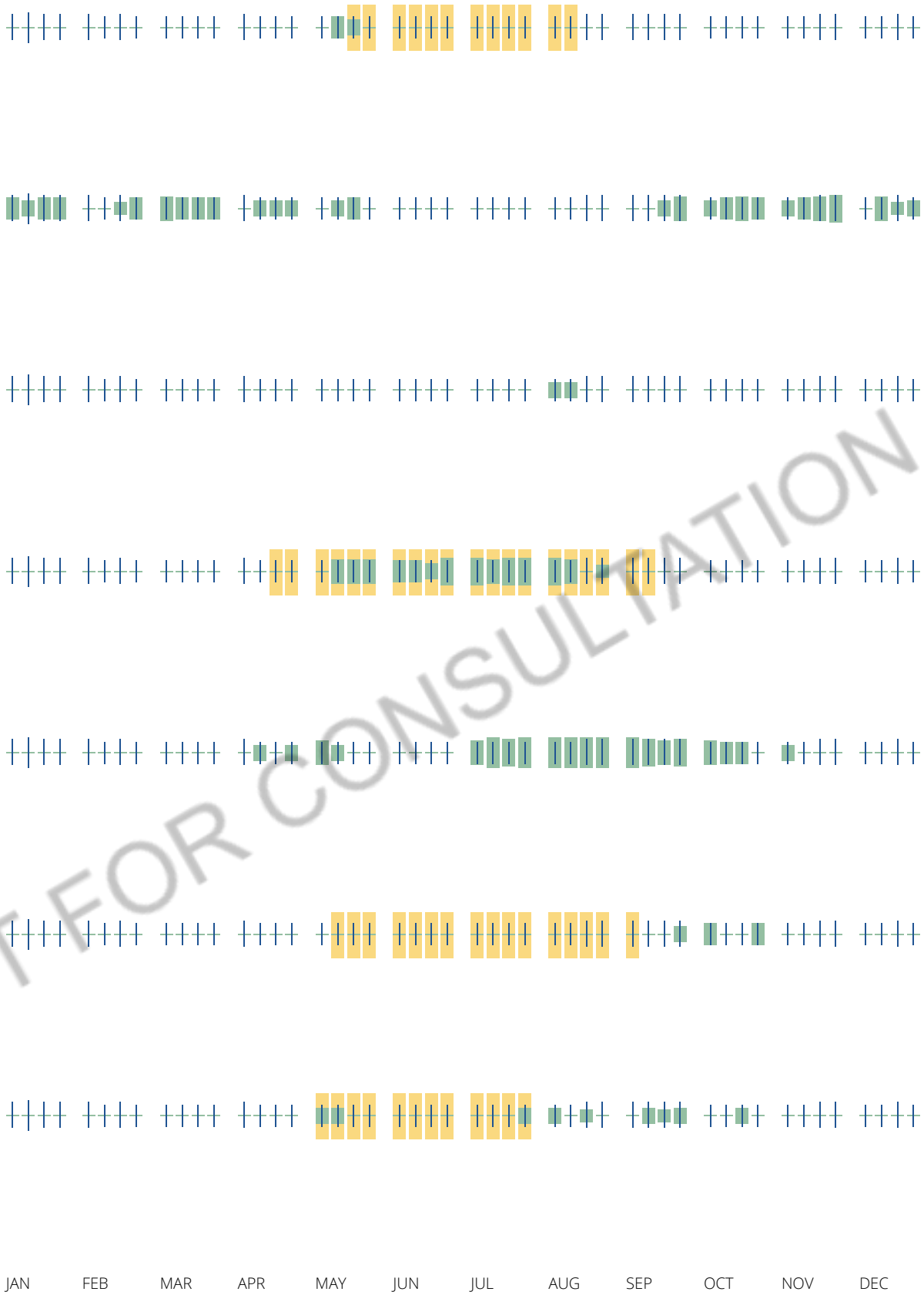
Hudsonian Godwit
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

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

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

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

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



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

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

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

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

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

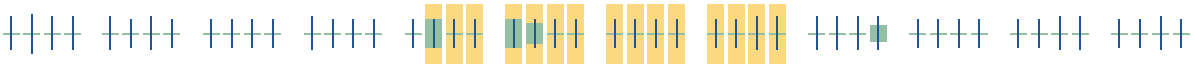
Short-billed Dowitcher
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

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

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

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

Wood Thrush
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.

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: January 10, 2020
Consultation Code: 05E1NE00-2020-SLI-0971
Event Code: 05E1NE00-2020-E-02711
Project Name: 21-35 West Second Street Discharge Location

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-0971

Event Code: 05E1NE00-2020-E-02711

Project Name: 21-35 West Second Street Discharge Location

Project Type: DEVELOPMENT

Project Description: Discharge location of temporary construction dewatering activities associated with 21-35 West Second Street.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.34561003882379N71.05716328076227W

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.

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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 **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.

Project information

NAME

21-35 West Second Street Discharge Location

LOCATION

Suffolk County, Massachusetts

DESCRIPTION

Discharge location of temporary construction dewatering activities associated with 21-35 West Second Street.

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. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. 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.)

American Oystercatcher Haematopus palliatus — Breeds Apr 15 to Aug 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8935

Bald Eagle Haliaeetus leucocephalus — Breeds Oct 15 to Aug 31
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

Black Skimmer Rynchops niger — Breeds May 20 to Sep 15
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/5234

Bobolink Dolichonyx oryzivorus — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Buff-breasted Sandpiper Calidris subruficollis — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9488

Canada Warbler Cardellina canadensis — Breeds May 20 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Dunlin Calidris alpina arcticola — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

King Rail Rallus elegans — Breeds May 1 to Sep 5
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/8936

Least Tern Sterna antillarum — Breeds Apr 20 to Sep 10
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Lesser Yellowlegs Tringa flavipes — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9679

Long-eared Owl asio otus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/3631

Nelson's Sparrow Ammodramus nelsoni — Breeds May 15 to Sep 5
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Prairie Warbler Dendroica discolor — Breeds May 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Purple Sandpiper Calidris maritima — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Red-throated Loon Gavia stellata — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Ruddy Turnstone Arenaria interpres morinella — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Rusty Blackbird Euphagus carolinus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Seaside Sparrow Ammodramus maritimus — Breeds May 10 to Aug 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Semipalmated Sandpiper Calidris pusilla — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Short-billed Dowitcher Limnodromus griseus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9480

Snowy Owl Bubo scandiacus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Whimbrel Numenius phaeopus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9483	Breeds elsewhere
Willet Tringa semipalmata This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Apr 20 to Aug 5
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.

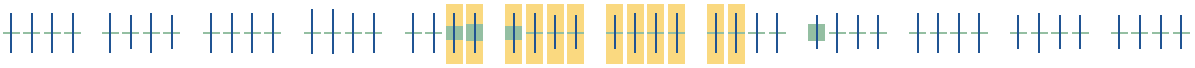
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

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.

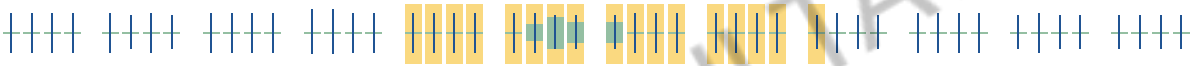
Buff-breasted Sandpiper
BCC Rangewide (CON) (This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.)

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



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

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

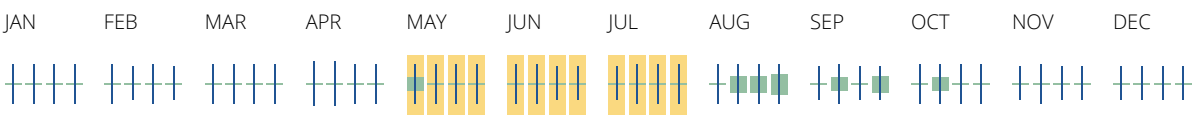


Least Tern
BCC - BCR (This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA)

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

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

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



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

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

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

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

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

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

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

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

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

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

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

Wood Thrush
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.

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

ESTUARINE AND MARINE DEEPWATER

E1UBLx

A full description for each wetland code can be found at the National Wetlands Inventory website

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.

GARFO Master ESA Species Table - Marine Mammals

Species	Region	Offshore distribution	Nearshore areas of importance	Likely Presence	Life Stages Present	Behaviors Anticipated to Occur
North Atlantic right whale	Northeast (ME to Cape Cod, MA)	throughout continental shelf and slope waters	Cape Cod Bay, Massachusetts Bay, Great South Channel, western Gulf of Maine, Georges Bank, Jordan Basin, Wilkinson Basin, Jeffreys Ledge, Cashes Ledge	Year round	Adults and juveniles	**Foraging -** Cape Cod Bay (January-April), Massachusetts Bay (January-April), Great South Channel (April-June), the western Gulf of Maine (April-May and July-October), the northern edge of Georges Bank (May-July), Jordan Basin (August-October), and Wilkinson Basin (April-July) **Wintering -** Increasing evidence of wintering areas (approximately November-January) in Cape Cod Bay, Jeffreys and Cashes Ledge, Jordan Basin, and Massachusetts Bay (e.g., Stellwagen Bank)
	Mid-Atlantic (Cape Cod, MA to VA)	throughout continental shelf and slope waters	possibly waters off New Jersey and Virginia	Year round	Adults and juveniles	**Migration** - Migratory pathway to/from northern (high latitude) foraging and southern calving grounds (primarily November-April)
Fin whale	Northeast (ME to Cape Cod, MA)	throughout continental shelf and slope waters	Massachusetts Bay, Stellwagen Bank, Great South Channel, east of Cape Cod, western Gulf of Maine, eastern perimeter of Georges Bank	Year round	Adults and juveniles	**Foraging** - Greatest densities from March-August; lower densities from September-November; important foraging grounds include Massachusetts Bay (especially Stellwagen Bank), Great South Channel, waters off Cape Cod (~40-50 meter contour), the western Gulf of Maine (especially Jeffreys Ledge), and the eastern perimenter of Georges Bank **Wintering** - Evidence of wintering areas in Stellwagen Bank and eastern perimeter of Georges Bank
	Mid-Atlantic (Cape Cod, MA to VA)	throughout continental shelf and slope waters	east end of Long Island, mid-shelf east of New Jersey	Year round	Adults and juveniles	**Foraging** - Year round in the mid-shelf area off the east end of Long Island **Migration** - Migratory pathway to/from northern (high latitude) foraging and southern (low latitude) calving grounds **Wintering** - Evidence of wintering areas in mid-shelf areas east of New Jersey **Calving** - Possible offshore calving area (October-January)

Sei whale	Northeast (ME to Cape Cod, MA)	continental shelf edge/slope waters with depths greater than 200 meters	none	Year round	Adults and juveniles	**Foraging** - Spring through summer, found in greatest densities in offshore waters of the Gulf of Maine and Georges Bank (eastern margin into the Northeast Channel area; along the southwestern edge in the area of Hydrographer Canyon); prefer continental shelf edge/slope waters (i.e., >200 meters), although incursions into continental shelf waters do occur seasonally or sporadically during periods of high prey abundance; generally feed on copepods and can often be found in areas where right whales are also found foraging, typically a bit further offshore than Cape Cod Bay **Migration** - The population is believed to migrate from south of Cape Cod and along the coast of eastern Canada in June-July, and return on a southward migration again in September-October
Sperm whale	Northeast and Mid-Atlantic (ME to VA)	areas with depths greater than 600 meters, and are relatively uncommon in waters less than 300 meters deep	none	Year round	Adults and juveniles	**Foraging** - In winter, concentrated east and northeast of Cape Hatteras; in spring, the center of distribution shifts northward to east of Delaware and Virginia, and is widespread throughout the central portion of the Mid-Atlantic Bight and the southern portion of Georges Bank; in summer, the distribution is similar but also includes the area east and north of Georges Bank and into the Northeast Channel region, as well as the continental shelf (inshore of the 100 meter isobath) south of New England; in fall, occurrence south of New England on the continental shelf is at its highest level, and there remains a continental shelf edge occurrence in the Mid-Atlantic Bight **Migration** - In some mid-latitudes, there seems to be a general trend to migrate north and south depending on the seasons (they move poleward in the summer); in temperate areas, there appears to be no obvious seasonal migration

Blue whale	Northeast and Mid-Atlantic (ME to VA)	continental shelf edge/slope waters with depths greater than 200 meters	none	Year round	Adults and juveniles	**Foraging** - Off the U.S. Northeast and Mid-Atlantic coasts, they are most common during the summer and fall feeding seasons and typically leave by early winter; although they are rare in continental shelf waters, blue whales are occasionally seen off Cape Cod; best considered an occasional visitor in U.S. Atlantic waters, which may represent the southern limit of its feeding range **Migration** - Migrate seasonally between summer and winter, but some evidence suggests that individuals remain in certain areas year round; information about movements varies with location, and migratory routes are not well known

Species	Listing Rule	Recovery Plan
North Atlantic right whale	73 FR 12024; March 6, 2008	NMFS 2005
Fin whale	35 FR 18319; December 2, 1970	NMFS 2010a
Sei whale	35 FR 18319; December 2, 1970	NMFS 2011
Sperm whale	35 FR 18319; December 2, 1970	NMFS 2010b
Blue whale	35 FR 18319; December 2, 1970	NMFS 1998

References: CETAP 1982; Watkins and Schevill 1982; Payne 1984; Kenney et al. 1986, 1995; Schevill et al. 1986; Winn et al. 1986; Wenzel et al. 1988; Hamilton and Mayo 1990; Payne et al.1990; Hain et al. 1992; Brown et al. 2002; McClellan et al. 2004; Good 2008; NOAA 2008; Baumgartner et al. 2011; Cole et al. 2013; Khan et al. 2013, 2014, 2016; Waring et al. 2016; 81 FR 4837, January 27, 2016; 50 CFR 224.105.

GARFO Master ESA Species Table - Sea Turtles

General distribution: Four species (loggerhead, green, Kemp's ridley, and leatherback) found throughout continental shelf and slope waters of the Northwest Atlantic Ocean; tropical to boreal waters, preferred temperatures greater than 10°C; northward and inshore movement into waters of the Greater Atlantic Region begins in the spring, with turtles arriving into Mid-Atlantic waters in mid-April/May and into Gulf of Maine waters in June; in the fall, this trend is reversed with most turtles leaving the region's waters by the end of November; outside of these times, sea turtle presence in the region's waters is considered unlikely aside from cold-stunned individuals that fail to migrate south (see below); a fifth species (hawksbill) is considered extremely rare in the region based on only a few documented occurrences and its affinity for tropical waters and coral reef type habitats

Disclaimer: the best available information on the presence of sea turtles in the Greater Atlantic Region is presented below; coastal/inshore areas of regular occurrence highlighted below are ones where we have information specific to sea turtle use of the area that would be helpful for action agencies reviewing proposed actions and their potential effects on turtles; however, they may occur in other coastal/inshore areas within this region for which we do not currently have specific information; for nesting individuals, the U.S. Fish and Wildlife Service has jurisdiction over sea turtles when they are on land

State	Coastal / Inshore Areas of Regular Occurrence	Likely Presence	Life Stages Present	Behaviors Anticipated to Occur
ME/NH and MA (north of Cape Cod)	Cape Cod Bay	June to October/November (note: cold stunning of hard-shelled sea turtles occurs annually from October to January)	Loggerhead (Northwest Atlantic DPS) - Pelagic and benthic juveniles, subadults, and adults Green (North Atlantic DPS) - Juveniles and adults Kemp's ridley - Juveniles only Leatherback - Juveniles and adults	**Foraging** Loggerhead (Northwest Atlantic DPS) - Pelagic and benthic juveniles - omnivorous on bottom and surface - Sub-adults and adults - benthic invertebrates along the coast Green (North Atlantic DPS) - Juveniles - Omnivorous along coasts and in protected bays and lagoons - Adults - Herbivorous in nearshore areas Kemp's ridley - Juveniles - Benthic invertebrates in protected coastal areas Leatherback - Juveniles and adults - Primarily prey on jellyfish in offshore oceanic or coastal neritic areas **Nesting** North of North Carolina, sea turtle nesting is rare (there is occasional loggerhead nesting in Virginia, but no established nesting beaches further north)
MA (south of Cape Cod)	Buzzards Bay, Nantucket and Vineyard Sounds	May to November (note: cold stunning of hard-shelled sea turtles occurs annually from October to January)		
RI	Narragansett Bay and Block Island Sound			
CT/NY	Long Island Sound and associated bays/estuaries (e.g., Peconic Bay)			
NY/NJ	Coastal waters off the New York Harbor Complex (e.g., Raritan and Sandy Hook Bays)			
NJ/DE	Delaware Bay and other back bays (e.g., Barnegat Bay)			
DE/MD/VA	Coastal waters off Virginia Beach, coastal waters and back bays of the DelMarVa Peninsula, Chesapeake Bay, Tangier Sound, and lower portions of southern Chesapeake Bay tributaries (e.g., James, York, Rappahannock, and Potomac Rivers)			

GARFO Master ESA Species Table - Sea Turtles

Loggerhead (Northwest Atlantic DPS)	**Listing rule**: 76 FR 58868, September 22, 2011;**Recovery plan**: NMFS and USFWS 2008; **Additional references**: Shoop and Kenney 1992; Epperly et al. 1995a, 1995b, 1995c; Braun-McNeill and Epperly 2004; Morreale and Standora 2005; Braun-McNeill et al. 2008; Conant et al. 2009; Mansfield et al. 2009; NMFS NEFSC 2011; Griffin et al. 2013
Green (North Atlantic DPS)	**Listing rule**: 81 FR 20057, April 6, 2016;**Recovery plan**: NMFS and USFWS 1991; **Additional references**: Lahanas et al. 1994; Wynne and Schwartz 1999; Ruiz-Urquiola et al. 2010; Seminoff et al. 2015
Kemp's ridley	**Listing rule**: 35 FR 18319, December 2, 1970;**Recovery plan**: NMFS et al. 2011; **Additional references**: TEWG 2000; Morreale et al. 2007; NMFS and USFWS 2015
Leatherback	**Listing rule**: 35 FR 8491, June 2, 1970;**Recovery plan**: NMFS and USFWS 1992; **Additional references**: Bjorndal 1997; TEWG 2007; Fossette et al. 2008; Dodge et al. 2011; NMFS and USFWS 2013
Hawksbill	**Listing rule**: 35 FR 18319, December 2, 1970;**Recovery plan**: NMFS and USFWS 1992; **Additional references**: NMFS and USFWS 2013

General distribution: Atlantic Ocean waters and associated bays, estuaries, and coastal river systems from Hamilton Inlet, Labrador, Canada, to Cape Canaveral, Florida; only subadult and adult lifestages occur in marine waters, where they are typically found in waters 5-50 meters in depth (Stein et al. 2004; ASMFC TC 2007); subadults and adults may travel long distances in marine waters, aggregate in both ocean and estuarine areas at certain times of the year, and exhibit seasonal coastal movements in the spring and fall; distribution in rivers and inshore bays typically occurs from the estuary or river mouth generally up to the first impassible barrier (e.g., a dam or falls); Atlantic sturgeon generally use the deepest habitats available to them in rivers, but they have also been collected over shallow (2.5 meters), tidally influenced flats and substrates ranging from mud to sand and mixed rubble and cobble (Savoy and Pacileo 2003)

Disclaimer: the best available information on Atlantic sturgeon presence within coastal rivers, estuaries, and bays of the Greater Atlantic Region is presented below; waterbodies highlighted below are ones where we have information specific to Atlantic sturgeon use of the area that would be helpful for action agencies reviewing proposed actions and their potential effects on Atlantic sturgeon; however, they may occur in other watersheds within this range for which we do not currently have specific information; note: individuals from any of the five listed DPSs (Gulf of Maine, New York Bight, Chesapeake Bay, Carolina, and South Atlantic) may occur in any of the areas identified throughout the species' range; a description of Atlantic sturgeon life history stages are included at the end of the table below

Body of Water (State)	Distribution/Range in Watershed	Life Stages Present	Use of the Watershed	References
Cobscook Bay/St. Croix River (ME)	Up to the Milltown Dam at Calais, ME (RKM 16)	subadults and adults	**Foraging** - assumed to occur wherever suitable forage is present[1]	[1] Zydlewski (UMaine) pers. comm., September 21, 2015
Penobscot River (ME)	Up to the Milford Dam (RKM 62)	subadults and adults (potentially eggs, larvae, YOY, and juveniles)	**Spawning** - undocumented, but 12 km of suitable spawning habitat is accessible[2] **Foraging -** wherever suitable forage is present, documented in the lower river (RKM 21-24.5)[1]	[1] Fernandes et al. 2010; [2] Wippelhauser et al. 2017
Damariscotta River (ME)	Up to Damariscotta Lake Dam (RKM 30.3)	subadults and adults	**Foraging** - assumed to occur wherever suitable forage is present; tag detections indicate that usage of the river is for short periods during coastal migrations[1]	[1] Picard and Zydlewski 2014
Sheepscot River (ME)	Up to the head-of-tide dam (RKM 35)	subadults and adults	**Foraging** - assumed to occur wherever suitable forage is present; may occur in Montsweag Bay as shortnose sturgeon foraging has been documented there[1]; subadults have been captured in the river[2]	[1] Fried and McCleave 1973; [2] ASSRT 2007
Kennebec River (ME)	Up to the Lockwood Dam (RKM 102), also includes the entirety of the Back and Sasanoa Rivers	eggs, larvae, YOY, juveniles, subadults, and adults	**Spawning** - May-August[4]; documented via captures of spawning condition adults and larvae (RKM 52.8-76)[1][4]; potentially occurs as far upstream as the Lockwood Dam in the restored spawning habitat (RKM 87-102)[4] **Rearing -** ELS have been documented near the spawning grounds[4]; juveniles have also been documented in the river[3] **Foraging** - assumed to occur wherever suitable forage is present (documented from RKM 0-42)[4]; also documented in the Sasanoa and Back Rivers[2][3]	[1] Wippelhauser 2011; [2] Wippelhauser 2012; [3] Wippelhauser and Squiers 2015; [4] Wippelhauser et al. 2017

Androscoggin River (ME)	Up to the Brunswick Dam (RKM 8.4)	eggs, larvae, YOY, juveniles, subadults, and adults	**Spawning** - May-August[2]; capture of a ripe male[2] in the summer below the Brunswick Dam (RKM 7.7-8.4)[1] indicates that spawning is likely occurring **Rearing** - Juveniles likely present throughout the river year-round **Foraging** - assumed to occur wherever suitable forage is present	[1] Wippelhauser and Squiers 2015; [2] Wippelhauser et al. 2017
Presumpscot River (ME)	Up to Presumpscot Falls (RKM 3)	subadults and adults	**Foraging** - assumed to occur wherever suitable forage is present; an Atlantic sturgeon was caught below Presumpscot Falls[1]	[1] Yoder et al. 2009
Scarborough River (ME)	Throughout the entire river	subadults and adults	**Foraging** - assumed to occur wherever suitable forage is present[1]	[1] Wippelhauser et al. 2017
Saco River (ME)	Up to Cataract Dam (RKM 10)	juveniles, subadults, and adults	**Foraging** - assumed to occur wherever suitable forage is present[1]	[1] Novak et al. 2017
Piscataqua River Watershed including Salmon Falls and Cocheco tributaries (NH)	Up to the confluence with the Salmon Falls and Cocheco Rivers (RKM 15) and including Great Bay; Salmon Falls River – up to the Route 4/South Berswick Dam (RKM 7); Cocheco River – up to the Cocheco Falls Dam (RKM 6)	subadults and adults (eggs, larvae, YOY, and juveniles possible)	**Spawning** - potentially occurs in the Salmon Falls and Cocheco rivers based on the presence of features necessary to support reproduction and recruitment as well as the capture of an adult female Atlantic sturgeon in spawning condition in 1990[1][3] **Rearing** - Juveniles potentially present throughout the river year-round **Foraging** - used seasonally for foraging and resting during spring and fall migrations; tagging data indicates that use by individual sturgeon is limited to days or weeks[2]	[1] ASSRT 2007; [2] Kieffer and Trefry 2017 pers. comm.; [3] NMFS 2017
Merrimack River (MA)	Up to the Essex Dam (RKM 46); often found around the lower islands reach (RKM 3-12) and the mouth of the river	subadults and adults (potentially eggs, larvae, YOY, and juveniles)	**Spawning** - potentially occurs due to the presence of features necessary to support reproduction and recruitment[4] **Rearing** - data suggests it is used as a nursery area for juveniles[3] **Foraging** - mouth of the river and the lower islands area (RKM 0-12); subadults use RKM 7-12[1][2]	[1] Kieffer and Kynard 1993; [2] Kynard et al. 2000; [3] ASSRT 2007; [4] NMFS 2017
Charles River (MA)	Up to Charles River Locks (RKM 5.5)	subadults and adults	**Foraging** - assumed to occur wherever suitable forage is present[1]	[1] Boston.com February 20, 2012 (http://archive.boston.com/news/science/articles/2012/02/20/from_depths_of_the_charles_an_ancient_species/)
North River (MA)	Up to Dam #1 on the Indian Head Reservoir at Luddam's Ford (RKM 21)	subadults and adults	**Foraging** - assumed to occur wherever suitable forage is present; an adult was found in the North River, 4 miles from the mouth in 2012[1]	[1] The Patriot Ledger June 1, 2012 (http://www.patriotledger.com/article/20120601/NEWS/306019786)
Taunton River (MA)	Up to the convergence of the Town River and Matfield River	subadults and adults	**Foraging** - assumed to occur wherever suitable forage is present[1][2]	[1] Buerkett and Kynard 1993; [2] ASSRT 2007

Narragansett Bay (RI)	Throughout the bay	subadults and adults	**Foraging** - assumed to occur wherever suitable forage is present[1]	[1] ASSRT 2007
Thames River (CT)	Up to the Yantic Dam in the Yantic River and up to the Greenville Dam in the Shetucket River	subadults and adults	**Foraging** - assumed to occur wherever suitable forage is present[1][2][3]	[1] Whitworth 1996; [2] ASSRT 2007; [3] The Day June 17, 2016 (http://www.theday.com/article/20160617/NWS01/160619212)
Connecticut River (CT/MA)	Up to the Holyoke Dam (RKM 140); mainly stay in the summer range of the salt wedge (RKM 0-26)	eggs, larvae, YOY, juveniles, subadults, and adults	**Spawning/Rearing** - captures of pre-migratory juvenile sturgeon in the river strongly suggests that spawning is occurring in this river[3] **Foraging** - assumed to occur wherever suitable forage is present[1][2]	[1] Savoy and Shake 1993; [2] Savoy and Pacileo 2003; [3] Savoy et al. 2017
Quinnipiac River (CT)	Up to bridge at Quinnipiac Street and River Road in Wallingford (RKM 27)	subadults and adults	**Foraging** - assumed to occur wherever suitable forage is present[1]	[1] Hartford Courant September 30, 1994 (http://articles.courant.com/1994-09-30/news/9409300111_1_sturgeon-fish-story-giant-fish)
Housatonic River (CT)	Up to the Derby Dam (RKM 23.5)	subadults and adults (potentially eggs, larvae, YOY, and juveniles)	**Spawning** - not documented; potentially occurs due to the presence of features necessary to support reproduction and recruitment[3] **Foraging** - assumed to occur wherever suitable forage is present[1][2]	[1] Whitworth 1996; [2] ASSRT 2007; [3] NMFS 2017
Long Island Sound (NY/CT)	All of Long Island Sound	subadults and adults	**Foraging** - where suitable forage is present; 85% of Atlantic sturgeon caught in Long Island Sound are over mud/transitional bottoms of 27-37 meters deep in the central basin[1]	[1] Savoy and Pacileo 2003
East River (NY)	full length of the East River	subadults and adults	**Migration** - subadults and adults have been documented using this waterbody to move between the Hudson River and western Long Island Sound[1][2] **Foraging** - assumed to occur wherever suitable forage is present, but forage is limited[1][2]	[1] Savoy and Pacileo 2003; [2] Tomichek et al. 2014

Hudson River (NY/NJ)	up to the Troy Dam (approximately RKM 246)	eggs, larvae, YOY, juveniles, subadults, and adults	**Spawning** - late April through August[1][6], notably around Hyde Park (RKM 129-135) [4] and Catskill (RKM 182)[2], as well as throughout RKM 113-184[4]; evidence strongly suggests that there is also spawning further upstream of RKM 193[6] **Rearing** - larvae and YOY - RKM 60-148[1] [3]; remain upstream of the salt wedge[2]; juveniles - RKM 63-140[1][3]; utilize the estuary up through Kingston (RKM 148)[1]; Newburgh and Haverstraw Bays (RKM 55-61) are areas of known juvenile concentrations[5] **Foraging** - assumed to occur wherever suitable forage is present **Overwintering** - juveniles - RKM 19-74 from fall through winter[1]; some juveniles were recorded in Esopus Meadows (RKM 134)[3]	[1] Dovel and Berggren 1983; [2] Van Eenennaam et al. 1996; [3] Bain 1997; [4] Bain et al. 1998; [5] Sweka et al. 2006; [6] Dewayne Fox, DSU, and Kathy Hattala, NYDEC, personal communication April 2014
Delaware River (NJ/DE/PA)	Up to the fall line near Trenton, NJ (RKM 211)	eggs, larvae, YOY, juveniles, subadults, and adults	**Spawning** - documented and/or potential spawning habitat in April through July from the Marcus Hook Bar to the fall line at Trenton, NJ (RKM 125-211)[2][3][5] **Rearing** - YOY/juveniles - Deepwater to Roebling, NJ (RKM 105-199)[4] with most of the detections in the Marcus Hook Area (RKM 127-129)[7] **Foraging** - where suitable forage and appropriate habitat conditions are present **Overwintering** - juveniles - move between lower (RKM 100-150) and upper (RKM 185-199) tidal areas[6]; may overwinter in tidal fresh water[1]	[1] Lazzari et al. 1986; [2] Simpson and Fox 2006; [3] Simpson 2008; [4] Calvo et al. 2010; [5] Breece et al. 2013; [6] Stetzar et al. 2015; [7] Hale et al. 2016
C&D Canal (DE/MD)	Used at least occasionally to move from Chesapeake Bay to the Delaware River	juveniles, subadults, and adults	**Foraging** - Assumed to occur in areas with suitable forage [1][2]	[1] Simpson 2008; [2] Brundage and O'Herron 2009
Chesapeake Bay (MD/VA)	Throughout the bay typically in spring through fall	juveniles, subadults, and adults	**Migration** - April-November for adults[5] and subadults[1]; year round for juveniles[2] [3]; these lifestages wander among coastal and estuarine habitats[5] **Foraging** - typically in areas where suitable forage and appropriate habitat conditions are present; typically tidally influenced flats and mud, sand and mixed cobble substrates[4]	[1] Dovel and Berggren 1983; [2] Secor et al. 2000; [3] Welsh et al. 2002; [4] Stein et al. 2004; [5] Horne and Stence 2016
Susquehanna River (MD)	Up to the Conowingo Dam (RKM 16)	subadults and adults (potentially eggs, larvae, YOY, and juveniles)	**Foraging** - where suitable forage and appropriate habitat conditions are present [1]	[1] ASSRT 2007

Choptank River (MD)	Range not confirmed, but they have been documented in this river (likely up to the dam at RKM 102)	subadults and adults (potentially eggs, larvae, YOY, and juveniles)	**Foraging -** where suitable forage and appropriate habitat conditions are present [2] **Spawning** - not documented, but a gravid female was caught at the mouth of the river near Tilghman Island[1]	[1] The Baltimore Sun June 13, 2007 (http://articles.baltimoresun.com/2007-06-13/news/0706130110_1_sturgeon-chesapeake-bay-university-of-maryland); [2] ASSRT 2007
Nanticoke River, including Marshyhope Creek and Broad Creek tributaries (MD)	Range not confirmed, but they have been documented in the Nanticoke River up to the mouth of Broad Creek; they have also been found up to Federalsburg, MD in Marshyhope Creek and up to Laurel, DE in Broad Creek[2]	subadults and adults (potentially eggs, larvae, YOY, and juveniles)	**Spawning -** potential for spawning due to the presence of features necessary to support reproduction and recruitment in one of its tributaries (in Marshyhope Creek, spawn ready adults have been captured)[2] **Rearing** - may be used as a nursery for juveniles[1] **Foraging** - assumed to occur wherever suitable forage is present[1]	[1] ASSRT 2007; [2] Horne and Stence 2016
Pocomoke River (MD)	To the limit of tidal influence where Whiton Crossing Road crosses the river	subadults and adults	**Foraging** - assumed to occur wherever suitable forage is present[1]	[1] Horne and Stence 2016
Potomac River (MD/VA)	Up to Little Falls Dam (RKM 189)	juveniles, subadults, and adults (potentially eggs, larvae, and YOY)	**Spawning** - potentially occurs as three small juveniles[3] and a large mature female[2] have been captured and due to the presence of features necessary to support reproduction and recruitment[1][2] **Rearing** - three juveniles have been captured[3] **Foraging** - where suitable forage and appropriate habitat conditions are present [2]	[1] Niklitschek and Secor 2005; [2] ASSRT 2007; [3] Kynard et al. 2007
Rappahannock River (VA)	Range not confirmed, but they have been documented in this river (likely throughout the entire river)	subadults and adults (potentially eggs, larvae, YOY, and juveniles)	**Spawning** - potentially occurs due to the capture of a male sturgeon in spawning condition in September 2015 and the presence of features necessary to support reproduction and recruitment[1][3] **Rearing** - may be used as a nursery for juveniles[2] **Foraging** - where suitable forage and appropriate habitat conditions are present [2]	[1] Bushnoe et al. 2005; [2] ASSRT 2007; [3] NMFS 2016

York River, including Mattaponi and Pamunkey River tributaries (VA)	York River - up to confluence with the Mattaponi and Pamunkey Rivers (RKM 55); Pamunkey River - up to RKM 150; Mattaponi River - up to RKM 120	eggs, larvae, YOY, juveniles, subadults, and adults	**Spawning** - potential for fall spawning due to the presence of features necessary to support reproduction in its tributaries (Mattaponi and Pamunkey Rivers) and recruitment in both the York River and its tributaries[1]; documented in the Pamunkey River through the capture of an adult female sturgeon in post-spawning condition in the fall and the presence of features necessary to support reproduction and recruitment[3]; may occur in the Pamunkey River as far upstream as RKM 150[4] **Rearing** - in freshwater reaches downstream of spawning sites; four age-0 Atlantic sturgeon were captured in the York River[2]; Juveniles likely present throughout the river year-round **Foraging** - where suitable forage and appropriate habitat conditions are present [1]	[1] Bushnoe et al. 2005; [2] Balazik et al. 2012; [3] Hager et al. 2014; [4] Kahn et al. 2014
James River (VA)	Up to Boshers Dam (RKM 182.3)	eggs, larvae, YOY, juveniles, subadults, and adults	**Staging** - likely done by fall spawners, during summer and fall in brackish water before and after the fall spawn (RKM 22-107)[4] **Spawning** - both a spring (likely at RKM 90-95)[4] and fall spawning event (likely between RKM 105 and the fall line near Richmond, VA at RKM 155)[3] **Rearing** - freshwater reaches downstream of spawning locations[1][2]; Juveniles likely present throughout the river year-round **Foraging** - where suitable forage and appropriate habitat conditions are present [2]	[1] Florida Museum of Natural History 2004; [2] ASSRT 2007; [3] Balazik et al. 2012; [4] Balazik and Musick 2015
Appomattox River (VA), tributary of the James River	Range not confirmed, but they have been documented in this river (likely up to Battersea Dam, RKM 21)	subadults and adults	**Foraging** - where suitable forage and appropriate habitat conditions are present [1]	[1] The Hopewell News 2013

Listing rules: 77 FR 5880 and 77 FR 5914, February 6, 2012; **Recovery plan**: none published

General distribution: Atlantic Ocean waters and associated bays, estuaries, and coastal river systems from Minas Basin, Nova Scotia, Canada, to the St. Johns River, Florida; only adults occur in marine waters, with some adults making coastal migrations between river systems (e.g., Penobscot River to Merrimack River via the Gulf of Maine; Merrimack River to Connecticut River via the Gulf of Maine and Long Island Sound; Connecticut River to Hudson River via Long Island Sound and the East River); typically, distribution in rivers and inshore bays occurs from the estuary or river mouth up to the first impassible barrier (e.g., a dam or falls); comprehensive information on species biology and distribution is available in the Shortnose Sturgeon Status Review Team's Biological Asessment (SSSRT 2010; available at: http://www.nmfs.noaa.gov/pr/pdfs/species/shortnosesturgeon_biological_assessment2010.pdf)

Disclaimer: the best available information on shortnose sturgeon presence within the Greater Atlantic Region is presented below; waterbodies included are ones where we have information specific to shortnose sturgeon use of the area that would be helpful for action agencies reviewing proposed actions and their potential effects on shortnose sturgeon; for waterbodies not listed below, we have no data on usage by shortnose sturgeon; however, we expect the species may be present in other coastal waters in the Gulf of Maine and along the U.S. Atlantic coast between the Merrimack and Hudson Rivers; bracketed footnotes are provided in the table to match up "Use of the Watershed" information to the specific reference(s) from which it came; a description of shortnose sturgeon life history stages are included at the end of the table below

Body of Water (State)	Distribution/Range in Watershed	Life Stages Present	Use of the Watershed	References
Narraguagus River (ME)	Up to Cherryfield Dam (RKM 10.6)	adults	**Foraging** - May be used for foraging; tag detections indicate that usage of the river is for short periods during coastal migrations[1]	[1] Dionne et al. 2013
Penobscot River (ME)	Up to Milford Dam (RKM 62)	adults documented; other life stages assumed but unknown	**Spawning** - Not documented to date; suitable spawning habitat is accessible[3] **Foraging** - Foraging concentrations from RKM 10-24.5 during the summer months as well as throughout the lower and middle estuary; RKM 21-45 by mid-July and August[1] **Overwintering** - Aggregations located from RKM 36.5-42 from mid-August to mid-April[2]	[1] Fernandes et al. 2010; [2] Lachapelle 2013; [3] Johnston 2016
St. George River (ME)	Up to RKM 39 in lower estuary	adults	**Foraging** - May be used for foraging; tag detections indicate that usage of the river is for short periods during coastal migrations[1][2]	[1] Zydlewski et al. 2011; [2] Dionne et al. 2013
Medomak River (ME)	Up to RKM 17.5	adults	**Foraging** - May be used for foraging; tag detections indicate that usage of the river is for short periods during coastal migrations[1][2][3]	[1] Zydlewski et al. 2011; [2] Dionne et al. 2013; [3] Johnston 2016
Damariscotta River (ME)	Up to Damariscotta Lake Dam (RKM 30.3)	adults	**Foraging** - May be used for foraging; tag detections indicate that usage of the river is for short periods during coastal migrations[1][2]	[1] Zydlewski et al. 2011; [2] Dionne et al. 2013
Sheepscot River (ME)	Up to Head Tide Dam (RKM 35)	adults	**Foraging** - Montsweag Bay during the summer [1] **Overwintering** - Suspected to occur in the estuary[2]	[1] Fried and McCleave 1973; [2] SSSRT 2010

General distribution: Atlantic Ocean waters and associated bays, estuaries, and coastal river systems from Minas Basin, Nova Scotia, Canada, to the St. Johns River, Florida; only adults occur in marine waters, with some adults making coastal migrations between river systems (e.g., Penobscot River to Merrimack River via the Gulf of Maine; Merrimack River to Connecticut River via the Gulf of Maine and Long Island Sound; Connecticut River to Hudson River via Long Island Sound and the East River); typically, distribution in rivers and inshore bays occurs from the estuary or river mouth up to the first impassible barrier (e.g., a dam or falls); comprehensive information on species biology and distribution is available in the Shortnose Sturgeon Status Review Team's Biological Asessment (SSSRT 2010; available at: http://www.nmfs.noaa.gov/pr/pdfs/species/shortnosesturgeon_biological_assessment2010.pdf)

Disclaimer: the best available information on shortnose sturgeon presence within the Greater Atlantic Region is presented below; waterbodies included are ones where we have information specific to shortnose sturgeon use of the area that would be helpful for action agencies reviewing proposed actions and their potential effects on shortnose sturgeon; for waterbodies not listed below, we have no data on usage by shortnose sturgeon; however, we expect the species may be present in other coastal waters in the Gulf of Maine and along the U.S. Atlantic coast between the Merrimack and Hudson Rivers; bracketed footnotes are provided in the table to match up "Use of the Watershed" information to the specific reference(s) from which it came; a description of shortnose sturgeon life history stages are included at the end of the table below

Body of Water (State)	Distribution/Range in Watershed	Life Stages Present	Use of the Watershed	References
Kennebec River (ME)	Up to Lockwood Dam (RKM 103), also includes Merrymeeting Bay, Sagadahoc Bay, and the entirety of the Back, Sasanoa, Eastern, and Cathance Rivers	eggs, larvae, YOY, juveniles, and adults	**Spawning** - Occurs at two sites: below the former Edwards Dam[7] (RKM 58-74) and downstream of the Lockwood Dam[8] (RKM 87-103) **Rearing** - Eggs and larvae occur in freshwater reaches below the spawning sites[8] **Foraging** - Throughout the lower estuary to the mouth of the river[4][5][8] (below RKM 70) with concentration areas near Bath[3][5][8] (RKM 16-29) including Sagadahoc Bay[6] and the Back and Sasanoa Rivers[1][5][8] **Overwintering** - Majority in Merrymeeting Bay [5][7] (RKM 37-40 and 40-42), also Bluff Head [2][5] (RKM 15), and in the lower portions of the Eastern and Cathance Rivers (tributaries to Merrymeeting Bay)[2]	[1] McCleave et al. 1977; [2] Squiers and Robillard 1997; [3] Squiers 2003; [4] Fernandes et al. 2010; [5] SSSRT 2010; [6] Fire et al. 2012; [7] Wippelhauser and Squiers 2015; [8] Wippelhauser et al. 2015
Androscoggin River (ME)	Up to Brunswick Dam (RKM 8.4)	eggs, larvae, YOY, juveniles, and adults	**Spawning** - Below Brunswick Dam to the Rt. 201 Bridge(RKM 7.7-8.4)[2] **Rearing** - Eggs and larvae occur in freshwater reaches below the spawning sites[3] **Foraging** - Montsweag Bay during the summer [1]	[1] McCleave et al. 1977; [2] Wippelhauser and Squiers 2015; [3] Wippelhauser et al. 2015
Presumpscot River (ME)	Up to Presumpscot Falls (RKM 4)	adults	**Foraging** - May be used for foraging[1]	[1] Yoder et al. 2009
Saco River (ME)	Up to Cataract Dam (RKM 10)	adults	**Foraging** - Used seasonally May-November[1]	[1] Little et al. 2013; [2] Hodgdon et al. 2018
Piscataqua River (NH)	Entirety of Piscataqua River including Cocheco River from its confluence with Piscataqua River upstream to Cocheco Falls Dam and waters of Salmon Falls River from its confluence with Piscataqua River upstream to the Route 4 Dam	adults	**Foraging** - Used seasonally for foraging and resting during spring and fall migrations; tracking data indicates that use by individual sturgeon is limited to days or weeks[1]	[1] Kieffer and Trefry, pers. comm., April 18, 2017

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Body of Water (State)	Distribution/Range in Watershed	Life Stages Present	Use of the Watershed	References
Merrimack River (MA)	Up to Essex Dam (RKM 46)	eggs, larvae, YOY, juveniles, and adults	**Spawning** - Near Haverhill[2] (RKM 30-32) **Rearing** - Eggs and larvae present in spawning grounds four weeks after spawning occurs, following which they would begin to move downstream continuing their development in the freshwater reach of the river[1] (RKM 16-32) **Foraging** - Lower river with concentrations near Amesbury and the lower islands[1][3] (RKM 6-24) **Overwintering** - Late fall to early spring[1]; multiple overwintering sites from RKM 15-29 in freshwater reaches beyond the maximum salt penetration[4]	[1] Kieffer and Kynard 1993; [2] Kieffer and Kynard 1996; [3] Kynard et al. 2000; [4] Wippelhauser et al. 2015
Narragansett Bay (RI)	Throughout the bay	adults	**Foraging** - Potentially occurs where suitable forage is present[1]	[1] NMFS 1998
Thames River (CT)	Up to the Greenville Dam (RKM 28)	adults undocumented, but assumed based on documented occurrences of Atlantic sturgeon in the river	**Foraging** - Assumed to occur where suitable forage is present[1]	[1] The Day June 17, 2016 (http://www.theday.com/article/20160617/NWS01/160619212)

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Body of Water (State)	Distribution/Range in Watershed	Life Stages Present	Use of the Watershed	References
Connecticut River (CT/MA)	Up to Turners Falls Dam, MA (RKM 198)	eggs, larvae, YOY, juveniles, and adults	**Spawning** - Below Turners Falls Dam/Cabot Station at two locations depending on river conditions[3] (RKM 193-194); limited spawning may occasionally occur below Holyoke Dam[3] (RKM 139-140) **Rearing** - Eggs and larvae spawned upstream documented up to 20 km downstream of the spawning site[3]; if spawning is successful downstream of Holyoke, early life stages would be present in downstream freshwater reaches [1][3] (RKM 13-194) **Foraging** - Concentrations above the Holyoke Dam in the Deerfield Concentration Area[3] (RKM 144-192), Agawam Concentration Area [1] (RKM 114-119), and the lower Connecticut Concentration Area[3] (RKM 0-110) **Overwintering** - Concentrations above the Holyoke Dam in the Deerfield Concentration Area[3] (RKM 144-192); below the Holyoke Dam concentrations near Holyoke[2] (RKM 137-140), Agawam[3] (RKM 114-119), Hartford [2] (RKM 82-86), Portland, CT[3] (RKM 46), and the lower river[2] (RKM 0-25)	[1] Buckley and Kynard 1983; [2] Buckley and Kynard 1985; [3] Kynard et al. 2012
Deerfield River (MA), tributary of the Connecticut River	Up to Deerfield No. 2 at Shelburne Falls (RKM 22.5)	adults documented in lower 3 km; larvae spawned in Connecticut River may be present during certain flow conditions	**Rearing** - Water flow could potentially draw migrating larvae into unfavorable habitat in the Deerfield River[1]; potential refuge area during high flows[2] **Foraging** - Spring through fall in lower river[2] (RKM 0-3.5) **Overwintering** - May be used as an overwintering area potential pre-spawning staging area for adults[1]	[1] Kieffer and Kynard 1992; [2] Kynard et al. 2012

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Body of Water (State)	Distribution/Range in Watershed	Life Stages Present	Use of the Watershed	References
Westfield River (MA), tributary of the Connecticut River	Up to DSI Dam (RKM 9.5)	adults	**Foraging** - Assumed to occur where suitable forage is present[1]	[1] USFWS 2007 in SSSRT 2010
Quinnipiac River (CT)	Up to Wallace Dam (RKM 27)	adults undocumented, but assumed based on documented occurrences of Atlantic sturgeon in the river	**Foraging** - Assumed to occur where suitable forage is present[1]	[1] Hartford Courant September 30, 1994 (http://articles.courant.com/1994-09-30/news/9409300111_1_sturgeon-fish-story-giant-fish)
Housatonic River (CT)	Up to Derby Dam (RKM 23.5)	adults	**Spawning** - Historical spawning occurred above the Derby Dam, none known to occur currently[1] **Foraging** - Potentially occurs where suitable forage is present[1]	[1] Savoy and Benway 2006 in SSSRT 2010
Long Island Sound (CT/NY)	Full length of Long Island Sound in nearshore coastal waters	adults	**Foraging** - Potentially occurs where suitable forage is present[1]	[1] Savoy 2004 in SSSRT 2010
East River (NY)	Full length of the East River	transient adults undocumented, but assumed based on detections of Atlantic sturgeon and occasional movements of shortnose sturgeon from Hudson River to Connecticut River	**Foraging** - Potentially occurs where suitable forage is present[1]	[1] Savoy 2004 in SSSRT 2010

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Body of Water (State)	Distribution/Range in Watershed	Life Stages Present	Use of the Watershed	References
Hudson River (NY/NJ)	Up to Troy Dam, NY (approximately RKM 246)	eggs, larvae, YOY, juveniles, and adults	**Spawning** - Documented from late March to early May when water temperatures reach 10°-18°C[1] from Coxsackie to below the Federal Dam at Troy[1][3] (RKM 190-246) **Rearing** - Eggs on the spawning grounds; larvae downstream to at least RKM 104; YOY downstream to at least RKM 64[1] **Foraging** - Throughout the Hudson River (RKM 38-175) [3][4] with concentrations in Haverstraw Bay[1] (RKM 56-64) **Overwintering** - Late fall to early spring[3]; largest area (mainly spawning adults) near Kingston[2] (RKM 137-149); smaller overwintering areas are located from Saugerties to Hyde Park[2] (RKM 123-170) and in the Croton-Haverstraw Bay area[2] (RKM 54-61); many juveniles overwinter in the lower river[1] (RKM 0-64)	[1] Dovel et al. 1992; [2] Geoghegan et al. 1992; [3] Bain 1997; [4] Pendleton et al. 2018

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Body of Water (State)	Distribution/Range in Watershed	Life Stages Present	Use of the Watershed	References
Delaware River and Bay (NJ/DE/PA)	Up to Lambertville, PA (RKM 240)	eggs, larvae, YOY, juveniles, and adults	**Spawning** - Documented from late March through late May; water temperatures 6-18°C; between Trenton and Lambertville[6] (RKM 214-238) **Rearing** - Eggs and larvae between Trenton and Lambertville[6] (RKM 214-238); juveniles located upstream of the salt wedge from Wilmington to Philadelphia[3] (RKM 114-148) **Foraging** - Throughout the river, between the vicinity of Trenton south to Artificial Island[7] (RKM 79) **Overwintering** - November to March[1]; overwinter when waters reach 10°C (typically mid-November)[2]; many adults concentrate from RKM 190-212[1][4], but occur downstream below Wilmington[4] (RKM 116); juveniles overwinter from Philadelphia to below Artificial Island[5] (RKM 70-154); variety of behaviors from sedentary to active[6]	[1] O'Herron et al. 1993; [2] USGS gauge at Philadelphia (01467200) during the 2003-2008 time period; [3] Burton et al. 2005; [4] ERC 2006; [5] Brundage and O'Herron 2009; [6] ERC 2009; [7] SSSRT 2010
Schuylkill River (PA), tributary of the Delaware River	Up to Fairmount Dam (RKM 13.6)	juveniles and adults	**Foraging** - Potentially occurs where suitable forage is present[1]	[1] Philadelphia Water Department November 7, 2014 (http://www.phillywatersheds.org/endangered-shortnose-sturgeon-returns-schuylkill)
C&D Canal (DE/MD)	Used at least occasionally to move from Chesapeake Bay to the Delaware River	adults	**Foraging** - Assumed to occur in areas with suitable forage[1]	[1] Welsh et al. 2002
Chesapeake Bay (MD/VA)	Maryland and Virigina waters of mainstem bay and tidal tributaries including those specifically listed below.	adults documented; other life stage presence unknown	**Foraging, Resting, and Overwintering** - Assumed to occur in areas with suitable forage [1][2]	[1] SSSRT 2010; [2] Balazik 2017

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Susquehanna River (MD)	Up to Conowingo Dam (RKM 16)	adults documented; other life stages assumed but unknown	**Spawning** - Historically occurred; currently unknown as suitability of habitat is likely impacted by dam operations[1] **Foraging** - Assumed to occur in areas with suitable forage[2] **Overwintering** - Not documented but assumed based on anecdotal reports of aggregations of sturgeon in deep holes near Lapidum and Perrysville[2]	[1] Litwiler 2001; [2] SSSRT 2010
Potomac River (MD/VA)	Up to Little Falls Dam (RKM 189)	adults documented; other life stages assumed but unknown	**Spawning** - Historically occurred; current spawning not documented but assumed based on presence of pre-spawning females and suitable habitat at RKM 185-187[1] **Rearing** - Eggs expected at RKM 185-187, larvae would be present downstream in freshwater[1] **Foraging** - Mainly in the deepwater channel from RKM 63-141[1][2] **Overwintering** - Near Mattawoman Creek; saltwater/freshwater reach near Craney Island [1][2] (RKM 63-141)	[1] Kynard et al. 2007; [2] Kynard et al. 2009
Rappahannock River (VA)	Range not confirmed, but they have been documented in this river (likely throughout the entire river)	adults	**Foraging** - Potentially occurs where suitable forage is present; one was captured in May 1998[1]	[1] Spells 1998
York River (VA)	Range unknown (potentially throughout the river and tributaries)	adults	**Foraging** - Potentially occurs where suitable forage is present [1]	[1] Balazik, pers. comm., June 7, 2018

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James River (VA)	Range not confirmed, but likely up to Boshers Dam (RKM 182.3)	adults	**Foraging/Spawning** - Foraging potentially occurs where suitable forage is present; a sturgeon, possibly from the Potomac or Delaware River, was captured on March 13, 2016, at RKM 48[1]; on February 2018, a second sturgeon (a confirmed gravid female) was captured near RKM 48[2] (genetics results not yet available); spawning area unknown; the salinity at RKM 48 is usually low (brackish).	[1] Balazik 2017; [2] Balazik, pers. comm., February 10, 2018

Listing rule: 32 FR 4001, March 11, 1967; **Recovery plan**: NMFS 1998. Available online: http://www.nmfs.noaa.gov/pr/pdfs/recovery/sturgeon_shortnose.pdf

June 7, 2019

GARFO Species List

(Proceed to page 2 for complete reference list)

Whales:

North Atlantic right whale (*Eubalaena glacialis*)(73 FR 12024; Recovery plan: NMFS 2005)
Fin whale (*Balaenoptera physalus*)(35 FR 18319; Recovery plan: NMFS 2010a)
Sei whale (*Balaenoptera borealis*)(35 FR 18319; Recovery plan: NMFS 2011)
Sperm whale (*Physeter macrocephalus*)(35 FR 18319; Recovery plan: NMFS 2010b)
Blue whale (*Balaenoptera musculus*)(35 FR 18319; Recovery plan: NMFS 1998b)

Sea Turtles:

Loggerhead turtle (*Caretta caretta*)(76 FR 58868; Recovery plan: NMFS & USFWS 2008) [1]
Leatherback turtle (*Dermochelys coriacea*)(35 FR 8491; Recovery plan: NMFS & USFWS 1992a)
Green turtle (*Chelonia mydas*)(81 FR 20057; Recovery plan: NMFS & USFWS 1991) [2]
Kemp's ridley turtle (*Lepidochelys kempii*)(35 FR 18319; Recovery plan: NMFS *et al.* 2011)
Hawksbill turtle (*Eretmochelys imbricata*)(35 FR 8491; Recovery plan: NMFS & USFWS 1992b)

Fish:

Shortnose sturgeon (*Acipenser brevirostrum*)(32 FR 4001; Recovery plan: NMFS 1998a)
Atlantic sturgeon (*Acipenser oxyrinchus oxyrinchus*)(77 FR 5880 and 77 FR 5914)[3]
Atlantic salmon (*Salmo salar*)(74 FR 29344; Recovery plan: NMFS & USFWS 2019)[4]

Critical Habitat:

North Atlantic right whale (81 FR 4837)
Loggerhead turtle (79 FR 4837)
Atlantic sturgeon (82 FR 39160)
Atlantic salmon (74 FR 29300)

[1] For loggerhead turtles, only the Northwest Atlantic Distinct Population Segment (DPS) occurs in the Greater Atlantic Region
[2] For green turtles, only the North Atlantic DPS occurs in the Greater Atlantic Region
[3] For Atlantic sturgeon, there are five listed DPSs that may occur in the Greater Atlantic Region: (1) Gulf of Maine, (2) New York Bight, (3) Chesapeake Bay, (4) Carolina, and (5) South Atlantic
[4] For Atlantic salmon, there is one listed DPS: the Gulf of Maine DPS

ESA Listing Rules:

North Atlantic right whale:
(73 FR 12024; March 6, 2008)

Fin, Sei, Sperm, and Blue whales:
(35 FR 18319; December 2, 1970)

Loggerhead turtle:
(76 FR 58868; September 20, 2011)

Leatherback turtle:
(35 FR 8491; June 2, 1970)

Green turtle:
(81 FR 20057; April 6, 2016)

Kemp's ridley and Hawksbill turtles:
(35 FR 18319; December 2, 1970)

Shortnose sturgeon:
(32 FR 4001; March 8, 1967)

Atlantic sturgeon:
(77 FR 5880; February 6, 2012)
(77 FR 5914; February 6, 2012)

Atlantic salmon:
(74 FR 29344; June 19, 2009)

Species Recovery Plans:

National Marine Fisheries Service (NMFS). (1998a). Final Recovery Plan for the Shortnose Sturgeon (*Acipenser brevirostrum*).

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National Marine Fisheries Service (NMFS). (2010b). Final Recovery Plan for the Sperm Whale (*Physeter macrocephalus)*.

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National Marine Fisheries Service (NMFS), and U.S. Fish and Wildlife Service (USFWS). (1991). Recovery Plan for U.S. Population of Atlantic Green Turtle (*Chelonia mydas*).

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APPENDIX E

National Register of Historic Places and
Massachusetts Historical Commission Documentation

Massachusetts Historical Commission

William Francis Galvin, Secretary of the Commonwealth

Massachusetts Cultural Resource Information System

MACRIS

Scanned forms and photos now available for selected towns!

The Massachusetts Cultural Resource Information System (MACRIS) allows you to search the Massachusetts Historical Commission database for information on historic properties and areas in the Commonwealth.

Users of the database should keep in mind that it does not include information on all historic properties and areas in Massachusetts, nor does it reflect all the information on file on historic properties and areas at the Massachusetts Historical Commission.

Click here to begin your search of the MACRIS database.




Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Boston; Place: South Boston; Street Name: West Second St; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year
BOS.6883	Harris, James W. Double House	368-370 E St	Boston	c 1852
BOS.7122	Ipswich Hosiery Mill	154 West Second St	Boston	1912
BOS.7124	Lawrence, William R. Row House	161 West Second St	Boston	c 1852
BOS.7125	Lawrence, William R. Row House	163 West Second St	Boston	c 1852
BOS.7126	Lawrence, William R. Row House	165 West Second St	Boston	c 1852
BOS.7127	Lawrence, William R. Row House	167 West Second St	Boston	c 1852
BOS.6848	Boston Beer Company	249 West Second St	Boston	c 1882
BOS.7123	Hersey Brothers Machinery Manufacturing Company	314-330 West Second St	Boston	c 1899

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

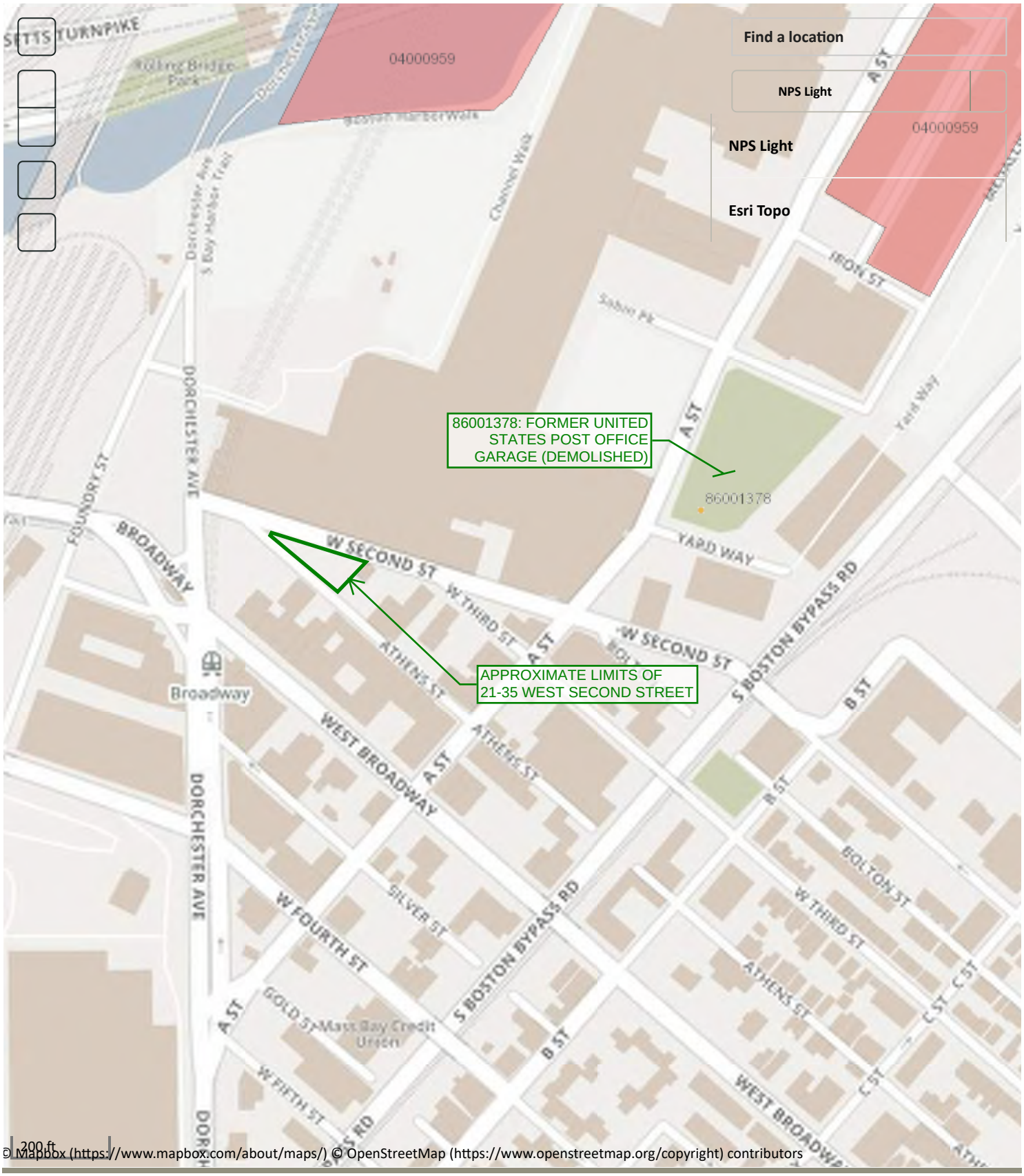
Search Criteria: Town(s): Boston; Place: South Boston; Street Name: Athens St; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year
BOS.6818	Boston Fire Department Hose Company #9	116 B St	Boston	1860
BOS.6882	Fletcher, Henry W. Double House	336-338 E St	Boston	c 1852

National Register of Histori...

National Park Service
U.S. Department of the Interior

Public, non-restricted data depicting National Register spatial data proce...



APPENDIX F

Laboratory Data Reports

ANALYTICAL REPORT

Lab Number:	L1910844
Client:	Haley & Aldrich, Inc. 465 Medford Street, Suite 2200 Charlestown, MA 02129-1400
ATTN:	Lee Vanzler
Phone:	(617) 886-7561
Project Name:	ZERO ATHENS ST.
Project Number:	132190-003
Report Date:	03/25/19

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: ZERO ATHENS ST.
Project Number: 132190-003

Lab Number: L1910844
Report Date: 03/25/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1910844-01	HA19-3 (OW)	WATER	SOUTH BOSTON, MA	03/19/19 09:25	03/19/19
L1910844-02	HA19-2 (OW)	WATER	SOUTH BOSTON, MA	03/19/19 10:55	03/19/19
L1910844-03	HA19-1 (OW)	WATER	SOUTH BOSTON, MA	03/19/19 12:20	03/19/19

Project Name:	ZERO ATHENS ST.	**Lab Number:**	L1910844
Project Number:	132190-003	**Report Date:**	03/25/19

MADEP MCP Response Action Analytical Report Certification

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

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

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

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

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

Project Name:	ZERO ATHENS ST.	**Lab Number:**	L1910844
Project Number:	132190-003	**Report Date:**	03/25/19

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:	ZERO ATHENS ST.	**Lab Number:**	L1910844
Project Number:	132190-003	**Report Date:**	03/25/19

Case Narrative (continued)

MCP Related Narratives

Volatile Organics

In reference to question H:

The initial calibration, associated with L1910844-01 through -03 (all submitted samples), did not meet the method required minimum response factor on the lowest calibration standard for 1,4-dioxane (0.0021), as well as the average response factor for 1,4-dioxane.

The continuing calibration standard, associated with L1910844-01 through -03 (all submitted samples), is outside the acceptance criteria for several compounds; however, it is within overall method allowances. A copy of the continuing calibration standard is included as an addendum to this report.

EPH

In reference to question I:

All samples were analyzed for a subset of MCP analytes per client request.

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: 03/25/19

QC OUTLIER SUMMARY REPORT

Project Name: ZERO ATHENS ST.
Project Number: 132190-003

Lab Number: L1910844
Report Date: 03/25/19

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment

There are no QC Outliers associated with this report.

ORGANICS

VOLATILES

Project Name: ZERO ATHENS ST. **Lab Number:** L1910844

Project Number: 132190-003 **Report Date:** 03/25/19

SAMPLE RESULTS

Lab ID: L1910844-01 Date Collected: 03/19/19 09:25
Client ID: HA19-3 (OW) Date Received: 03/19/19
Sample Location: SOUTH BOSTON, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 03/22/19 12:19
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1

Project Name: ZERO ATHENS ST. **Lab Number:** L1910844

Project Number: 132190-003 **Report Date:** 03/25/19

SAMPLE RESULTS

Lab ID: L1910844-01 Date Collected: 03/19/19 09:25

Client ID: HA19-3 (OW) Date Received: 03/19/19

Sample Location: SOUTH BOSTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	ND		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	ND		ug/l	1.0	--	1
1,2-Dichloroethene, Total	ND		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	26		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
Methyl ethyl ketone	ND		ug/l	5.0	--	1
Methyl isobutyl ketone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1

Project Name: ZERO ATHENS ST. **Lab Number:** L1910844

Project Number: 132190-003 **Report Date:** 03/25/19

SAMPLE RESULTS

Lab ID: L1910844-01 Date Collected: 03/19/19 09:25

Client ID: HA19-3 (OW) Date Received: 03/19/19

Sample Location: SOUTH BOSTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Diethyl ether	ND		ug/l	2.0	--	1
Diisopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	112		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	109		70-130

Project Name: ZERO ATHENS ST. **Lab Number:** L1910844

Project Number: 132190-003 **Report Date:** 03/25/19

SAMPLE RESULTS

Lab ID: L1910844-02 Date Collected: 03/19/19 10:55
Client ID: HA19-2 (OW) Date Received: 03/19/19
Sample Location: SOUTH BOSTON, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 03/22/19 12:49
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	ND		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1

Project Name: ZERO ATHENS ST. **Lab Number:** L1910844

Project Number: 132190-003 **Report Date:** 03/25/19

SAMPLE RESULTS

Lab ID: L1910844-02 Date Collected: 03/19/19 10:55

Client ID: HA19-2 (OW) Date Received: 03/19/19

Sample Location: SOUTH BOSTON, MA Field Prep: Not Specified

Sample Depth:

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

Project Name: ZERO ATHENS ST. **Lab Number:** L1910844

Project Number: 132190-003 **Report Date:** 03/25/19

SAMPLE RESULTS

Lab ID: L1910844-02 Date Collected: 03/19/19 10:55

Client ID: HA19-2 (OW) Date Received: 03/19/19

Sample Location: SOUTH BOSTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Diethyl ether	ND		ug/l	2.0	--	1
Diisopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	111		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	111		70-130

Project Name: ZERO ATHENS ST. **Lab Number:** L1910844

Project Number: 132190-003 **Report Date:** 03/25/19

SAMPLE RESULTS

Lab ID: L1910844-03 Date Collected: 03/19/19 12:20
Client ID: HA19-1 (OW) Date Received: 03/19/19
Sample Location: SOUTH BOSTON, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 03/22/19 13:19
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	2.5		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1

Project Name: ZERO ATHENS ST. **Lab Number:** L1910844

Project Number: 132190-003 **Report Date:** 03/25/19

SAMPLE RESULTS

Lab ID: L1910844-03 Date Collected: 03/19/19 12:20

Client ID: HA19-1 (OW) Date Received: 03/19/19

Sample Location: SOUTH BOSTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	92		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	13		ug/l	1.0	--	1
1,2-Dichloroethene, Total	13		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
Methyl ethyl ketone	ND		ug/l	5.0	--	1
Methyl isobutyl ketone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1

Project Name: ZERO ATHENS ST. **Lab Number:** L1910844

Project Number: 132190-003 **Report Date:** 03/25/19

SAMPLE RESULTS

Lab ID: L1910844-03 Date Collected: 03/19/19 12:20

Client ID: HA19-1 (OW) Date Received: 03/19/19

Sample Location: SOUTH BOSTON, MA Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Diethyl ether	ND		ug/l	2.0	--	1
Diisopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	111		70-130
Dibromofluoromethane	106		70-130

Project Name: ZERO ATHENS ST. **Lab Number:** L1910844

Project Number: 132190-003 **Report Date:** 03/25/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 03/22/19 05:09
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-03 Batch: WG1218370-5					
Methylene chloride	ND		ug/l	2.0	--
1,1-Dichloroethane	ND		ug/l	1.0	--
Chloroform	ND		ug/l	1.0	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,2-Dichloropropane	ND		ug/l	1.0	--
Dibromochloromethane	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.0	--
Tetrachloroethene	ND		ug/l	1.0	--
Chlorobenzene	ND		ug/l	1.0	--
Trichlorofluoromethane	ND		ug/l	2.0	--
1,2-Dichloroethane	ND		ug/l	1.0	--
1,1,1-Trichloroethane	ND		ug/l	1.0	--
Bromodichloromethane	ND		ug/l	1.0	--
trans-1,3-Dichloropropene	ND		ug/l	0.40	--
cis-1,3-Dichloropropene	ND		ug/l	0.40	--
1,3-Dichloropropene, Total	ND		ug/l	0.40	--
1,1-Dichloropropene	ND		ug/l	2.0	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--
Benzene	ND		ug/l	0.50	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Chloromethane	ND		ug/l	2.0	--
Bromomethane	ND		ug/l	2.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	2.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
trans-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--

Project Name: ZERO ATHENS ST. **Lab Number:** L1910844

Project Number: 132190-003 **Report Date:** 03/25/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 03/22/19 05:09
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-03 Batch: WG1218370-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	--
1,3-Dichlorobenzene	ND		ug/l	1.0	--
1,4-Dichlorobenzene	ND		ug/l	1.0	--
Methyl tert butyl ether	ND		ug/l	2.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-Xylene	ND		ug/l	1.0	--
Xylenes, Total	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
1,2-Dichloroethene, Total	ND		ug/l	1.0	--
Dibromomethane	ND		ug/l	2.0	--
1,2,3-Trichloropropane	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	2.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	2.0	--
Methyl ethyl ketone	ND		ug/l	5.0	--
Methyl isobutyl ketone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.0	--
Tetrahydrofuran	ND		ug/l	2.0	--
2,2-Dichloropropane	ND		ug/l	2.0	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--
Bromobenzene	ND		ug/l	2.0	--
n-Butylbenzene	ND		ug/l	2.0	--
sec-Butylbenzene	ND		ug/l	2.0	--
tert-Butylbenzene	ND		ug/l	2.0	--
o-Chlorotoluene	ND		ug/l	2.0	--

Project Name: ZERO ATHENS ST. **Lab Number:** L1910844

Project Number: 132190-003 **Report Date:** 03/25/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 03/22/19 05:09
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01-03 Batch: WG1218370-5					
p-Chlorotoluene	ND		ug/l	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--
Hexachlorobutadiene	ND		ug/l	0.60	--
Isopropylbenzene	ND		ug/l	2.0	--
p-Isopropyltoluene	ND		ug/l	2.0	--
Naphthalene	ND		ug/l	2.0	--
n-Propylbenzene	ND		ug/l	2.0	--
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--
Diethyl ether	ND		ug/l	2.0	--
Diisopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	108		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	112		70-130
Dibromofluoromethane	108		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: ZERO ATHENS ST.
Project Number: 132190-003

Lab Number: L1910844
Report Date: 03/25/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-03 Batch: WG1218370-3 WG1218370-4								
Methylene chloride	94		85		70-130	10		20
1,1-Dichloroethane	110		98		70-130	12		20
Chloroform	110		98		70-130	12		20
Carbon tetrachloride	110		95		70-130	15		20
1,2-Dichloropropane	110		100		70-130	10		20
Dibromochloromethane	100		99		70-130	1		20
1,1,2-Trichloroethane	110		100		70-130	10		20
Tetrachloroethene	110		100		70-130	10		20
Chlorobenzene	110		100		70-130	10		20
Trichlorofluoromethane	100		92		70-130	8		20
1,2-Dichloroethane	120		110		70-130	9		20
1,1,1-Trichloroethane	110		96		70-130	14		20
Bromodichloromethane	110		100		70-130	10		20
trans-1,3-Dichloropropene	100		96		70-130	4		20
cis-1,3-Dichloropropene	100		96		70-130	4		20
1,1-Dichloropropene	110		99		70-130	11		20
Bromoform	100		100		70-130	0		20
1,1,2,2-Tetrachloroethane	110		100		70-130	10		20
Benzene	100		93		70-130	7		20
Toluene	110		98		70-130	12		20
Ethylbenzene	110		100		70-130	10		20
Chloromethane	92		83		70-130	10		20
Bromomethane	98		89		70-130	10		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: ZERO ATHENS ST.
Project Number: 132190-003

Lab Number: L1910844
Report Date: 03/25/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-03 Batch: WG1218370-3 WG1218370-4								
Vinyl chloride	100		91		70-130	9		20
Chloroethane	100		94		70-130	6		20
1,1-Dichloroethene	95		88		70-130	8		20
trans-1,2-Dichloroethene	94		85		70-130	10		20
Trichloroethene	110		99		70-130	11		20
1,2-Dichlorobenzene	110		100		70-130	10		20
1,3-Dichlorobenzene	110		100		70-130	10		20
1,4-Dichlorobenzene	100		95		70-130	5		20
Methyl tert butyl ether	92		85		70-130	8		20
p/m-Xylene	105		100		70-130	5		20
o-Xylene	105		100		70-130	5		20
cis-1,2-Dichloroethene	99		90		70-130	10		20
Dibromomethane	110		100		70-130	10		20
1,2,3-Trichloropropane	110		100		70-130	10		20
Styrene	105		95		70-130	10		20
Dichlorodifluoromethane	88		78		70-130	12		20
Acetone	120		110		70-130	9		20
Carbon disulfide	99		89		70-130	11		20
Methyl ethyl ketone	110		110		70-130	0		20
Methyl isobutyl ketone	100		92		70-130	8		20
2-Hexanone	98		93		70-130	5		20
Bromochloromethane	110		97		70-130	13		20
Tetrahydrofuran	100		94		70-130	6		20

Lab Control Sample Analysis
Batch Quality Control

Project Name: ZERO ATHENS ST.
Project Number: 132190-003

Lab Number: L1910844
Report Date: 03/25/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-03 Batch: WG1218370-3 WG1218370-4								
2,2-Dichloropropane	110		98		70-130	12		20
1,2-Dibromoethane	100		95		70-130	5		20
1,3-Dichloropropane	110		100		70-130	10		20
1,1,1,2-Tetrachloroethane	100		100		70-130	0		20
Bromobenzene	110		100		70-130	10		20
n-Butylbenzene	91		83		70-130	9		20
sec-Butylbenzene	110		99		70-130	11		20
tert-Butylbenzene	110		97		70-130	13		20
o-Chlorotoluene	120		110		70-130	9		20
p-Chlorotoluene	100		94		70-130	6		20
1,2-Dibromo-3-chloropropane	93		93		70-130	0		20
Hexachlorobutadiene	96		84		70-130	13		20
Isopropylbenzene	110		100		70-130	10		20
p-Isopropyltoluene	96		86		70-130	11		20
Naphthalene	73		72		70-130	1		20
n-Propylbenzene	110		100		70-130	10		20
1,2,3-Trichlorobenzene	85		78		70-130	9		20
1,2,4-Trichlorobenzene	82		78		70-130	5		20
1,3,5-Trimethylbenzene	89		82		70-130	8		20
1,2,4-Trimethylbenzene	85		77		70-130	10		20
Diethyl ether	99		91		70-130	8		20
Diisopropyl Ether	110		100		70-130	10		20
Ethyl-Tert-Butyl-Ether	100		98		70-130	2		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: ZERO ATHENS ST.

Project Number: 132190-003

Lab Number: L1910844

Report Date: 03/25/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01-03 Batch: WG1218370-3 WG1218370-4								
Tertiary-Amyl Methyl Ether	100		94		70-130	6		20
1,4-Dioxane	130		116		70-130	11		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	105		105		70-130
Toluene-d8	102		103		70-130
4-Bromofluorobenzene	96		97		70-130
Dibromofluoromethane	106		105		70-130

PETROLEUM HYDROCARBONS

Project Name: ZERO ATHENS ST. **Lab Number:** L1910844

Project Number: 132190-003 **Report Date:** 03/25/19

SAMPLE RESULTS

Lab ID:	L1910844-01	Date Collected:	03/19/19 09:25
Client ID:	HA19-3 (OW)	Date Received:	03/19/19
Sample Location:	SOUTH BOSTON, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	98,EPH-04-1.1	Extraction Date:	03/21/19 02:08
Analytical Date:	03/23/19 14:39	Cleanup Method1:	EPH-04-1
Analyst:	DG	Cleanup Date1:	03/23/19

Quality Control Information

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	50		40-140
o-Terphenyl	65		40-140
2-Fluorobiphenyl	78		40-140
2-Bromonaphthalene	78		40-140

Project Name: ZERO ATHENS ST. **Lab Number:** L1910844

Project Number: 132190-003 **Report Date:** 03/25/19

SAMPLE RESULTS

Lab ID:	L1910844-02	Date Collected:	03/19/19 10:55
Client ID:	HA19-2 (OW)	Date Received:	03/19/19
Sample Location:	SOUTH BOSTON, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	98,EPH-04-1.1	Extraction Date:	03/21/19 02:08
Analytical Date:	03/23/19 15:11	Cleanup Method1:	EPH-04-1
Analyst:	DG	Cleanup Date1:	03/23/19

Quality Control Information

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	62		40-140
o-Terphenyl	63		40-140
2-Fluorobiphenyl	77		40-140
2-Bromonaphthalene	77		40-140

Project Name: ZERO ATHENS ST. **Lab Number:** L1910844

Project Number: 132190-003 **Report Date:** 03/25/19

SAMPLE RESULTS

Lab ID:	L1910844-03	Date Collected:	03/19/19 12:20
Client ID:	HA19-1 (OW)	Date Received:	03/19/19
Sample Location:	SOUTH BOSTON, MA	Field Prep:	Not Specified
Sample Depth:			
Matrix:	Water	Extraction Method:	EPA 3510C
Analytical Method:	98,EPH-04-1.1	Extraction Date:	03/21/19 02:08
Analytical Date:	03/23/19 15:42	Cleanup Method1:	EPH-04-1
Analyst:	DG	Cleanup Date1:	03/23/19

Quality Control Information

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

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Extractable Petroleum Hydrocarbons - Westborough Lab						
C9-C18 Aliphatics	ND		ug/l	100	--	1
C19-C36 Aliphatics	ND		ug/l	100	--	1
C11-C22 Aromatics	ND		ug/l	100	--	1
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	59		40-140
o-Terphenyl	66		40-140
2-Fluorobiphenyl	78		40-140
2-Bromonaphthalene	78		40-140

Project Name: ZERO ATHENS ST.
Project Number: 132190-003
Lab Number: L1910844
Report Date: 03/25/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 98,EPH-04-1.1
Analytical Date: 03/23/19 12:01
Analyst: DG

Extraction Method: EPA 3510C
Extraction Date: 03/21/19 02:08
Cleanup Method: EPH-04-1
Cleanup Date: 03/23/19

Parameter	Result	Qualifier	Units	RL	MDL
Extractable Petroleum Hydrocarbons - Westborough Lab for sample(s): 01-03 Batch: WG1217826-1					
C9-C18 Aliphatics	ND		ug/l	100	--
C19-C36 Aliphatics	ND		ug/l	100	--
C11-C22 Aromatics	ND		ug/l	100	--
C11-C22 Aromatics, Adjusted	ND		ug/l	100	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Chloro-Octadecane	74		40-140
o-Terphenyl	66		40-140
2-Fluorobiphenyl	72		40-140
2-Bromonaphthalene	72		40-140

Lab Control Sample Analysis
Batch Quality Control

Project Name: ZERO ATHENS ST.
Project Number: 132190-003

Lab Number: L1910844
Report Date: 03/25/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-03 Batch: WG1217826-2 WG1217826-3								
C9-C18 Aliphatics	64		62		40-140	3		25
C19-C36 Aliphatics	83		81		40-140	2		25
C11-C22 Aromatics	66		67		40-140	2		25
Naphthalene	49		50		40-140	2		25
2-Methylnaphthalene	50		51		40-140	2		25
Acenaphthylene	54		55		40-140	2		25
Acenaphthene	56		57		40-140	2		25
Fluorene	59		60		40-140	2		25
Phenanthrene	65		64		40-140	2		25
Anthracene	66		66		40-140	0		25
Fluoranthene	68		67		40-140	1		25
Pyrene	68		68		40-140	0		25
Benzo(a)anthracene	68		68		40-140	0		25
Chrysene	68		68		40-140	0		25
Benzo(b)fluoranthene	68		68		40-140	0		25
Benzo(k)fluoranthene	68		68		40-140	0		25
Benzo(a)pyrene	65		66		40-140	2		25
Indeno(1,2,3-cd)Pyrene	66		66		40-140	0		25
Dibenzo(a,h)anthracene	66		67		40-140	2		25
Benzo(ghi)perylene	62		62		40-140	0		25
Nonane (C9)	43		40		30-140	7		25
Decane (C10)	52		50		40-140	4		25
Dodecane (C12)	59		57		40-140	3		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: ZERO ATHENS ST.

Project Number: 132190-003

Lab Number: L1910844

Report Date: 03/25/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Extractable Petroleum Hydrocarbons - Westborough Lab Associated sample(s): 01-03 Batch: WG1217826-2 WG1217826-3								
Tetradecane (C14)	62		61		40-140	2		25
Hexadecane (C16)	69		67		40-140	3		25
Octadecane (C18)	78		74		40-140	5		25
Nonadecane (C19)	76		74		40-140	3		25
Eicosane (C20)	79		77		40-140	3		25
Docosane (C22)	80		78		40-140	3		25
Tetracosane (C24)	79		77		40-140	3		25
Hexacosane (C26)	79		77		40-140	3		25
Octacosane (C28)	79		77		40-140	3		25
Triacontane (C30)	79		77		40-140	3		25
Hexatriacontane (C36)	78		75		40-140	4		25

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Chloro-Octadecane	77		76		40-140
o-Terphenyl	68		68		40-140
2-Fluorobiphenyl	69		70		40-140
2-Bromonaphthalene	70		70		40-140
% Naphthalene Breakthrough	0		0		
% 2-Methylnaphthalene Breakthrough	0		0		

Project Name: ZERO ATHENS ST.
Project Number: 132190-003

Lab Number: L1910844
Report Date: 03/25/19

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1910844-01A	Vial HCl preserved	B	NA		3.2	Y	Absent		MCP-8260-10(14)
L1910844-01B	Vial HCl preserved	B	NA		3.2	Y	Absent		MCP-8260-10(14)
L1910844-01C	Vial HCl preserved	B	NA		3.2	Y	Absent		MCP-8260-10(14)
L1910844-01D	Amber 1000ml HCl preserved	B	<2	<2	3.2	Y	Absent		EPH-10(14)
L1910844-01E	Amber 1000ml HCl preserved	B	<2	<2	3.2	Y	Absent		EPH-10(14)
L1910844-02A	Vial HCl preserved	B	NA		3.2	Y	Absent		MCP-8260-10(14)
L1910844-02B	Vial HCl preserved	B	NA		3.2	Y	Absent		MCP-8260-10(14)
L1910844-02C	Vial HCl preserved	B	NA		3.2	Y	Absent		MCP-8260-10(14)
L1910844-02D	Amber 1000ml HCl preserved	B	<2	<2	3.2	Y	Absent		EPH-10(14)
L1910844-02E	Amber 1000ml HCl preserved	B	<2	<2	3.2	Y	Absent		EPH-10(14)
L1910844-03A	Vial HCl preserved	B	NA		3.2	Y	Absent		MCP-8260-10(14)
L1910844-03B	Vial HCl preserved	B	NA		3.2	Y	Absent		MCP-8260-10(14)
L1910844-03C	Vial HCl preserved	B	NA		3.2	Y	Absent		MCP-8260-10(14)
L1910844-03D	Amber 1000ml HCl preserved	B	<2	<2	3.2	Y	Absent		EPH-10(14)
L1910844-03E	Amber 1000ml HCl preserved	B	<2	<2	3.2	Y	Absent		EPH-10(14)

*Values in parentheses indicate holding time in days

Project Name:	ZERO ATHENS ST.	**Lab Number:**	L1910844
Project Number:	132190-003	**Report Date:**	03/25/19

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.

MSD - Matrix Spike Sample Duplicate: Refer to MS.

NA - Not Applicable.

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

NDPA/DPA - N-Nitrosodiphenylamine/Diphenylamine.

NI - Not Ignitable.

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

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

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

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

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

TEF - Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.

TEQ - Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.

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

Footnotes

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

Report Format: Data Usability Report

original method.

Terms

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

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

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

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

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

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

Data Qualifiers

A - Spectra identified as "Aldol Condensation Product".

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

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

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

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

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

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

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

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

REFERENCES

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

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

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

EPA 6860: SCM: Perchlorate

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

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

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

Westborough Facility:

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

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

Mansfield Facility:

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

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

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

CHAIN OF CUSTODY

ALPHA ANALYTICAL

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: 3/19/19

ALPHA Job #: L1910844

Project Information
- Project Name: Zero Athens St
- Project Location: South Boston, MA
- Project #: 132190-003
- (Use Project name as Project #)
- Project Manager: L. Vanzler
- 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:

Billing Information
- Same as Client Info
- PO #

H&A Information
- H&A Client:
- H&A Address: 465 Medford St
- Boston, MA 02129-1400
- H&A Phone: 617-886-7400
- H&A Email:
- H&A Email:

Regulatory Requirements (Program/Criteria)
- MA
- 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:

ANALYSIS
- VOC by 8260
- EPH C-Ranges only
- VPH

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

Sample Specific Comments

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	VOC by 8260	EPH C-Ranges only	VPH	Total # Bottles
10844-01	HA19-3(DW)	3/19/19	0925	AQ	BMP	X	X		5
-02	HA19-2(DW)	3/19/19	1055	AQ	BMP	X	X		5
-03	HA19-1(DW)	3/19/19	1220	AQ	BMP	X	X		5

Preservative Code: A = None, B = HCl, C = HNO_3, D = H_2SO_4, E = NaOH, F = MeOH, G = NaHSO4, 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	AV	A							
Preservative	B	B							

Relinquished By:	Date/Time	Received By:	Date/Time
	3-19-19		3/19/19 16:10
	3/19/19 1746		3/19/19 17:17
	3/19/19 17:40		3/19/19 1840

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)

Method Blank Summary
Form 4
Volatiles

Client	: Haley & Aldrich, Inc.	**Lab Number**	: L1910844
Project Name	: ZERO ATHENS ST.	**Project Number**	: 132190-003
Lab Sample ID	: WG1218370-5	**Lab File ID**	: VQ190322A04
Instrument ID	: QUIMBY		
Matrix	: WATER	**Analysis Date**	: 03/22/19 05:09

Client Sample No.	Lab Sample ID	Analysis Date
WG1218370-3LCS	WG1218370-3	03/22/19 03:39
WG1218370-4LCSD	WG1218370-4	03/22/19 04:10
HA19-3 (OW)	L1910844-01	03/22/19 12:19
HA19-2 (OW)	L1910844-02	03/22/19 12:49
HA19-1 (OW)	L1910844-03	03/22/19 13:19

Calibration Verification Summary
Form 7
Volatiles

Client	: Haley & Aldrich, Inc.	**Lab Number**	: L1910844		
Project Name	: ZERO ATHENS ST.	**Project Number**	: 132190-003		
Instrument ID	: QUIMBY	**Calibration Date**	: 03/22/19 03:39		
Lab File ID	: VQ190322A01	**Init. Calib. Date(s)**	: 02/07/19	02/07/19	
Sample No	: WG1218370-2	**Init. Calib. Times**	: 05:30	09:02	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	104	0
Dichlorodifluoromethane	0.52	0.456	-	12.3	20	95	0
Chloromethane	0.869	0.796	-	8.4	20	96	0
Vinyl chloride	0.702	0.703	-	-0.1	20	103	0
Bromomethane	0.292	0.288	-	1.4	20	103	0
Chloroethane	0.408	0.429	-	-5.1	20	107	0
Trichlorofluoromethane	0.735	0.732	-	0.4	20	104	0
Ethyl ether	0.208	0.205	-	1.4	20	104	0
1,1-Dichloroethene	0.432	0.412	-	4.6	20	105	0
Carbon disulfide	1.34	1.33	-	0.7	20	105	0
Freon-113	0.394	0.45	-	-14.2	20	120	0
Methylene chloride	0.517	0.485	-	6.2	20	104	0
Acetone	10	12.422	-	-24.2*	20	123	0
trans-1,2-Dichloroethene	0.534	0.501	-	6.2	20	102	0
Methyl tert-butyl ether	1.073	0.989	-	7.8	20	98	0
Diisopropyl ether	2.161	2.43	-	-12.4	20	119	0
1,1-Dichloroethane	1.163	1.244	-	-7	20	112	0
Ethyl tert-butyl ether	1.72	1.817	-	-5.6	20	111	0
cis-1,2-Dichloroethene	0.573	0.569	-	0.7	20	107	0
2,2-Dichloropropane	0.936	1.006	-	-7.5	20	115	0
Bromochloromethane	0.187	0.202	-	-8	20	111	0
Chloroform	0.957	1.025	-	-7.1	20	114	0
Carbon tetrachloride	0.746	0.792	-	-6.2	20	115	0
Tetrahydrofuran	0.101	0.102	-	-1	20	109	0
Dibromofluoromethane	0.212	0.223	-	-5.2	20	111	0
1,1,1-Trichloroethane	0.884	0.943	-	-6.7	20	113	0
2-Butanone	0.137	0.155	-	-13.1	20	115	0
1,1-Dichloropropene	0.792	0.858	-	-8.3	20	113	0
Benzene	2.333	2.393	-	-2.6	20	109	0
tert-Amyl methyl ether	1.227	1.236	-	-0.7	20	106	0
1,2-Dichloroethane-d4	0.264	0.279	-	-5.7	20	113	0
1,2-Dichloroethane	0.641	0.75	-	-17	20	124	0
Trichloroethene	0.547	0.602	-	-10.1	20	116	0
Dibromomethane	0.231	0.249	-	-7.8	20	115	0
1,2-Dichloropropane	0.61	0.657	-	-7.7	20	114	0
Bromodichloromethane	0.683	0.73	-	-6.9	20	113	0
1,4-Dioxane	0.00197	0.00257*	-	-30.5*	20	139	-.01
cis-1,3-Dichloropropene	0.86	0.895	-	-4.1	20	110	0
Chlorobenzene-d5	1	1	-	0	20	106	0
Toluene-d8	1.411	1.443	-	-2.3	20	109	0
Toluene	2.011	2.137	-	-6.3	20	113	0
4-Methyl-2-pentanone	0.176	0.176	-	0	20	106	0
Tetrachloroethene	0.746	0.798	-	-7	20	116	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: Haley & Aldrich, Inc.	**Lab Number**	: L1910844		
Project Name	: ZERO ATHENS ST.	**Project Number**	: 132190-003		
Instrument ID	: QUIMBY	**Calibration Date**	: 03/22/19 03:39		
Lab File ID	: VQ190322A01	**Init. Calib. Date(s)**	: 02/07/19	02/07/19	
Sample No	: WG1218370-2	**Init. Calib. Times**	: 05:30	09:02	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
trans-1,3-Dichloropropene	1.036	1.057	-	-2	20	113	0
1,1,2-Trichloroethane	0.41	0.436	-	-6.3	20	117	0
Chlorodibromomethane	0.527	0.543	-	-3	20	111	0
1,3-Dichloropropane	0.897	0.952	-	-6.1	20	115	0
1,2-Dibromoethane	0.426	0.427	-	-0.2	20	107	0
2-Hexanone	0.296	0.292	-	1.4	20	101	0
Chlorobenzene	1.915	2.096	-	-9.5	20	116	0
Ethylbenzene	3.953	4.268	-	-8	20	116	0
1,1,1,2-Tetrachloroethane	0.669	0.704	-	-5.2	20	116	0
p/m Xylene	1.373	1.45	-	-5.6	20	113	0
o Xylene	1.262	1.342	-	-6.3	20	114	0
Styrene	2.034	2.122	-	-4.3	20	111	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	105	0
Bromoform	0.649	0.687	-	-5.9	20	110	0
Isopropylbenzene	7.983	9.099	-	-14	20	120	0
4-Bromofluorobenzene	1.204	1.16	-	3.7	20	101	0
Bromobenzene	1.573	1.731	-	-10	20	115	0
n-Propylbenzene	9.209	10.155	-	-10.3	20	119	0
1,1,2,2-Tetrachloroethane	1.075	1.198	-	-11.4	20	117	0
2-Chlorotoluene	5.748	6.648	-	-15.7	20	124	0
1,3,5-Trimethylbenzene	5.814	5.164	-	11.2	20	94	0
1,2,3-Trichloropropane	0.939	1.051	-	-11.9	20	117	0
4-Chlorotoluene	5.605	5.842	-	-4.2	20	114	0
tert-Butylbenzene	5.007	5.328	-	-6.4	20	116	0
1,2,4-Trimethylbenzene	5.336	4.515	-	15.4	20	89	0
sec-Butylbenzene	7.223	7.914	-	-9.6	20	120	0
p-Isopropyltoluene	5.859	5.604	-	4.4	20	104	0
1,3-Dichlorobenzene	2.864	3.101	-	-8.3	20	115	0
1,4-Dichlorobenzene	2.751	2.89	-	-5.1	20	112	0
n-Butylbenzene	5.292	4.807	-	9.2	20	98	0
1,2-Dichlorobenzene	2.438	2.68	-	-9.9	20	116	0
1,2-Dibromo-3-chloropropan	0.14	0.131	-	6.4	20	97	0
Hexachlorobutadiene	0.98	0.941	-	4	20	110	-.01
1,2,4-Trichlorobenzene	1.25	1.019	-	18.5	20	87	0
Naphthalene	1.739	1.269	-	27*	20	75	0
1,2,3-Trichlorobenzene	1.024	0.874	-	14.6	20	91	-.01

* Value outside of QC limits.

ANALYTICAL REPORT

Lab Number:	L1922956
Client:	Haley & Aldrich, Inc. 465 Medford Street, Suite 2200 Charlestown, MA 02129-1400
ATTN:	Lee Vanzler
Phone:	(617) 886-7561
Project Name:	O ATHENS ST.
Project Number:	132190-003
Report Date:	06/04/19

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: O ATHENS ST.
Project Number: 132190-003

Lab Number: L1922956
Report Date: 06/04/19

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1922956-01	HA19-1 (OW)	WATER	BOSTON	05/30/19 13:15	05/30/19

Project Name: O ATHENS ST. **Lab Number:** L1922956

Project Number: 132190-003 **Report Date:** 06/04/19

MADEP MCP Response Action Analytical Report Certification

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

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

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

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

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

Project Name:	O ATHENS ST.	**Lab Number:**	L1922956
Project Number:	132190-003	**Report Date:**	06/04/19

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: O ATHENS ST. **Lab Number:** L1922956
Project Number: 132190-003 **Report Date:** 06/04/19

Case Narrative (continued)

MCP Related Narratives

Volatile Organics

In reference to question H:

The initial calibration, associated with L1922956-01 (HA19-1 (OW)), did not meet the method required minimum response factor on the lowest calibration standard for 1,4-dioxane (0.0022), as well as the average response factor for 1,4-dioxane.

The continuing calibration standard, associated with L1922956-01 (HA19-1 (OW)), is outside the acceptance criteria for several compounds; however, it is within overall method allowances. A copy of the continuing calibration standard is included as an addendum to this report.

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: Amita Naik

Title: Technical Director/Representative Date: 06/04/19

QC OUTLIER SUMMARY REPORT

Project Name: O ATHENS ST.
Project Number: 132190-003

Lab Number: L1922956
Report Date: 06/04/19

Method	Client ID (Native ID)	Lab ID	Parameter	QC Type	Recovery/RPD (%)	QC Limits (%)	Associated Samples	Data Quality Assessment
MCP Volatile Organics - Westborough Lab								
8260C	Batch QC	WG1243174-3	Bromomethane	LCS	52	70-130	01	potential low bias
8260C	Batch QC	WG1243174-4	Bromomethane	LCSD	21	20	01	non-directional bias
8260C	Batch QC	WG1243174-4	Bromomethane	LCSD	64	70-130	01	potential low bias
8260C	Batch QC	WG1243174-4	Acetone	LCSD	22	20	01	non-directional bias

ORGANICS

VOLATILES

Project Name: O ATHENS ST. **Lab Number:** L1922956

Project Number: 132190-003 **Report Date:** 06/04/19

SAMPLE RESULTS

Lab ID: L1922956-01
Client ID: HA19-1 (OW)
Sample Location: BOSTON

Date Collected: 05/30/19 13:15
Date Received: 05/30/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 97,8260C
Analytical Date: 05/31/19 14:20
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Methylene chloride	ND		ug/l	2.0	--	1
1,1-Dichloroethane	ND		ug/l	1.0	--	1
Chloroform	ND		ug/l	1.0	--	1
Carbon tetrachloride	ND		ug/l	1.0	--	1
1,2-Dichloropropane	ND		ug/l	1.0	--	1
Dibromochloromethane	ND		ug/l	1.0	--	1
1,1,2-Trichloroethane	ND		ug/l	1.0	--	1
Tetrachloroethene	2.4		ug/l	1.0	--	1
Chlorobenzene	ND		ug/l	1.0	--	1
Trichlorofluoromethane	ND		ug/l	2.0	--	1
1,2-Dichloroethane	ND		ug/l	1.0	--	1
1,1,1-Trichloroethane	ND		ug/l	1.0	--	1
Bromodichloromethane	ND		ug/l	1.0	--	1
trans-1,3-Dichloropropene	ND		ug/l	0.40	--	1
cis-1,3-Dichloropropene	ND		ug/l	0.40	--	1
1,3-Dichloropropene, Total	ND		ug/l	0.40	--	1
1,1-Dichloropropene	ND		ug/l	2.0	--	1
Bromoform	ND		ug/l	2.0	--	1
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Benzene	ND		ug/l	0.50	--	1
Toluene	ND		ug/l	1.0	--	1
Ethylbenzene	ND		ug/l	1.0	--	1
Chloromethane	ND		ug/l	2.0	--	1
Bromomethane	ND		ug/l	2.0	--	1
Vinyl chloride	ND		ug/l	1.0	--	1
Chloroethane	ND		ug/l	2.0	--	1
1,1-Dichloroethene	ND		ug/l	1.0	--	1
trans-1,2-Dichloroethene	ND		ug/l	1.0	--	1

Project Name: O ATHENS ST. **Lab Number:** L1922956

Project Number: 132190-003 **Report Date:** 06/04/19

SAMPLE RESULTS

Lab ID: L1922956-01 Date Collected: 05/30/19 13:15

Client ID: HA19-1 (OW) Date Received: 05/30/19

Sample Location: BOSTON Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
Trichloroethene	100		ug/l	1.0	--	1
1,2-Dichlorobenzene	ND		ug/l	1.0	--	1
1,3-Dichlorobenzene	ND		ug/l	1.0	--	1
1,4-Dichlorobenzene	ND		ug/l	1.0	--	1
Methyl tert butyl ether	ND		ug/l	2.0	--	1
p/m-Xylene	ND		ug/l	2.0	--	1
o-Xylene	ND		ug/l	1.0	--	1
Xylenes, Total	ND		ug/l	1.0	--	1
cis-1,2-Dichloroethene	12		ug/l	1.0	--	1
1,2-Dichloroethene, Total	12		ug/l	1.0	--	1
Dibromomethane	ND		ug/l	2.0	--	1
1,2,3-Trichloropropane	ND		ug/l	2.0	--	1
Styrene	ND		ug/l	1.0	--	1
Dichlorodifluoromethane	ND		ug/l	2.0	--	1
Acetone	ND		ug/l	5.0	--	1
Carbon disulfide	ND		ug/l	2.0	--	1
Methyl ethyl ketone	ND		ug/l	5.0	--	1
Methyl isobutyl ketone	ND		ug/l	5.0	--	1
2-Hexanone	ND		ug/l	5.0	--	1
Bromochloromethane	ND		ug/l	2.0	--	1
Tetrahydrofuran	ND		ug/l	2.0	--	1
2,2-Dichloropropane	ND		ug/l	2.0	--	1
1,2-Dibromoethane	ND		ug/l	2.0	--	1
1,3-Dichloropropane	ND		ug/l	2.0	--	1
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--	1
Bromobenzene	ND		ug/l	2.0	--	1
n-Butylbenzene	ND		ug/l	2.0	--	1
sec-Butylbenzene	ND		ug/l	2.0	--	1
tert-Butylbenzene	ND		ug/l	2.0	--	1
o-Chlorotoluene	ND		ug/l	2.0	--	1
p-Chlorotoluene	ND		ug/l	2.0	--	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--	1
Hexachlorobutadiene	ND		ug/l	0.60	--	1
Isopropylbenzene	ND		ug/l	2.0	--	1
p-Isopropyltoluene	ND		ug/l	2.0	--	1
Naphthalene	ND		ug/l	2.0	--	1
n-Propylbenzene	ND		ug/l	2.0	--	1

Project Name: O ATHENS ST.
Lab Number: L1922956
Project Number: 132190-003
Report Date: 06/04/19

SAMPLE RESULTS

Lab ID: L1922956-01
Client ID: HA19-1 (OW)
Sample Location: BOSTON
Date Collected: 05/30/19 13:15
Date Received: 05/30/19
Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
MCP Volatile Organics - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--	1
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--	1
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--	1
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--	1
Diethyl ether	ND		ug/l	2.0	--	1
Diisopropyl Ether	ND		ug/l	2.0	--	1
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--	1
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--	1
1,4-Dioxane	ND		ug/l	250	--	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	96		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	99		70-130

Project Name: O ATHENS ST. **Lab Number:** L1922956

Project Number: 132190-003 **Report Date:** 06/04/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 05/31/19 08:46
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01 Batch: WG1243174-5					
Methylene chloride	ND		ug/l	2.0	--
1,1-Dichloroethane	ND		ug/l	1.0	--
Chloroform	ND		ug/l	1.0	--
Carbon tetrachloride	ND		ug/l	1.0	--
1,2-Dichloropropane	ND		ug/l	1.0	--
Dibromochloromethane	ND		ug/l	1.0	--
1,1,2-Trichloroethane	ND		ug/l	1.0	--
Tetrachloroethene	ND		ug/l	1.0	--
Chlorobenzene	ND		ug/l	1.0	--
Trichlorofluoromethane	ND		ug/l	2.0	--
1,2-Dichloroethane	ND		ug/l	1.0	--
1,1,1-Trichloroethane	ND		ug/l	1.0	--
Bromodichloromethane	ND		ug/l	1.0	--
trans-1,3-Dichloropropene	ND		ug/l	0.40	--
cis-1,3-Dichloropropene	ND		ug/l	0.40	--
1,3-Dichloropropene, Total	ND		ug/l	0.40	--
1,1-Dichloropropene	ND		ug/l	2.0	--
Bromoform	ND		ug/l	2.0	--
1,1,2,2-Tetrachloroethane	ND		ug/l	1.0	--
Benzene	ND		ug/l	0.50	--
Toluene	ND		ug/l	1.0	--
Ethylbenzene	ND		ug/l	1.0	--
Chloromethane	ND		ug/l	2.0	--
Bromomethane	ND		ug/l	2.0	--
Vinyl chloride	ND		ug/l	1.0	--
Chloroethane	ND		ug/l	2.0	--
1,1-Dichloroethene	ND		ug/l	1.0	--
trans-1,2-Dichloroethene	ND		ug/l	1.0	--
Trichloroethene	ND		ug/l	1.0	--

Project Name: O ATHENS ST. **Lab Number:** L1922956

Project Number: 132190-003 **Report Date:** 06/04/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 05/31/19 08:46
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01 Batch: WG1243174-5					
1,2-Dichlorobenzene	ND		ug/l	1.0	--
1,3-Dichlorobenzene	ND		ug/l	1.0	--
1,4-Dichlorobenzene	ND		ug/l	1.0	--
Methyl tert butyl ether	ND		ug/l	2.0	--
p/m-Xylene	ND		ug/l	2.0	--
o-Xylene	ND		ug/l	1.0	--
Xylenes, Total	ND		ug/l	1.0	--
cis-1,2-Dichloroethene	ND		ug/l	1.0	--
1,2-Dichloroethene, Total	ND		ug/l	1.0	--
Dibromomethane	ND		ug/l	2.0	--
1,2,3-Trichloropropane	ND		ug/l	2.0	--
Styrene	ND		ug/l	1.0	--
Dichlorodifluoromethane	ND		ug/l	2.0	--
Acetone	ND		ug/l	5.0	--
Carbon disulfide	ND		ug/l	2.0	--
Methyl ethyl ketone	ND		ug/l	5.0	--
Methyl isobutyl ketone	ND		ug/l	5.0	--
2-Hexanone	ND		ug/l	5.0	--
Bromochloromethane	ND		ug/l	2.0	--
Tetrahydrofuran	ND		ug/l	2.0	--
2,2-Dichloropropane	ND		ug/l	2.0	--
1,2-Dibromoethane	ND		ug/l	2.0	--
1,3-Dichloropropane	ND		ug/l	2.0	--
1,1,1,2-Tetrachloroethane	ND		ug/l	1.0	--
Bromobenzene	ND		ug/l	2.0	--
n-Butylbenzene	ND		ug/l	2.0	--
sec-Butylbenzene	ND		ug/l	2.0	--
tert-Butylbenzene	ND		ug/l	2.0	--
o-Chlorotoluene	ND		ug/l	2.0	--

Project Name: O ATHENS ST. **Lab Number:** L1922956

Project Number: 132190-003 **Report Date:** 06/04/19

Method Blank Analysis
Batch Quality Control

Analytical Method: 97,8260C
Analytical Date: 05/31/19 08:46
Analyst: MKS

Parameter	Result	Qualifier	Units	RL	MDL
MCP Volatile Organics - Westborough Lab for sample(s): 01 Batch: WG1243174-5					
p-Chlorotoluene	ND		ug/l	2.0	--
1,2-Dibromo-3-chloropropane	ND		ug/l	2.0	--
Hexachlorobutadiene	ND		ug/l	0.60	--
Isopropylbenzene	ND		ug/l	2.0	--
p-Isopropyltoluene	ND		ug/l	2.0	--
Naphthalene	ND		ug/l	2.0	--
n-Propylbenzene	ND		ug/l	2.0	--
1,2,3-Trichlorobenzene	ND		ug/l	2.0	--
1,2,4-Trichlorobenzene	ND		ug/l	2.0	--
1,3,5-Trimethylbenzene	ND		ug/l	2.0	--
1,2,4-Trimethylbenzene	ND		ug/l	2.0	--
Diethyl ether	ND		ug/l	2.0	--
Diisopropyl Ether	ND		ug/l	2.0	--
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	--
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	--
1,4-Dioxane	ND		ug/l	250	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	93		70-130
Toluene-d8	100		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	100		70-130

Lab Control Sample Analysis
Batch Quality Control

Project Name: O ATHENS ST.
Project Number: 132190-003

Lab Number: L1922956
Report Date: 06/04/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1243174-3 WG1243174-4								
Methylene chloride	100		97		70-130	3		20
1,1-Dichloroethane	93		91		70-130	2		20
Chloroform	92		94		70-130	2		20
Carbon tetrachloride	88		91		70-130	3		20
1,2-Dichloropropane	88		88		70-130	0		20
Dibromochloromethane	84		88		70-130	5		20
1,1,2-Trichloroethane	88		91		70-130	3		20
Tetrachloroethene	99		100		70-130	1		20
Chlorobenzene	94		100		70-130	6		20
Trichlorofluoromethane	89		93		70-130	4		20
1,2-Dichloroethane	90		88		70-130	2		20
1,1,1-Trichloroethane	95		98		70-130	3		20
Bromodichloromethane	86		88		70-130	2		20
trans-1,3-Dichloropropene	85		86		70-130	1		20
cis-1,3-Dichloropropene	84		84		70-130	0		20
1,1-Dichloropropene	85		85		70-130	0		20
Bromoform	77		87		70-130	12		20
1,1,2,2-Tetrachloroethane	87		97		70-130	11		20
Benzene	91		93		70-130	2		20
Toluene	93		98		70-130	5		20
Ethylbenzene	92		96		70-130	4		20
Chloromethane	92		86		70-130	7		20
Bromomethane	**52**	Q	**64**	Q	70-130	**21**	Q	20

Lab Control Sample Analysis
Batch Quality Control

Project Name: O ATHENS ST.
Project Number: 132190-003

Lab Number: L1922956
Report Date: 06/04/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1243174-3 WG1243174-4								
Vinyl chloride	94		90		70-130	4		20
Chloroethane	100		100		70-130	0		20
1,1-Dichloroethene	90		90		70-130	0		20
trans-1,2-Dichloroethene	99		98		70-130	1		20
Trichloroethene	98		97		70-130	1		20
1,2-Dichlorobenzene	89		99		70-130	11		20
1,3-Dichlorobenzene	88		98		70-130	11		20
1,4-Dichlorobenzene	90		99		70-130	10		20
Methyl tert butyl ether	88		84		70-130	5		20
p/m-Xylene	90		95		70-130	5		20
o-Xylene	90		90		70-130	0		20
cis-1,2-Dichloroethene	100		98		70-130	2		20
Dibromomethane	90		89		70-130	1		20
1,2,3-Trichloropropane	84		95		70-130	12		20
Styrene	85		85		70-130	0		20
Dichlorodifluoromethane	89		88		70-130	1		20
Acetone	110		88		70-130	**22**	Q	20
Carbon disulfide	84		84		70-130	0		20
Methyl ethyl ketone	86		80		70-130	7		20
Methyl isobutyl ketone	78		75		70-130	4		20
2-Hexanone	74		72		70-130	3		20
Bromochloromethane	97		99		70-130	2		20
Tetrahydrofuran	100		96		70-130	4		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: O ATHENS ST.

Project Number: 132190-003

Lab Number: L1922956

Report Date: 06/04/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1243174-3 WG1243174-4								
2,2-Dichloropropane	90		91		70-130	1		20
1,2-Dibromoethane	91		94		70-130	3		20
1,3-Dichloropropane	86		88		70-130	2		20
1,1,1,2-Tetrachloroethane	90		93		70-130	3		20
Bromobenzene	89		100		70-130	12		20
n-Butylbenzene	92		100		70-130	8		20
sec-Butylbenzene	81		90		70-130	11		20
tert-Butylbenzene	86		96		70-130	11		20
o-Chlorotoluene	87		96		70-130	10		20
p-Chlorotoluene	87		95		70-130	9		20
1,2-Dibromo-3-chloropropane	80		88		70-130	10		20
Hexachlorobutadiene	91		100		70-130	9		20
Isopropylbenzene	86		99		70-130	14		20
p-Isopropyltoluene	90		98		70-130	9		20
Naphthalene	88		90		70-130	2		20
n-Propylbenzene	86		96		70-130	11		20
1,2,3-Trichlorobenzene	90		98		70-130	9		20
1,2,4-Trichlorobenzene	92		99		70-130	7		20
1,3,5-Trimethylbenzene	92		100		70-130	8		20
1,2,4-Trimethylbenzene	95		100		70-130	5		20
Diethyl ether	90		83		70-130	8		20
Diisopropyl Ether	84		81		70-130	4		20
Ethyl-Tert-Butyl-Ether	87		84		70-130	4		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: O ATHENS ST.

Project Number: 132190-003

Lab Number: L1922956

Report Date: 06/04/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
MCP Volatile Organics - Westborough Lab Associated sample(s): 01 Batch: WG1243174-3 WG1243174-4								
Tertiary-Amyl Methyl Ether	84		83		70-130	1		20
1,4-Dioxane	116		112		70-130	4		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	91		91		70-130
Toluene-d8	105		101		70-130
4-Bromofluorobenzene	96		97		70-130
Dibromofluoromethane	97		100		70-130

Project Name: O ATHENS ST.
Project Number: 132190-003

Lab Number: L1922956
Report Date: 06/04/19

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(*)*
L1922956-01A	Vial HCl preserved	A	NA		3.2	Y	Absent		MCP-8260-10(14)
L1922956-01B	Vial HCl preserved	A	NA		3.2	Y	Absent		MCP-8260-10(14)
L1922956-01C	Vial HCl preserved	A	NA		3.2	Y	Absent		MCP-8260-10(14)

*Values in parentheses indicate holding time in days

Project Name:	O ATHENS ST.	**Lab Number:**	L1922956
Project Number:	132190-003	**Report Date:**	06/04/19

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:	O ATHENS ST.	**Lab Number:**	L1922956
Project Number:	132190-003	**Report Date:**	06/04/19

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.

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: O ATHENS ST. **Lab Number:** L1922956

Project Number: 132190-003 **Report Date:** 06/04/19

REFERENCES

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

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

EPA 6860: SCM: Perchlorate

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

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

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

Westborough Facility:

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

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

Mansfield Facility:

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

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

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

CHAIN OF CUSTODY

ALPHA ANALYTICAL

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: 5/30/19

ALPHA Job #: L1922956

H&A Information

H&A Client: Transom Real Estate

H&A Address: 465 Medford Street

Boston, MA 02129

H&A Phone: 617-886-7400

H&A Fax:

H&A Email: LVanzler@HaleyAldrich.com

These samples have been previously analyzed by Alpha ☒

Other project specific requirements/comments:

Please specify Metals or TAL.

Project Information

Project Name: 0 Athens St

Project Location: Boston

Project #: 132190-003

(Use Project name as Project #) ☐

Project Manager: L. Vanzler

ALPHAQuote #:

Turn-Around Time

Standard ☑ — Due Date:

Rush (only if pre approved) ☐ — # of Days: 5 Day

Deliverables

☑ Email ☐ Fax

☐ EQuIS (1 File) ☐ EQuIS (4 File)

☐ Other:

Billing Information

☑ Same as Client Info

PO #

Regulatory Requirements (Program/Criteria)

MA RCS-1

Note: Select State from menu & identify criteria.

Disposal Site Information

Please identify below location of applicable disposal facilities.

Disposal Facility: ☐ NJ ☐ NY ☐ Other:

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	VOCs	Sample Specific Comments	Total # Bottles
22956-01	HA19-1(ow)	5/30	1315	AQ	SR	X		3

Container Type: V

Preservative: B

Preservative Code: A = None; B = HCl; C = HNO_3; D = H_2SO_4; E = NaOH; F = MeOH; G = $NaHSO_4$; H = $Na_2S_2O_3$; KE = 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

Relinquished By:	Date/Time	Received By:	Date/Time
A. Paul	5/30/19 1520		
	5/30/19 1630		5/30/19 1630
Rob Moerke via 5/30/19	1850	Rob Moerke via 5/30/19	1645

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)

Method Blank Summary
Form 4
Volatiles

Client	: Haley & Aldrich, Inc.	**Lab Number**	: L1922956
Project Name	: O ATHENS ST.	**Project Number**	: 132190-003
Lab Sample ID	: WG1243174-5	**Lab File ID**	: VJ190531A07
Instrument ID	: JACK		
Matrix	: WATER	**Analysis Date**	: 05/31/19 08:46

Client Sample No.	Lab Sample ID	Analysis Date
WG1243174-3LCS	WG1243174-3	05/31/19 07:05
WG1243174-4LCSD	WG1243174-4	05/31/19 07:39
HA19-1 (OW)	L1922956-01	05/31/19 14:20

Calibration Verification Summary
Form 7
Volatiles

Client	: Haley & Aldrich, Inc.	**Lab Number**	: L1922956		
Project Name	: O ATHENS ST.	**Project Number**	: 132190-003		
Instrument ID	: JACK	**Calibration Date**	: 05/31/19 07:05		
Lab File ID	: VJ190531A01	**Init. Calib. Date(s)**	: 04/30/19	04/30/19	
Sample No	: WG1243174-2	**Init. Calib. Times**	: 09:54	13:47	
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Fluorobenzene	1	1	-	0	20	126	0
Dichlorodifluoromethane	0.347	0.31	-	10.7	20	104	0
Chloromethane	0.458	0.421	-	8.1	20	108	.01
Vinyl chloride	0.421	0.395	-	6.2	20	108	0
Bromomethane	0.303	0.159	-	47.5*	20	66	0
Chloroethane	0.272	0.28	-	-2.9	20	112	0
Trichlorofluoromethane	0.595	0.53	-	10.9	20	106	0
Ethyl ether	0.195	0.176	-	9.7	20	108	0
1,1-Dichloroethene	0.365	0.327	-	10.4	20	105	0
Carbon disulfide	1.018	0.853	-	16.2	20	100	0
Freon-113	0.368	0.343	-	6.8	20	108	0
Iodomethane	10	6.061	-	39.4*	20	93	0
Acrolein	0.055	0.045*	-	18.2	20	101	0
Methylene chloride	0.371	0.372	-	-0.3	20	126	0
Acetone	10	11.032	-	-10.3	20	129	0
trans-1,2-Dichloroethene	0.384	0.381	-	0.8	20	119	0
Methyl acetate	0.229	0.186	-	18.8	20	104	0
Methyl tert-butyl ether	0.908	0.796	-	12.3	20	109	0
tert-Butyl alcohol	0.025	0.02*	-	20	20	103	0
Diisopropyl ether	1.456	1.217	-	16.4	20	104	0
1,1-Dichloroethane	0.73	0.679	-	7	20	112	0
Halothane	0.317	0.29	-	8.5	20	113	-.01
Acrylonitrile	0.103	0.08	-	22.3*	20	97	0
Ethyl tert-butyl ether	1.205	1.048	-	13	20	108	0
Vinyl acetate	0.984	0.819	-	16.8	20	103	0
cis-1,2-Dichloroethene	0.427	0.443	-	-3.7	20	127	0
2,2-Dichloropropane	0.63	0.568	-	9.8	20	107	0
Bromochloromethane	0.194	0.187	-	3.6	20	119	0
Cyclohexane	0.751	0.655	-	12.8	20	104	0
Chloroform	0.689	0.631	-	8.4	20	113	0
Ethyl acetate	0.336	0.53	-	-57.7*	20	194	0
Carbon tetrachloride	0.56	0.491	-	12.3	20	106	0
Tetrahydrofuran	0.11	0.11	-	0	20	124	0
Dibromofluoromethane	0.232	0.225	-	3	20	120	0
1,1,1-Trichloroethane	0.626	0.594	-	5.1	20	116	0
2-Butanone	0.144	0.124	-	13.9	20	110	0
1,1-Dichloropropene	0.694	0.588	-	15.3	20	109	0
Benzene	1.74	1.583	-	9	20	111	0
tert-Amyl methyl ether	1.062	0.89	-	16.2	20	105	0
1,2-Dichloroethane-d4	0.273	0.248	-	9.2	20	118	0
1,2-Dichloroethane	0.503	0.452	-	10.1	20	113	0
Methyl cyclohexane	0.759	0.708	-	6.7	20	115	0
Trichloroethene	0.426	0.416	-	2.3	20	121	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: Haley & Aldrich, Inc.		**Lab Number**	: L1922956	
Project Name	: O ATHENS ST.		**Project Number**	: 132190-003	
Instrument ID	: JACK		**Calibration Date**	: 05/31/19 07:05	
Lab File ID	: VJ190531A01		**Init. Calib. Date(s)**	: 04/30/19	04/30/19
Sample No	: WG1243174-2		**Init. Calib. Times**	: 09:54	13:47
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
Dibromomethane	0.211	0.19	-	10	20	114	0
1,2-Dichloropropane	0.42	0.369	-	12.1	20	106	0
2-Chloroethyl vinyl ether	0.192	0.149	-	22.4*	20	93	0
Bromodichloromethane	0.547	0.471	-	13.9	20	106	0
1,4-Dioxane	0.00243	0.0028*	-	-15.2	20	146	0
cis-1,3-Dichloropropene	0.701	0.588	-	16.1	20	109	0
Chlorobenzene-d5	1	1	-	0	20	129	0
Toluene-d8	1.23	1.297	-	-5.4	20	133	0
Toluene	1.381	1.282	-	7.2	20	116	0
4-Methyl-2-pentanone	0.137	0.106	-	22.6*	20	98	0
Tetrachloroethene	0.569	0.561	-	1.4	20	120	0
trans-1,3-Dichloropropene	0.72	0.61	-	15.3	20	109	0
Ethyl methacrylate	0.542	0.442	-	18.5	20	107	0
1,1,2-Trichloroethane	0.328	0.289	-	11.9	20	113	0
Chlorodibromomethane	0.484	0.408	-	15.7	20	109	0
1,3-Dichloropropane	0.695	0.6	-	13.7	20	111	0
1,2-Dibromoethane	0.389	0.353	-	9.3	20	117	0
2-Hexanone	0.264	0.197	-	25.4*	20	91	0
Chlorobenzene	1.487	1.406	-	5.4	20	120	0
Ethylbenzene	2.599	2.398	-	7.7	20	117	0
1,1,1,2-Tetrachloroethane	0.531	0.479	-	9.8	20	118	0
p/m Xylene	0.984	0.905	-	8	20	121	0
o Xylene	0.975	0.864	-	11.4	20	119	0
Styrene	1.633	1.369	-	16.2	20	119	0
1,4-Dichlorobenzene-d4	1	1	-	0	20	140	0
Bromoform	0.596	0.458	-	23.2*	20	102	0
Isopropylbenzene	5.332	4.569	-	14.3	20	121	0
4-Bromofluorobenzene	0.995	0.954	-	4.1	20	132	0
Bromobenzene	1.275	1.13	-	11.4	20	122	0
n-Propylbenzene	5.524	4.748	-	14	20	120	0
1,4-Dichlorobutane	1.432	1.206	-	15.8	20	110	0
1,1,2,2-Tetrachloroethane	10	8.679	-	13.2	20	106	0
4-Ethyltoluene	4.611	3.992	-	13.4	20	120	0
2-Chlorotoluene	3.912	3.415	-	12.7	20	121	0
1,3,5-Trimethylbenzene	3.909	3.585	-	8.3	20	126	0
1,2,3-Trichloropropane	10	8.388	-	16.1	20	108	0
trans-1,4-Dichloro-2-buten	0.305	0.222	-	27.2*	20	94	0
4-Chlorotoluene	3.415	2.966	-	13.1	20	124	0
tert-Butylbenzene	3.267	2.807	-	14.1	20	123	0
1,2,4-Trimethylbenzene	3.682	3.503	-	4.9	20	131	0
sec-Butylbenzene	4.554	3.705	-	18.6	20	116	0
p-Isopropyltoluene	3.824	3.453	-	9.7	20	131	0
1,3-Dichlorobenzene	2.276	1.997	-	12.3	20	126	0

* Value outside of QC limits.

Calibration Verification Summary
Form 7
Volatiles

Client	: Haley & Aldrich, Inc.		**Lab Number**	: L1922956	
Project Name	: O ATHENS ST.		**Project Number**	: 132190-003	
Instrument ID	: JACK		**Calibration Date**	: 05/31/19 07:05	
Lab File ID	: VJ190531A01		**Init. Calib. Date(s)**	: 04/30/19	04/30/19
Sample No	: WG1243174-2		**Init. Calib. Times**	: 09:54	13:47
Channel	:				

Compound	Ave. RRF	RRF	Min RRF	%D	Max %D	Area%	Dev(min)
1,4-Dichlorobenzene	2.17	1.945	-	10.4	20	129	0
p-Diethylbenzene	2.196	1.955	-	11	20	127	0
n-Butylbenzene	2.926	2.689	-	8.1	20	130	0
1,2-Dichlorobenzene	2.072	1.847	-	10.9	20	127	0
1,2,4,5-Tetramethylbenzene	3.323	2.973	-	10.5	20	120	0
1,2-Dibromo-3-chloropropan	0.15	0.119	-	20.7*	20	102	0
1,3,5-Trichlorobenzene	1.133	1.064	-	6.1	20	125	0
Hexachlorobutadiene	0.316	0.287	-	9.2	20	120	0
1,2,4-Trichlorobenzene	0.942	0.865	-	8.2	20	123	0
Naphthalene	2.372	2.094	-	11.7	20	116	0
1,2,3-Trichlorobenzene	0.83	0.743	-	10.5	20	121	0

*** Value outside of QC limits.**

ANALYTICAL REPORT

Lab Number:	L1961616
Client:	Haley & Aldrich, Inc. 465 Medford Street, Suite 2200 Charlestown, MA 02129-1400
ATTN:	Lee Vanzler
Phone:	(617) 886-7561
Project Name:	21-35 WEST SECOND STREET
Project Number:	132190-005
Report Date:	01/03/20

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: 21-35 WEST SECOND STREET
Project Number: 132190-005

Lab Number: L1961616
Report Date: 01/03/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1961616-01	HA19-2-20191224	WATER	BOSTON, MA	12/24/19 11:45	12/24/19

Project Name:	21-35 WEST SECOND STREET	**Lab Number:**	L1961616
Project Number:	132190-005	**Report Date:**	01/03/20

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:	21-35 WEST SECOND STREET	**Lab Number:**	L1961616
Project Number:	132190-005	**Report Date:**	01/03/20

Case Narrative (continued)

Report Submission

January 03, 2020: This final report includes the results of all requested analyses.

December 31, 2019: This is a preliminary report.

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.

Semivolatile Organics by SIM

The following surrogate recoveries are above the acceptance criteria for 2,4,6-tribromophenol. The sample and associated Method Blank were non-detect for all target analytes, re-analysis was not required:

L1961616-01 (HA19-2-20191224): 152%

WG1324987-1: 137%

WG1324987-2: 161%

The WG1324987-2 LCS recovery, associated with L1961616-01 (HA19-2-20191224), is above the acceptance criteria for pentachlorophenol (155%); however, the associated samples are non-detect to the RL for this target analyte. The results of the original analysis are reported.

Dissolved Metals

The WG1325848-2 LCS recovery, associated with L1961616-01 (HA19-2-20191224), is above the acceptance criteria for selenium (116%); however, the associated samples are non-detect to the RL for this target analyte. The results of the original analysis are reported.

Anions by Ion Chromatography

The WG1325131-3 MS recovery, performed on L1961616-01 (HA19-2-20191224), is outside the acceptance criteria for chloride (83%); however, the associated LCS recovery is within criteria. No further action was taken.

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

Authorized Signature: Melissa Sturgis Melissa Sturgis

Title: Technical Director/Representative Date: 01/03/20

ORGANICS

VOLATILES

Project Name: 21-35 WEST SECOND STREET **Lab Number:** L1961616

Project Number: 132190-005 **Report Date:** 01/03/20

SAMPLE RESULTS

Lab ID: L1961616-01 Date Collected: 12/24/19 11:45
Client ID: HA19-2-20191224 Date Received: 12/24/19
Sample Location: BOSTON, MA Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1
Analytical Date: 12/26/19 18:31
Analyst: MKS

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: 21-35 WEST SECOND STREET **Lab Number:** L1961616

Project Number: 132190-005 **Report Date:** 01/03/20

SAMPLE RESULTS

Lab ID: L1961616-01 Date Collected: 12/24/19 11:45

Client ID: HA19-2-20191224 Date Received: 12/24/19

Sample Location: BOSTON, MA Field Prep: Not Specified

Sample Depth:

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

Surrogate	% Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	100		60-140
Fluorobenzene	94		60-140
4-Bromofluorobenzene	101		60-140

Project Name: 21-35 WEST SECOND STREET **Lab Number:** L1961616

Project Number: 132190-005 **Report Date:** 01/03/20

SAMPLE RESULTS

Lab ID: L1961616-01
Client ID: HA19-2-20191224
Sample Location: BOSTON, MA

Date Collected: 12/24/19 11:45
Date Received: 12/24/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 128,624.1-SIM
Analytical Date: 12/26/19 18:31
Analyst: MKS

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	79		60-140
4-Bromofluorobenzene	90		60-140

Project Name: 21-35 WEST SECOND STREET
Project Number: 132190-005
Lab Number: L1961616
Report Date: 01/03/20

SAMPLE RESULTS

Lab ID: L1961616-01
Client ID: HA19-2-20191224
Sample Location: BOSTON, MA

Date Collected: 12/24/19 11:45
Date Received: 12/24/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 12/26/19 18:40
Analyst: AMM

Extraction Method: EPA 504.1
Extraction Date: 12/26/19 15:04

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: 21-35 WEST SECOND STREET
Project Number: 132190-005
Lab Number: L1961616
Report Date: 01/03/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 12/26/19 16:26
Analyst: AMM

Extraction Method: EPA 504.1
Extraction Date: 12/26/19 15:04

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westborough Lab for sample(s): 01 Batch: WG1324958-1						
1,2-Dibromoethane	ND		ug/l	0.010	--	A

Project Name: 21-35 WEST SECOND STREET **Lab Number:** L1961616

Project Number: 132190-005 **Report Date:** 01/03/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 12/26/19 12:58
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1324981-4					
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: 21-35 WEST SECOND STREET **Lab Number:** L1961616

Project Number: 132190-005 **Report Date:** 01/03/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1
Analytical Date: 12/26/19 12:58
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1324981-4					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Pentafluorobenzene	95		60-140
Fluorobenzene	95		60-140
4-Bromofluorobenzene	101		60-140

Project Name: 21-35 WEST SECOND STREET **Lab Number:** L1961616

Project Number: 132190-005 **Report Date:** 01/03/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 128,624.1-SIM
Analytical Date: 12/26/19 12:58
Analyst: KJD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1325181-4					
1,4-Dioxane	ND		ug/l	50	--

Surrogate	%Recovery	Qualifier	Acceptance Criteria
Fluorobenzene	78		60-140
4-Bromofluorobenzene	92		60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: 21-35 WEST SECOND STREET

Project Number: 132190-005

Lab Number: L1961616

Report Date: 01/03/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab	Associated sample(s): 01		Batch: WG1324958-2						
1,2-Dibromoethane	90		-		80-120	-			A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 21-35 WEST SECOND STREET

Project Number: 132190-005

Lab Number: L1961616

Report Date: 01/03/20

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: WG1324981-3								
Methylene chloride	80		-		60-140	-		28
1,1-Dichloroethane	80		-		50-150	-		49
Carbon tetrachloride	95		-		70-130	-		41
1,1,2-Trichloroethane	100		-		70-130	-		45
Tetrachloroethene	100		-		70-130	-		39
1,2-Dichloroethane	90		-		70-130	-		49
1,1,1-Trichloroethane	95		-		70-130	-		36
Benzene	95		-		65-135	-		61
Toluene	100		-		70-130	-		41
Ethylbenzene	95		-		60-140	-		63
Vinyl chloride	60		-		5-195	-		66
1,1-Dichloroethene	80		-		50-150	-		32
cis-1,2-Dichloroethene	85		-		60-140	-		30
Trichloroethene	85		-		65-135	-		48
1,2-Dichlorobenzene	110		-		65-135	-		57
1,3-Dichlorobenzene	100		-		70-130	-		43
1,4-Dichlorobenzene	100		-		65-135	-		57
p/m-Xylene	92		-		60-140	-		30
o-xylene	90		-		60-140	-		30
Acetone	76		-		40-160	-		30
Methyl tert butyl ether	80		-		60-140	-		30
Tert-Butyl Alcohol	84		-		60-140	-		30
Tertiary-Amyl Methyl Ether	90		-		60-140	-		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 21-35 WEST SECOND STREET

Project Number: 132190-005

Lab Number: L1961616

Report Date: 01/03/20

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: WG1324981-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Pentafluorobenzene	100				60-140
Fluorobenzene	97				60-140
4-Bromofluorobenzene	98				60-140

Lab Control Sample Analysis

Batch Quality Control

Project Name: 21-35 WEST SECOND STREET

Project Number: 132190-005

Lab Number: L1961616

Report Date: 01/03/20

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: WG1325181-3								
1,4-Dioxane	91		-		60-140	-		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Fluorobenzene	80				60-140
4-Bromofluorobenzene	94				60-140

Matrix Spike Analysis

Batch Quality Control

Project Name: 21-35 WEST SECOND STREET

Project Number: 132190-005

Lab Number: L1961616

Report Date: 01/03/20

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: WG1324958-3 QC Sample: L1960989-02 Client ID: MS Sample													
1,2-Dibromoethane	ND	0.246	0.213	86		-	-		80-120	-		20	A
1,2-Dibromo-3-chloropropane	ND	0.246	0.212	86		-	-		80-120	-		20	A
1,2,3-Trichloropropane	ND	0.246	0.244	99		-	-		80-120	-		20	A

SEMIVOLATILES

Project Name: 21-35 WEST SECOND STREET
Project Number: 132190-005
Lab Number: L1961616
Report Date: 01/03/20

SAMPLE RESULTS

Lab ID: L1961616-01
Client ID: HA19-2-20191224
Sample Location: BOSTON, MA

Date Collected: 12/24/19 11:45
Date Received: 12/24/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1
Analytical Date: 12/27/19 11:38
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 12/26/19 15:33

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	61		42-122
2-Fluorobiphenyl	50		46-121
4-Terphenyl-d14	80		47-138

Project Name: 21-35 WEST SECOND STREET **Lab Number:** L1961616

Project Number: 132190-005 **Report Date:** 01/03/20

SAMPLE RESULTS

Lab ID: L1961616-01
Client ID: HA19-2-20191224
Sample Location: BOSTON, MA

Date Collected: 12/24/19 11:45
Date Received: 12/24/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 129,625.1-SIM
Analytical Date: 12/27/19 14:02
Analyst: DV

Extraction Method: EPA 625.1
Extraction Date: 12/26/19 15:35

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	40		25-87
Phenol-d6	29		16-65
Nitrobenzene-d5	75		42-122
2-Fluorobiphenyl	86		46-121
2,4,6-Tribromophenol	**152**	Q	45-128
4-Terphenyl-d14	108		47-138

Project Name: 21-35 WEST SECOND STREET
Project Number: 132190-005
Lab Number: L1961616
Report Date: 01/03/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1
Analytical Date: 12/27/19 03:41
Analyst: SZ

Extraction Method: EPA 625.1
Extraction Date: 12/26/19 15:33

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1324986-1					
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	57		42-122
2-Fluorobiphenyl	66		46-121
4-Terphenyl-d14	83		47-138

Project Name: 21-35 WEST SECOND STREET **Lab Number:** L1961616

Project Number: 132190-005 **Report Date:** 01/03/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 129,625.1-SIM
Analytical Date: 12/27/19 12:55
Analyst: DV

Extraction Method: EPA 625.1
Extraction Date: 12/26/19 15:35

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1324987-1					
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	47		25-87
Phenol-d6	36		16-65
Nitrobenzene-d5	81		42-122
2-Fluorobiphenyl	92		46-121
2,4,6-Tribromophenol	**137**	Q	45-128
4-Terphenyl-d14	126		47-138

Lab Control Sample Analysis

Batch Quality Control

Project Name: 21-35 WEST SECOND STREET

Project Number: 132190-005

Lab Number: L1961616

Report Date: 01/03/20

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: WG1324986-2								
Bis(2-ethylhexyl)phthalate	100		-		29-137	-		82
Butyl benzyl phthalate	113		-		1-140	-		60
Di-n-butylphthalate	105		-		8-120	-		47
Di-n-octylphthalate	102		-		19-132	-		69
Diethyl phthalate	96		-		1-120	-		100
Dimethyl phthalate	95		-		1-120	-		183

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
Nitrobenzene-d5	68				42-122
2-Fluorobiphenyl	67				46-121
4-Terphenyl-d14	80				47-138

Lab Control Sample Analysis
Batch Quality Control

Project Name: 21-35 WEST SECOND STREET
Project Number: 132190-005

Lab Number: L1961616
Report Date: 01/03/20

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: WG1324987-2								
Acenaphthene	100		-		60-132	-		30
Fluoranthene	117		-		43-121	-		30
Naphthalene	94		-		36-120	-		30
Benzo(a)anthracene	110		-		42-133	-		30
Benzo(a)pyrene	125		-		32-148	-		30
Benzo(b)fluoranthene	130		-		42-140	-		30
Benzo(k)fluoranthene	105		-		25-146	-		30
Chrysene	96		-		44-140	-		30
Acenaphthylene	112		-		54-126	-		30
Anthracene	106		-		43-120	-		30
Benzo(ghi)perylene	112		-		1-195	-		30
Fluorene	109		-		70-120	-		30
Phenanthrene	101		-		65-120	-		30
Dibenzo(a,h)anthracene	122		-		1-200	-		30
Indeno(1,2,3-cd)pyrene	134		-		1-151	-		30
Pyrene	115		-		70-120	-		30
Pentachlorophenol	**155**	Q	-		38-152	-		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 21-35 WEST SECOND STREET
Project Number: 132190-005

Lab Number: L1961616
Report Date: 01/03/20

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: WG1324987-2								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	53				25-87
Phenol-d6	37				16-65
Nitrobenzene-d5	89				42-122
2-Fluorobiphenyl	106				46-121
2,4,6-Tribromophenol	**161**	Q			45-128
4-Terphenyl-d14	136				47-138

PCBS

Project Name: 21-35 WEST SECOND STREET **Lab Number:** L1961616

Project Number: 132190-005 **Report Date:** 01/03/20

SAMPLE RESULTS

Lab ID: L1961616-01
Client ID: HA19-2-20191224
Sample Location: BOSTON, MA

Date Collected: 12/24/19 11:45
Date Received: 12/24/19
Field Prep: Not Specified

Sample Depth:
Matrix: Water
Analytical Method: 127,608.3
Analytical Date: 12/27/19 17:57
Analyst: WR

Extraction Method: EPA 608.3
Extraction Date: 12/25/19 05:29
Cleanup Method: EPA 3665A
Cleanup Date: 12/26/19
Cleanup Method: EPA 3660B
Cleanup Date: 12/26/19

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	72		37-123	B
Decachlorobiphenyl	82		38-114	B
2,4,5,6-Tetrachloro-m-xylene	73		37-123	A
Decachlorobiphenyl	75		38-114	A

Project Name: 21-35 WEST SECOND STREET
Project Number: 132190-005
Lab Number: L1961616
Report Date: 01/03/20

Method Blank Analysis
Batch Quality Control

Analytical Method: 127,608.3
Analytical Date: 12/27/19 18:44
Analyst: WR

Extraction Method: EPA 608.3
Extraction Date: 12/25/19 05:29
Cleanup Method: EPA 3665A
Cleanup Date: 12/26/19
Cleanup Method: EPA 3660B
Cleanup Date: 12/26/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG1324706-1						
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	58		37-123	B
Decachlorobiphenyl	74		38-114	B
2,4,5,6-Tetrachloro-m-xylene	55		37-123	A
Decachlorobiphenyl	64		38-114	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 21-35 WEST SECOND STREET

Project Number: 132190-005

Lab Number: L1961616

Report Date: 01/03/20

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: WG1324706-2									
Aroclor 1016	68		-		50-140	-		36	A
Aroclor 1260	65		-		8-140	-		38	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	65				37-123	B
Decachlorobiphenyl	84				38-114	B
2,4,5,6-Tetrachloro-m-xylene	67				37-123	A
Decachlorobiphenyl	76				38-114	A

METALS

Project Name: 21-35 WEST SECOND STREET **Lab Number:** L1961616

Project Number: 132190-005 **Report Date:** 01/03/20

SAMPLE RESULTS

Lab ID: L1961616-01 Date Collected: 12/24/19 11:45

Client ID: HA19-2-20191224 Date Received: 12/24/19

Sample Location: BOSTON, MA Field Prep: Not Specified

Sample Depth:

Matrix: Water

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	ND		mg/l	0.00400	--	1	12/27/19 20:59	12/30/19 12:19	EPA 3005A	3,200.8	AM
Arsenic, Total	0.00232		mg/l	0.00100	--	1	12/27/19 20:59	12/30/19 12:19	EPA 3005A	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	12/27/19 20:59	12/30/19 12:19	EPA 3005A	3,200.8	AM
Chromium, Total	0.00103		mg/l	0.00100	--	1	12/27/19 20:59	12/30/19 12:19	EPA 3005A	3,200.8	AM
Copper, Total	0.00161		mg/l	0.00100	--	1	12/27/19 20:59	12/30/19 12:19	EPA 3005A	3,200.8	AM
Iron, Total	ND		mg/l	0.050	--	1	12/27/19 20:59	12/30/19 13:35	EPA 3005A	19,200.7	LC
Lead, Total	ND		mg/l	0.00100	--	1	12/27/19 20:59	12/30/19 12:19	EPA 3005A	3,200.8	AM
Mercury, Total	ND		mg/l	0.00020	--	1	12/27/19 12:53	12/27/19 16:56	EPA 245.1	3,245.1	AL
Nickel, Total	ND		mg/l	0.00200	--	1	12/27/19 20:59	12/30/19 12:19	EPA 3005A	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	--	1	12/27/19 20:59	12/30/19 12:19	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00040	--	1	12/27/19 20:59	12/30/19 12:19	EPA 3005A	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	--	1	12/27/19 20:59	12/30/19 12:19	EPA 3005A	3,200.8	AM
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	--	1		12/30/19 12:19	NA	107,-	
Dissolved Metals - Mansfield Lab											
Antimony, Dissolved	ND		mg/l	0.0040	--	1	12/30/19 16:33	12/30/19 23:14	EPA 3005A	3,200.8	AM
Arsenic, Dissolved	0.00190		mg/l	0.0010	--	1	12/30/19 16:33	12/30/19 23:14	EPA 3005A	3,200.8	AM
Cadmium, Dissolved	ND		mg/l	0.0002	--	1	12/30/19 16:33	12/30/19 23:14	EPA 3005A	3,200.8	AM
Chromium, Dissolved	ND		mg/l	0.0010	--	1	12/30/19 16:33	12/30/19 23:14	EPA 3005A	3,200.8	AM
Copper, Dissolved	0.0017		mg/l	0.0010	--	1	12/30/19 16:33	12/30/19 23:14	EPA 3005A	3,200.8	AM
Iron, Dissolved	ND		mg/l	0.050	--	1	12/30/19 16:33	12/31/19 00:30	EPA 3005A	19,200.7	MC
Lead, Dissolved	ND		mg/l	0.0010	--	1	12/30/19 16:33	12/30/19 23:14	EPA 3005A	3,200.8	AM
Mercury, Dissolved	ND		mg/l	0.00020	--	1	12/27/19 14:34	12/27/19 17:03	EPA 245.1	3,245.1	AL
Nickel, Dissolved	ND		mg/l	0.0020	--	1	12/30/19 16:33	12/30/19 23:14	EPA 3005A	3,200.8	AM
Selenium, Dissolved	ND		mg/l	0.0050	--	1	12/30/19 16:33	12/30/19 23:14	EPA 3005A	3,200.8	AM
Silver, Dissolved	ND		mg/l	0.0004	--	1	12/30/19 16:33	12/30/19 23:14	EPA 3005A	3,200.8	AM
Zinc, Dissolved	ND		mg/l	0.0100	--	1	12/30/19 16:33	12/30/19 23:14	EPA 3005A	3,200.8	AM

Project Name: 21-35 WEST SECOND STREET **Lab Number:** L1961616

Project Number: 132190-005 **Report Date:** 01/03/20

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: WG1325292-1										
Mercury, Total	ND		mg/l	0.00020	--	1	12/27/19 12:53	12/27/19 16:03	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
Dissolved Metals - Mansfield Lab for sample(s): 01 Batch: WG1325327-1										
Mercury, Dissolved	ND		mg/l	0.00020	--	1	12/27/19 14:34	12/27/19 16:59	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: WG1325379-1										
Iron, Total	ND		mg/l	0.050	--	1	12/27/19 20:59	12/30/19 09:50	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: WG1325387-1										
Antimony, Total	ND		mg/l	0.00400	--	1	12/27/19 20:59	12/30/19 10:53	3,200.8	AM
Arsenic, Total	ND		mg/l	0.00100	--	1	12/27/19 20:59	12/30/19 10:53	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	--	1	12/27/19 20:59	12/30/19 10:53	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	--	1	12/27/19 20:59	12/30/19 10:53	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	--	1	12/27/19 20:59	12/30/19 10:53	3,200.8	AM

Project Name: 21-35 WEST SECOND STREET **Lab Number:** L1961616

Project Number: 132190-005 **Report Date:** 01/03/20

Method Blank Analysis
Batch Quality Control

Lead, Total	ND	mg/l	0.00100	--	1	12/27/19 20:59	12/30/19 10:53	3,200.8	AM
Nickel, Total	ND	mg/l	0.00200	--	1	12/27/19 20:59	12/30/19 10:53	3,200.8	AM
Selenium, Total	ND	mg/l	0.00500	--	1	12/27/19 20:59	12/30/19 10:53	3,200.8	AM
Silver, Total	ND	mg/l	0.00040	--	1	12/27/19 20:59	12/30/19 10:53	3,200.8	AM
Zinc, Total	ND	mg/l	0.01000	--	1	12/27/19 20:59	12/30/19 10:53	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
Dissolved Metals - Mansfield Lab for sample(s): 01 Batch: WG1325846-1										
Iron, Dissolved	ND		mg/l	0.050	--	1	12/30/19 16:33	12/30/19 23:30	19,200.7	MC

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 01 Batch: WG1325848-1										
Antimony, Dissolved	ND		mg/l	0.0040	--	1	12/30/19 16:33	12/30/19 21:14	3,200.8	MG
Arsenic, Dissolved	ND		mg/l	0.0010	--	1	12/30/19 16:33	12/30/19 21:14	3,200.8	MG
Cadmium, Dissolved	ND		mg/l	0.0002	--	1	12/30/19 16:33	12/30/19 21:14	3,200.8	MG
Chromium, Dissolved	ND		mg/l	0.0010	--	1	12/30/19 16:33	12/30/19 21:14	3,200.8	MG
Copper, Dissolved	ND		mg/l	0.0010	--	1	12/30/19 16:33	12/30/19 21:14	3,200.8	MG
Lead, Dissolved	ND		mg/l	0.0010	--	1	12/30/19 16:33	12/30/19 21:14	3,200.8	MG
Nickel, Dissolved	ND		mg/l	0.0020	--	1	12/30/19 16:33	12/30/19 21:14	3,200.8	MG
Selenium, Dissolved	ND		mg/l	0.0050	--	1	12/30/19 16:33	12/30/19 21:14	3,200.8	MG
Silver, Dissolved	ND		mg/l	0.0004	--	1	12/30/19 16:33	12/30/19 21:14	3,200.8	MG
Zinc, Dissolved	ND		mg/l	0.0100	--	1	12/30/19 16:33	12/30/19 21:14	3,200.8	MG

Project Name: 21-35 WEST SECOND STREET
Project Number: 132190-005
Lab Number: L1961616
Report Date: 01/03/20

Method Blank Analysis
Batch Quality Control

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 21-35 WEST SECOND STREET

Project Number: 132190-005

Lab Number: L1961616

Report Date: 01/03/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1325292-2								
Mercury, Total	98		-		85-115	-		
Dissolved Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1325327-2								
Mercury, Dissolved	95		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1325379-2								
Iron, Total	112		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1325387-2								
Antimony, Total	86		-		85-115	-		
Arsenic, Total	105		-		85-115	-		
Cadmium, Total	103		-		85-115	-		
Chromium, Total	100		-		85-115	-		
Copper, Total	98		-		85-115	-		
Lead, Total	105		-		85-115	-		
Nickel, Total	101		-		85-115	-		
Selenium, Total	113		-		85-115	-		
Silver, Total	97		-		85-115	-		
Zinc, Total	101		-		85-115	-		

Lab Control Sample Analysis

Batch Quality Control

Project Name: 21-35 WEST SECOND STREET

Project Number: 132190-005

Lab Number: L1961616

Report Date: 01/03/20

Parameter	LCS %Recovery		LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1325846-2						
Iron, Dissolved	107		-	85-115	-	
Dissolved Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1325848-2						
Antimony, Dissolved	104		-	85-115	-	
Arsenic, Dissolved	112		-	85-115	-	
Cadmium, Dissolved	109		-	85-115	-	
Chromium, Dissolved	112		-	85-115	-	
Copper, Dissolved	110		-	85-115	-	
Lead, Dissolved	110		-	85-115	-	
Nickel, Dissolved	113		-	85-115	-	
Selenium, Dissolved	**116**	Q	-	85-115	-	
Silver, Dissolved	102		-	85-115	-	
Zinc, Dissolved	115		-	85-115	-	

Matrix Spike Analysis
Batch Quality Control

Project Name: 21-35 WEST SECOND STREET
Project Number: 132190-005

Lab Number: L1961616
Report Date: 01/03/20

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: WG1325292-3 QC Sample: L1961510-01 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00463	93		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1325292-5 QC Sample: L1961510-02 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00456	91		-	-		70-130	-		20
Dissolved Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1325327-3 QC Sample: L1961616-01 Client ID: HA19-2-20191224												
Mercury, Dissolved	ND	0.005	0.00454	91		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1325379-3 QC Sample: L1960667-01 Client ID: MS Sample												
Iron, Total	0.508	1	1.64	113		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1325379-7 QC Sample: L1960667-02 Client ID: MS Sample												
Iron, Total	0.373	1	1.51	114		-	-		75-125	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1325387-3 QC Sample: L1960667-01 Client ID: MS Sample												
Antimony, Total	ND	0.5	0.4393	88		-	-		70-130	-		20
Arsenic, Total	0.0011	0.12	0.1211	100		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.05144	101		-	-		70-130	-		20
Chromium, Total	ND	0.2	0.2018	101		-	-		70-130	-		20
Copper, Total	0.00641	0.25	0.2550	99		-	-		70-130	-		20
Lead, Total	ND	0.51	0.5373	105		-	-		70-130	-		20
Nickel, Total	ND	0.5	0.5191	104		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1336	111		-	-		70-130	-		20
Silver, Total	ND	0.05	0.04946	99		-	-		70-130	-		20
Zinc, Total	ND	0.5	0.5142	103		-	-		70-130	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: 21-35 WEST SECOND STREET
Project Number: 132190-005

Lab Number: L1961616
Report Date: 01/03/20

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1325846-3 QC Sample: L1960572-01 Client ID: MS Sample									
Iron, Dissolved	0.084	1	1.09	100	-	-	75-125	-	20
Dissolved Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1325848-3 QC Sample: L1961750-01 Client ID: MS Sample									
Antimony, Dissolved	ND	0.5	0.5319	106	-	-	70-130	-	20
Arsenic, Dissolved	0.0692	0.12	0.1924	103	-	-	70-130	-	20
Cadmium, Dissolved	ND	0.051	0.0415	81	-	-	70-130	-	20
Chromium, Dissolved	0.3334	0.2	0.5756	121	-	-	70-130	-	20
Copper, Dissolved	ND	0.25	0.2260	90	-	-	70-130	-	20
Lead, Dissolved	ND	0.51	0.5434	106	-	-	70-130	-	20
Nickel, Dissolved	ND	0.5	0.4868	97	-	-	70-130	-	20
Selenium, Dissolved	ND	0.12	0.0958	80	-	-	70-130	-	20
Silver, Dissolved	ND	0.05	0.0442	88	-	-	70-130	-	20
Zinc, Dissolved	ND	0.5	0.3733	75	-	-	70-130	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 21-35 WEST SECOND STREET
Project Number: 132190-005

Lab Number: L1961616
Report Date: 01/03/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1325292-4 QC Sample: L1961510-01 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1325292-6 QC Sample: L1961510-02 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20
Dissolved Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1325327-4 QC Sample: L1961616-01 Client ID: HA19-2-20191224						
Mercury, Dissolved	ND	ND	mg/l	NC		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1325379-4 QC Sample: L1960667-01 Client ID: DUP Sample						
Iron, Total	0.508	0.520	mg/l	2		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1325379-8 QC Sample: L1960667-02 Client ID: DUP Sample						
Iron, Total	0.373	0.394	mg/l	5		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1325387-4 QC Sample: L1960667-01 Client ID: DUP Sample						
Copper, Total	0.00641	0.00650	mg/l	1		20
Lead, Total	ND	ND	mg/l	NC		20
Dissolved Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1325848-4 QC Sample: L1961750-02 Client ID: DUP Sample						
Arsenic, Dissolved	0.1120	0.1052	mg/l	6		20
Chromium, Dissolved	0.5683	0.5603	mg/l	1		20
Selenium, Dissolved	ND	ND	mg/l	NC		20
Zinc, Dissolved	ND	ND	mg/l	NC		20

INORGANICS
&
MISCELLANEOUS

Project Name: 21-35 WEST SECOND STREET
Project Number: 132190-005

Lab Number: L1961616
Report Date: 01/03/20

SAMPLE RESULTS

Lab ID: L1961616-01
Client ID: HA19-2-20191224
Sample Location: BOSTON, MA

Date Collected: 12/24/19 11:45
Date Received: 12/24/19
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										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	12/26/19 07:38	121,2540D	EM
Cyanide, Total	ND		mg/l	0.005	--	1	12/26/19 08:05	12/26/19 10:28	121,4500CN-CE	LH
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	12/24/19 18:23	121,4500CL-D	AS
Nitrogen, Ammonia	0.161		mg/l	0.075	--	1	12/26/19 10:10	12/26/19 23:23	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.00	--	1	12/26/19 16:30	12/26/19 21:30	74,1664A	ML
Phenolics, Total	ND		mg/l	0.030	--	1	12/26/19 05:20	12/26/19 08:56	4,420.1	MV
Chromium, Hexavalent	ND		mg/l	0.010	--	1	12/24/19 19:20	12/24/19 19:58	1,7196A	AS
Anions by Ion Chromatography - Westborough Lab										
Chloride	20.6		mg/l	0.500	--	1	-	12/27/19 03:38	44,300.0	DS

Project Name: 21-35 WEST SECOND STREET **Lab Number:** L1961616

Project Number: 132190-005 **Report Date:** 01/03/20

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: WG1324653-1										
Chlorine, Total Residual	ND		mg/l	0.02	--	1	-	12/24/19 18:23	121,4500CL-D	AS
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1324662-1										
Chromium, Hexavalent	ND		mg/l	0.010	--	1	12/24/19 19:20	12/24/19 19:56	1,7196A	AS
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1324738-1										
Phenolics, Total	ND		mg/l	0.030	--	1	12/26/19 05:20	12/26/19 08:48	4,420.1	MV
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1324748-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	12/26/19 07:38	121,2540D	EM
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1324763-1										
Cyanide, Total	ND		mg/l	0.005	--	1	12/26/19 08:05	12/26/19 10:20	121,4500CN-CE	LH
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1324794-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	12/26/19 10:10	12/26/19 23:19	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1325010-1										
TPH, SGT-HEM	ND		mg/l	4.00	--	1	12/26/19 16:30	12/26/19 21:30	74,1664A	ML
Anions by Ion Chromatography - Westborough Lab for sample(s): 01 Batch: WG1325131-1										
Chloride	ND		mg/l	0.500	--	1	-	12/27/19 01:26	44,300.0	DS

Lab Control Sample Analysis

Batch Quality Control

Project Name: 21-35 WEST SECOND STREET
Project Number: 132190-005

Lab Number: L1961616
Report Date: 01/03/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1324653-2								
Chlorine, Total Residual	104		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1324662-2								
Chromium, Hexavalent	101		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1324738-2								
Phenolics, Total	95		-		70-130	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1324763-2								
Cyanide, Total	102		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1324794-2								
Nitrogen, Ammonia	106		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1325010-2								
TPH	90		-		64-132	-		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 Batch: WG1325131-2								
Chloride	97		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 21-35 WEST SECOND STREET
Project Number: 132190-005

Lab Number: L1961616
Report Date: 01/03/20

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: WG1324653-4 QC Sample: L1961616-01 Client ID: HA19-2-20191224												
Chlorine, Total Residual	ND	0.25	0.26	104		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1324662-4 QC Sample: L1961616-01 Client ID: HA19-2-20191224												
Chromium, Hexavalent	ND	0.1	0.102	102		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1324738-4 QC Sample: L1961602-01 Client ID: MS Sample												
Phenolics, Total	ND	0.4	0.37	94		-	-		70-130	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1324763-4 QC Sample: L1961616-01 Client ID: HA19-2-20191224												
Cyanide, Total	ND	0.2	0.186	93		-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1324794-4 QC Sample: L1961463-03 Client ID: MS Sample												
Nitrogen, Ammonia	39.0	4	30.2	**0**	Q	-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1325010-4 QC Sample: L1900012-153 Client ID: MS Sample												
TPH	ND	20	17.4	87		-	-		64-132	-		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1325131-3 QC Sample: L1961616-01 Client ID: HA19-2-20191224												
Chloride	20.6	4	24.0	**83**	Q	-	-		90-110	-		18

Lab Duplicate Analysis
Batch Quality Control

Project Name: 21-35 WEST SECOND STREET
Project Number: 132190-005

Lab Number: L1961616
Report Date: 01/03/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1324653-3 QC Sample: L1961602-01 Client ID: DUP Sample						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1324662-3 QC Sample: L1961616-01 Client ID: HA19-2-20191224						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1324738-3 QC Sample: L1961602-01 Client ID: DUP Sample						
Phenolics, Total	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1324748-2 QC Sample: L1961561-01 Client ID: DUP Sample						
Solids, Total Suspended	14	13	mg/l	7		29
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1324763-3 QC Sample: L1961602-01 Client ID: DUP Sample						
Cyanide, Total	0.005	0.005	mg/l	6		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1324794-3 QC Sample: L1961463-02 Client ID: DUP Sample						
Nitrogen, Ammonia	0.542	0.417	mg/l	**26**	Q	20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1325010-3 QC Sample: L1900012-152 Client ID: DUP Sample						
TPH	ND	ND	mg/l	NC		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1325131-4 QC Sample: L1961616-01 Client ID: HA19-2-20191224						
Chloride	20.6	20.6	mg/l	0		18

Project Name: 21-35 WEST SECOND STREET
Project Number: 132190-005

Lab Number: L1961616
Report Date: 01/03/20

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information

Cooler	Custody Seal
B	Absent

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1961616-01A	Vial Na2S2O3 preserved	B	NA		2.9	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L1961616-01A1	Vial Na2S2O3 preserved	B	NA		2.9	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L1961616-01B	Vial Na2S2O3 preserved	B	NA		2.9	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L1961616-01B1	Vial Na2S2O3 preserved	B	NA		2.9	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L1961616-01C	Vial Na2S2O3 preserved	B	NA		2.9	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L1961616-01C1	Vial Na2S2O3 preserved	B	NA		2.9	Y	Absent		624.1-SIM-RGP(7),624.1-RGP(7)
L1961616-01D	Vial Na2S2O3 preserved	B	NA		2.9	Y	Absent		504(14)
L1961616-01E	Vial Na2S2O3 preserved	B	NA		2.9	Y	Absent		504(14)
L1961616-01F	Vial unpreserved	B	NA		2.9	Y	Absent		SUB-ETHANOL(14)
L1961616-01G	Vial unpreserved	B	NA		2.9	Y	Absent		SUB-ETHANOL(14)
L1961616-01H	Vial unpreserved	B	NA		2.9	Y	Absent		SUB-ETHANOL(14)
L1961616-01I	Amber 1000ml Na2S2O3	B	7	7	2.9	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L1961616-01I1	Amber 1000ml Na2S2O3	B	7	7	2.9	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L1961616-01J	Amber 1000ml Na2S2O3	B	7	7	2.9	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L1961616-01J1	Amber 1000ml Na2S2O3	B	7	7	2.9	Y	Absent		625.1-RGP(7),625.1-SIM-RGP(7)
L1961616-01K	Amber 1000ml Na2S2O3	B	7	7	2.9	Y	Absent		PCB-608.3(7)
L1961616-01L	Amber 1000ml Na2S2O3	B	7	7	2.9	Y	Absent		PCB-608.3(7)
L1961616-01N	Plastic 250ml HNO3 preserved	B	<2	<2	2.9	Y	Absent		CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),AS-2008T(180),HG-U(28),AG-2008T(180),SE-2008T(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L1961616-01O	Plastic 950ml unpreserved	B	7	7	2.9	Y	Absent		TSS-2540(7)
L1961616-01P	Plastic 950ml unpreserved	B	7	7	2.9	Y	Absent		HEXCR-7196(1),CL-300(28),TRC-4500(1)
L1961616-01Q	Amber 1000ml HCl preserved	B	NA		2.9	Y	Absent		TPH-1664(28)

*Values in parentheses indicate holding time in days

Project Name: 21-35 WEST SECOND STREET
Project Number: 132190-005

Lab Number: L1961616
Report Date: 01/03/20

Container Information

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1961616-01R	Amber 1000ml HCl preserved	B	NA		2.9	Y	Absent		TPH-1664(28)
L1961616-01S	Plastic 250ml NaOH preserved	B	>12	>12	2.9	Y	Absent		TCN-4500(14)
L1961616-01T	Plastic 500ml H2SO4 preserved	B	<2	<2	2.9	Y	Absent		NH3-4500(28)
L1961616-01U	Plastic 120ml unpreserved split	B	7	7	2.9	Y	Absent		-
L1961616-01W	Amber 950ml H2SO4 preserved	B	<2	<2	2.9	Y	Absent		TPHENOL-420(28)
L1961616-01X	Plastic 120ml HNO3 preserved Filtrates	B	NA		2.9	Y	Absent		AG-2008S(180),CR-2008S(180),FE-RI(180),AS-2008S(180),PB-2008S(180),ZN-2008S(180),NI-2008S(180),SE-2008S(180),SB-2008S(180),CD-2008S(180),CU-2008S(180),HG-R(28)

*Values in parentheses indicate holding time in days

Project Name:	21-35 WEST SECOND STREET	**Lab Number:**	L1961616
Project Number:	132190-005	**Report Date:**	01/03/20

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:	21-35 WEST SECOND STREET	**Lab Number:**	L1961616
Project Number:	132190-005	**Report Date:**	01/03/20

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.

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:	21-35 WEST SECOND STREET	**Lab Number:**	L1961616
Project Number:	132190-005	**Report Date:**	01/03/20

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:	21-35 WEST SECOND STREET	**Lab Number:**	L1961616
Project Number:	132190-005	**Report Date:**	01/03/20

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.
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 ANALYTICAL

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 12203 — Tonawanda, NY 14150 — Holmes, PA 19043

Page 1 of 1

Date Rec'd in Lab: 12/24/19

ALPHA Job #: L1961616

H&A Information

H&A Client: Zero Athens, LLC

H&A Address: 465 Medford Street, Suite 2200 Boston, MA 02129

H&A Phone: 617.680.2263

H&A Fax:

H&A Email: ivanzler, jthibault

Project Information

Project Name: 21-35 West Second Street

Project Location: Boston, MA

Project #: 132190-005

(Use Project name as Project #)

Project Manager: L. Vanzler

ALPHAQuote #:

Turn-Around Time

Standard ☑ Due Date:

Rush (only if pre approved) ☐ # of Days: 5 Day

These samples have been previously analyzed by Alpha ☐

Other project specific requirements/comments:

Sample submitted for 2017 NPDES RGP application; please follow approved testing methods and minimum detection levels as required by EPA.

Please specify Metals or TAL.

Deliverables

☑ Email ☐ Fax

☐ EQuIS (1 File) ☑ EQuIS (4 File)

☐ Other:

Regulatory Requirements (Program/Criteria)

MA 2017 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:

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 Initials	Depth	1. VOCs 624.1 & 624.1-SIM	2. SVOCs 625.1 & 625.1-SIM	3. TSS 2540, HexCr, TRC 4500, pH, Cl 300, TCN	4. PCBs 608, EDB 504	5. Ammonia, TPHENOL, TPH 1664	6. Ethanol	7. Total NPDES RGP Metals	8. Dissolved NPDES RGP Metals (Lab	Sample Specific Comments	Total Bottles
L1961616-01	HA19-2-20191224	12/24/19	1145	AQ	MJD	—	X	X	X	X	X	X	X	X	1. 1,4-Dioxane by 624.1-SIM	25
															7. NPDES RGP Metals	
															includes: Ag, As, Cd, Cr, Cu,	
															Ni, Pb, Sb, Se, Zn, Fe, Hg	
															8. Lab Filtered NPDES RGP	
															Metals	
															25 TOTAL	
Container Type							V	A	P	A	A	V	P	?		
Preservative							H	H	A	H	D	A	C	?		

Preservative Code: A = None; B = HCl; C = HNO_3; D = H_2SO_4; E = NaOH; F = MeOH; G = $NaHSO_4$; H = $Na_2S_2O_3$; KE = 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

Relinquished By:	Date/Time	Received By:	Date/Time
	12/24/19 1330		12-24-19 1330
	12/24/19 1610		12/24/19 1620

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# 2019-22-Alpha Analytical by and between Haley & Aldrich, Inc., its subsidiaries and affiliates and Alpha Analytical.

Document ID: 20455 Rev 3 (LITOOOIK)

ALPHA ANALYTICAL
World Class Chemistry

Subcontract Chain of Custody

Tek Lab, Inc.
5445 Horseshoe Lake Road
Collinsville, IL 62234-7425

Alpha Job Number
L1961616

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: Deliverables:	State/Federal Program: Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L1961616

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
	HA19-2-20191224	12-24-19 11:45	WATER	Ethanol by EPA 1671 Revision A	

	Relinquished By:	Date/Time:	Received By:	Date/Time:
	C Coleman	12/26/19		
Form No: AL_subcoc				

December 31, 2019

Melissa Gulli
Alpha Analytical
145 Flanders Road
Westborough, MA 01581
TEL: (603) 319-5010
FAX:

RE: L1961616 **WorkOrder:** 19121634

Dear Melissa Gulli:

TEKLAB, INC received 1 sample on 12/27/2019 10:18:00 AM for the analysis presented in the following report.

Samples are analyzed on an as received basis unless otherwise requested and documented. The sample results contained in this report relate only to the requested analytes of interest as directed on the chain of custody. NELAP accredited fields of testing are indicated by the letters NELAP under the Certification column. Unless otherwise documented within this report, Teklab Inc. analyzes samples utilizing the most current methods in compliance with 40CFR. All tests are performed in the Collinsville, IL laboratory unless otherwise noted in the Case Narrative.

All quality control criteria applicable to the test methods employed for this project have been satisfactorily met and are in accordance with NELAP except where noted. The following report shall not be reproduced, except in full, without the written approval of Teklab, Inc.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Marvin L. Darling II

Marvin L. Darling
Project Manager
(618)344-1004 ex 41
mdarling@teklabinc.com

Teklab, Inc.
Environmental Laboratory

Report Contents

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 19121634
Client Project: L1961616
Report Date: 31-Dec-2019

This reporting package includes the following:

Teklab, Inc.
Environmental Laboratory

Definitions

http://www.teklabinc.com/

Client: Alpha Analytical

Work Order: 19121634

Client Project: L1961616

Report Date: 31-Dec-2019

Abbr Definition

*	Analytes on report marked with an asterisk are not NELAP accredited
CCV	Continuing calibration verification is a check of a standard to determine the state of calibration of an instrument between recalibration.
CRQL	A Client Requested Quantitation Limit is a reporting limit that varies according to customer request. The CRQL may not be less than the MDL.
DF	Dilution factor is the dilution performed during analysis only and does not take into account any dilutions made during sample preparation. The reported result is final and includes all dilution factors.
DNI	Did not ignite
DUP	Laboratory duplicate is a replicate aliquot prepared under the same laboratory conditions and independently analyzed to obtain a measure of precision.
ICV	Initial calibration verification is a check of a standard to determine the state of calibration of an instrument before sample analysis is initiated.
IDPH	IL Dept. of Public Health
LCS	Laboratory control sample is a sample matrix, free from the analytes of interest,spiked with verified known amounts of analytes and analyzed exactly like a sample to establish intra-laboratory or analyst specific precision and bias or to assess the performance of all or a portion of the measurement system.
LCSD	Laboratory control sample duplicate is a replicate laboratory control sample that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MBLK	Method blank is a sample of a matrix similar to the batch of associated sample (when available) that is free from the analytes of interest and is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedures, and in which no target analytes or interferences should present at concentrations that impact the analytical results for sample analyses.
MDL	"The method detection limit is defined as the minimum measured concentration of a substance that can be reported with 99% confidence that the measured concentration is distinguishable from method blank results."
MS	Matrix spike is an aliquot of matrix fortified (spiked) with known quantities of specific analytes that is subjected to the entire analytical procedures in order to determine the effect of the matrix on an approved test method's recovery system. The acceptable recovery range is listed in the QC Package (provided upon request).
MSD	Matrix spike duplicate means a replicate matrix spike that is prepared and analyzed in order to determine the precision of the approved test method. The acceptable recovery range is listed in the QC Package (provided upon request).
MW	Molecular weight
ND	Not Detected at the Reporting Limit
NELAP	NELAP Accredited
PQL	Practical quantitation limit means the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions.
RL	The reporting limit the lowest level that the data is displayed in the final report. The reporting limit may vary according to customer request or sample dilution. The reporting limit may not be less than the MDL.
RPD	Relative percent difference is a calculated difference between two recoveries (ie. MS/MSD). The acceptable recovery limit is listed in the QC Package (provided upon request).
SPK	The spike is a known mass of target analyte added to a blank sample or sub-sample; used to determine recovery deficiency or for other quality control purposes.
Surr	Surrogates are compounds which are similar to the analytes of interest in chemical composition and behavior in the analytical process, but which are not normally found in environmental samples.
TIC	Tentatively identified compound: Analytes tentatively identified in the sample by using a library search. Only results not in the calibration standard will be reported as tentatively identified compounds. Results for tentatively identified compounds that are not present in the calibration standard, but are assigned a specific chemical name based upon the library search, are calculated using total peak areas from reconstructed ion chromatograms and a response factor of one. The nearest Internal Standard is used for the calculation. The results of any TICs must be considered estimated, and are flagged with a "T". If the estimated result is above the calibration range it is flagged "ET"
TNTC	Too numerous to count (> 200 CFU)

Qualifiers

# -	Unknown hydrocarbon	B -	Analyte detected in associated Method Blank
C -	RL shown is a Client Requested Quantitation Limit	E -	Value above quantitation range
H -	Holding times exceeded	I -	Associated internal standard was outside method criteria
J -	Analyte detected below quantitation limits	M -	Manual Integration used to determine area response
ND -	Not Detected at the Reporting Limit	R -	RPD outside accepted recovery limits
S -	Spike Recovery outside recovery limits	T -	TIC(Tentatively identified compound)
X -	Value exceeds Maximum Contaminant Level		

Teklab, Inc.
Environmental Laboratory

Case Narrative

http://www.teklabinc.com/

Client: Alpha Analytical
Client Project: L1961616

Work Order: 19121634
Report Date: 31-Dec-2019

Cooler Receipt Temp: 0.4 °C

Locations

Collinsville

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email jhriley@teklabinc.com

Springfield

Address 3920 Pintail Dr
Springfield, IL 62711-9415
Phone (217) 698-1004
Fax (217) 698-1005
Email KKlostermann@teklabinc.com

Kansas City

Address 8421 Nieman Road
Lenexa, KS 66214
Phone (913) 541-1998
Fax (913) 541-1998
Email jhriley@teklabinc.com

Collinsville Air

Address 5445 Horseshoe Lake Road
Collinsville, IL 62234-7425
Phone (618) 344-1004
Fax (618) 344-1005
Email EHurley@teklabinc.com

Chicago

Address 1319 Butterfield Rd.
Downers Grove, IL 60515
Phone (630) 324-6855
Fax
Email arenner@teklabinc.com

Teklab, Inc.
Environmental Laboratory

Accreditations

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 19121634
Client Project: L1961616
Report Date: 31-Dec-2019

State	Dept	Cert #	NELAP	Exp Date	Lab
Illinois	IEPA	100226	NELAP	1/31/2020	Collinsville
Kansas	KDHE	E-10374	NELAP	4/30/2020	Collinsville
Louisiana	LDEQ	166493	NELAP	6/30/2020	Collinsville
Louisiana	LDEQ	166578	NELAP	6/30/2020	Collinsville
Oklahoma	ODEQ	9978	NELAP	8/31/2020	Collinsville
Arkansas	ADEQ	88-0966		3/14/2020	Collinsville
Illinois	IDPH	17584		5/31/2021	Collinsville
Indiana	ISDH	C-IL-06		1/31/2020	Collinsville
Kentucky	KDEP	98006		12/31/2019	Collinsville
Kentucky	UST	0073		1/31/2020	Collinsville
Louisiana	LDPH	LA016		12/31/2019	Collinsville
Missouri	MDNR	930		1/31/2022	Collinsville
Missouri	MDNR	00930		5/31/2021	Collinsville
Tennessee	TDEC	04905		1/31/2020	Collinsville

Teklab, Inc.
Environmental Laboratory

Laboratory Results

http://www.teklabinc.com/

Client: Alpha Analytical
Work Order: 19121634
Client Project: L1961616
Report Date: 31-Dec-2019
Lab ID: 19121634-001
Client Sample ID: HA19-2-20191224
Matrix: AQUEOUS
Collection Date: 12/24/2019 11:45

Analyses	Certification	RL	Qual	Result	Units	DF	Date Analyzed	Batch
EPA 600 1671A, PHARMACEUTICAL MANUFACTURING INDUSTRY NON-PURGEABLE VOLATILE ORGANICS								
Ethanol	*	20		**ND**	mg/L	1	12/27/2019 20:48	R271087

Teklab, Inc. Environmental Laboratory

Quality Control Results

http://www.teklabinc.com/

Client: Alpha Analytical
Client Project: L1961616

Work Order: 19121634
Report Date: 31-Dec-2019

EPA 600 1671A, PHARMACEUTICAL MANUFACTURING INDUSTRY NON-PURGEABLE VOLATILE ORG

Batch R271087 **SampType:** MBLK Units **mg/L**
SampID: MBLK-122719

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	20		**ND**						12/27/2019

Batch R271087 **SampType:** LCS Units **mg/L**
SampID: LCS-122719

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	20		**220**	250.0	0	86.3	70	132	12/27/2019

Batch R271087 **SampType:** MS Units **mg/L**
SampID: 19121417-002AMS

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	Low Limit	High Limit	Date Analyzed
Ethanol	20		**220**	250.0	0	86.0	70	132	12/27/2019

Batch R271087 **SampType:** MSD Units **mg/L** RPD Limit **30**
SampID: 19121417-002AMSD

Analyses	RL	Qual	Result	Spike	SPK Ref Val	%REC	RPD Ref Val	%RPD	Date Analyzed
Ethanol	20		**250**	250.0	0	102.0	215.1	16.94	12/27/2019

Teklab, Inc. Environmental Laboratory

Receiving Check List

http://www.teklabinc.com/

Client: Alpha Analytical

Client Project: L1961616

Work Order: 19121634

Report Date: 31-Dec-2019

Carrier: UPS

Received By: KMT

Completed by: Amber M. Dilallo
On: 27-Dec-2019

Reviewed by: Elizabeth A. Hurley
On: 27-Dec-2019

Pages to follow: Chain of custody 1 Extra pages included 0

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐	Temp °C 0.4
Type of thermal preservation?	None ☐	Ice ☑	Blue Ice ☐	Dry Ice ☐
Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐		
Samples in proper container/bottle?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Reported field parameters measured:	Field ☐	Lab ☐	NA ☑	
Container/Temp Blank temperature in compliance?	Yes ☑	No ☐		

When thermal preservation is required, samples are compliant with a temperature between 0.1°C - 6.0°C, or when samples are received on ice the same day as collected.

Water – at least one vial per sample has zero headspace?	Yes ☑	No ☐	No VOA vials ☐
Water - TOX containers have zero headspace?	Yes ☐	No ☐	No TOX containers ☑
Water - pH acceptable upon receipt?	Yes ☑	No ☐	NA ☐
NPDES/CWA TCN interferences checked/treated in the field?	Yes ☐	No ☐	NA ☑

Any No responses must be detailed below or on the COC.

ALPHA ANALYTICAL — World Class Chemistry

Subcontract Chain of Custody

Tek Lab, Inc.
5445 Horsehoe Lake Road
Collinsville, IL 62234-7425

Alpha Job Number
L1961616

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:
Deliverables:

Regulatory Requirements/Report Limits

State/Federal Program:
Regulatory Criteria:

Project Specific Requirements and/or Report Requirements

Reference following Alpha Job Number on final report/deliverables: L1961616

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
AALK34-001	HA19-2-20191224	12-24-19 11:45	WATER	Ethanol by EPA 1671 Revision A	

Relinquished By:	Date/Time:	Received By:	Date/Time:
C Coleman	12/26/19	UPS	12/27/19 1018

Form No: AL_subcoc

0.4°C LTG3 ice
OLHS KH 12/27/19

KH 12/27/19

ANALYTICAL REPORT

Lab Number:	L2002682
Client:	Haley & Aldrich, Inc. 465 Medford Street, Suite 2200 Charlestown, MA 02129-1400
ATTN:	Lee Vanzler
Phone:	(617) 886-7561
Project Name:	21-35 WEST SECOND STREET
Project Number:	132190-005
Report Date:	01/20/20

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: 21-35 WEST SECOND STREET
Project Number: 132190-005

Lab Number: L2002682
Report Date: 01/20/20

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L2002682-01	CSO-072	WATER	BOSTON, MA	09/13/19 12:00	09/13/19

Project Name:	21-35 WEST SECOND STREET	**Lab Number:**	L2002682
Project Number:	132190-005	**Report Date:**	01/20/20

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.

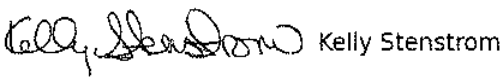
When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded 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.

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

Authorized Signature:  Kelly Stenstrom

Title: Technical Director/Representative Date: 01/20/20

INORGANICS
&
MISCELLANEOUS

Project Name: 21-35 WEST SECOND STREET
Project Number: 132190-005
Lab Number: L2002682
Report Date: 01/20/20

SAMPLE RESULTS

Lab ID: L2002682-01
Client ID: CSO-072
Sample Location: BOSTON, MA
Sample Depth:
Matrix: Water

Date Collected: 09/13/19 12:00
Date Received: 09/13/19
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
SALINITY	28		SU	2.0	--	1	-	09/14/19 03:24	121,2520B	JW
pH (H)	7.8		SU	-	NA	1	-	09/14/19 09:38	121,4500H+-B	JA
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	09/16/19 07:10	09/16/19 21:53	121,4500NH3-BH	ML

Project Name: 21-35 WEST SECOND STREET **Lab Number:** L2002682

Project Number: 132190-005 **Report Date:** 01/20/20

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: WG1284451-1										
Nitrogen, Ammonia	ND		mg/l	0.075	--	1	09/16/19 07:10	09/16/19 21:38	121,4500NH3-BH	ML

Lab Control Sample Analysis

Batch Quality Control

Project Name: 21-35 WEST SECOND STREET

Project Number: 132190-005

Lab Number: L2002682

Report Date: 01/20/20

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1284129-1								
SALINITY	101		-			-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1284168-1								
pH	100		-		99-101	-		5
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1284451-2								
Nitrogen, Ammonia	100		-		80-120	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: 21-35 WEST SECOND STREET
Project Number: 132190-005

Lab Number: L2002682
Report Date: 01/20/20

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: WG1284451-4 QC Sample: L1942242-01 Client ID: MS Sample												
Nitrogen, Ammonia	ND	4	3.66	92		-	-		80-120	-		20

Lab Duplicate Analysis

Batch Quality Control

Project Name: 21-35 WEST SECOND STREET

Project Number: 132190-005

Lab Number: L2002682

Report Date: 01/20/20

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1284129-2 QC Sample: L1942242-01 Client ID: DUP Sample						
SALINITY	28	27	SU	4		
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1284168-2 QC Sample: L1941758-01 Client ID: DUP Sample						
pH	7.4	7.3	SU	1		5
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1284451-3 QC Sample: L1942242-01 Client ID: DUP Sample						
Nitrogen, Ammonia	ND	ND	mg/l	NC		20

Project Name: 21-35 WEST SECOND STREET
Project Number: 132190-005

Lab Number: L2002682
Report Date: 01/20/20

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(*)
L2002682-01A	Plastic 60ml unpreserved	NA	NA			Y	Absent		PH-4500(.01)
L2002682-01B	Amber 120ml unpreserved	NA	NA			Y	Absent		SALINITY(28)
L2002682-01C	Plastic 500ml H2SO4 preserved	NA	NA			Y	Absent		NH3-4500(28)

*Values in parentheses indicate holding time in days

Project Name:	21-35 WEST SECOND STREET	**Lab Number:**	L2002682
Project Number:	132190-005	**Report Date:**	01/20/20

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:	21-35 WEST SECOND STREET	**Lab Number:**	L2002682
Project Number:	132190-005	**Report Date:**	01/20/20

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

Report Format: Data Usability Report

Project Name:	21-35 WEST SECOND STREET	**Lab Number:**	L2002682
Project Number:	132190-005	**Report Date:**	01/20/20

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:	21-35 WEST SECOND STREET	**Lab Number:**	L2002682
Project Number:	132190-005	**Report Date:**	01/20/20

REFERENCES

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

Westborough Facility
EPA 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 ANALYTICAL

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: 9/13/19

ALPHA Job #: L1942242

H&A Information

H&A Client:

H&A Address: 465 Medford Street

Boston, MA 02129

H&A Phone: 617-886-7400

H&A Fax:

H&A Email: LVoegler@haldrich.com

Project Information

Project Name:

Project Location: Boston

Project #

(Use Project name as Project #) ☐

Project Manager: L. Voegler

ALPHAQuote #:

Turn-Around Time

Standard ☑ — Due Date:

Rush (only if pre approved) ☐ — # of Days: 5 Day

Deliverables

☑ Email ☐ Fax

☐ EQuIS (1 File) ☐ EQuIS (4 Files)

☐ Other:

Billing Information

☑ Same as Client Info

PO #

Regulatory Requirements (Program/Criteria)

MA

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:

Please specify Metals or TAL.

L12002682

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	Ammonia	Salinity	pH	TCN	Ethanol	524, 624 with SIM ROC			Sample Specific Comments	Total # Bottles
L1942242-01	CSO-072	9/13/19	1200	AQ	SRP	X	X	X							3
-02	HA7-3(24)	↓	1330	↓	↓				X	X	X				12
Container Type						P	A	P	P	V	V				
Preservative						O	A	A	E	B	H				

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

Relinquished By:	Date/Time	Received By:	Date/Time
A. Pink	9/13/19	Matt	9/13/19 1603
Matt	9/13/19 1603	[illegible]	9/13/19 1605
[illegible]	9/13/19 1910	[illegible]	9/13/19 1910

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# 2016-18-Alpha Analytical by and between Haley & Aldrich, Inc., its subsidiaries and affiliates and Alpha Analytical.

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