MASSACHUSETTS
100 Fifth Avenue, 5th Floor
Waltham, Massachusetts 02451
p +1 781.419.7696

RHODE ISLAND
10 Hemingway Drive, 2nd Floor
East Providence, Rhode Island 02915
p +1 401.434.5560

VIRGINIA
999 Waterside Drive, Suite 2525
Norfolk, Virginia 23510
p +1 757.777.3777

June 8, 2017

United States Environmental Protection Agency
Remediation General Permit NOI Processing
5 Post Office Square, Suite 100
Mail Code OEP06-01
Boston, Massachusetts 02109-3912

Re: Notice of Intent for Temporary Discharge
3190-3204 Washington Street & 50 Montebello Avenue
Boston, MA 02130
ESS Project No. B451-001

To Whom It May Concern,

ESS Group, Inc. (ESS), on behalf of 3200 Washington Street LLC (the Client), respectfully submits this EPA Remediation General Permit (RGP) Notice of Intent (NOI) for the properties located at 3190-3204 Washington Street and 50 Montebello Avenue in the Jamaica Plain section of Boston, Massachusetts (hereafter referred to as the Site or subject Site). This submittal has been prepared in order to obtain a permit for the temporary discharge of groundwater and storm-water generated during construction activities to the Charles River via a municipal storm drain system.

The required NOI Form contained in the RGP permit is included as **Attachment A**. This project is considered Activity Category III-G as defined in the RGP. Based on the Activity Category, and in accordance with the RGP, contamination Types A through F, as described in Table 2 of the RGP, apply to the Site. Thus, Technology Based Effluent Limitations (TBELs) and Water Quality Based Effluent Limitations (WQBELs) apply and were calculated in accordance with Appendix V of the RGP for detected parameters.

SITE DESCRIPTION

The longitude and latitude for the central area of the Site is approximately 42° 18' 45.57' north and 71° 6' 3.43''east, respectively. The location of the Site relative to regional geographic features is shown on the Site Locus Map included as **Figure 1**.

The Site is located in a mixed commercial and residential area of the Jamaica Plain section of Boston, Massachusetts and consists of two properties located at 3190-3204 Washington Street and 50 Montebello Road. Collectively the properties, which according to the City of Boston Assessors database are identified by Parcel ID Nos. 1102371010 and 1102370000, respectively, cover an area of approximately 38,044 square feet (ft^2). The properties are generally rectangular in shape and bound by Montebello Road to the south, Washington Street to the west, Iffley Road to the north and residential properties to the east. Mixed commercial and residential properties are located immediately across Washington Street to the west and Iffley Street to the north and residential properties are located immediately across Montebello Road to the south. The central and western portions of the Site are mostly flat with a slight slope to the west, while the northeast portion of the Site has a more distinct slope to the west.

It should be noted that the portion of the subject Site identified by Parcel ID No. 1102371010 formerly consisted of four parcels of land (located at 3190 Washington Street, 3204 Washington Street and 11 & 15 Iffley Road). In 2016, the four parcels were combined to form the current parcel. A two-story brick structure exists at the former 3190 Washington Street parcel, which is currently vacant. This building was most recently occupied by a plumbing contractor (Economy Plumbing & Heating Supply Company), but also reportedly utilized for automotive repair. A one-story brick building is present at the former 3204 Washington Street parcel, was most recently utilized as an automotive repair garage (E & J Auto Center) circa 1936 - 2016, and was historically utilized as a gasoline filling station circa 1936 - 1995. A one-story concrete block structure (with a former address of 11 &15 Iffley Road) exists on the northeastern portion of the Site and was most recently used as a vehicle storage garage. The 50 Montebello Road parcel is currently vacant and designated as "Urban Wild" land. Refer to the Site Plan (**Figure 2**) for the approximate location of existing Site buildings.

PROPOSED SITE REDEVELOPMENT

The redevelopment project will involve the construction of three new building sections for mixed-use residential and commercial/retail. The new development will include residential units, street level retail space, widened sidewalks and usable open space above a garage facility for on-site parking. Two of the proposed new buildings will be situated along Washington Street, with street level retail space in each location, building lobby, enclosed bike storage and structured parking under ample usable open space at the second floor level at the center of the site. The two new buildings along Washington Street will vary in height, from a six-story building with a mezzanine level at the corner of Washington Street and Iffley Road to a five-story building with a stepped-back sixth level at Washington Street and Montebello Road. Towards the rear of the site along Iffley Road, a third building will feature townhouse units with dedicated on-site parking spaces and ground level open space.

Proposed Scope of Work

The proposed scope of work for Site redevelopment involves demolition and removal of existing Site buildings and structures, excavation and backfilling to achieve proposed elevation grades, installation of subsurface utilities, and construction of new buildings. Excavation activities will include overburden soils and bedrock and advance to a maximum depth of 18 feet below grade surface (bgs). Note that groundwater is not expected to be encountered in overburden soils, which are present across the Site at thicknesses ranging from less than one foot to approximately 8.5 feet. Based on recent Site investigations, groundwater may be encountered in bedrock at depths ranging from 3 to 10 feet bgs.

Dewatering will be performed to manage groundwater and storm-water runoff during Site redevelopment. Groundwater from excavations and storm-water runoff in excavation and depressed areas of the Site will be pumped to a 21,000 gallon fractional (frac) tank or 18,000 gallon weir tank staged on-Site. Under a Dewatering Discharge Permit obtained through the Boston Water and Sewer Commission (BWSC) and the requested RGP, water from the frac tank will be pumped, treated on-Site, as warranted, and discharged to a catch basin located on the south side of Iffley Street. According to the BWSC who was contacted on May 9, 2017 and notified of the proposed discharge, the catch basin is connected to a separate storm-drain system that meanders below the streets of Boston and outfalls at the Charles River. The BWSC identifies the outfall as Outfall No. CS0023. Note

that the Dewatering Discharge Permit will be obtained in conjunction with this requested RGP. A schematic of the storm-drain system immediately surrounding the Site and indicating the catch basin where discharge is proposed is included as **Figure 3**. Refer to **Figure 4** for the approximate location of the storm-drain system outfall at the Charles River.

SITE RELEASE HISTORY

The Site is associated with two known releases of oil and hazardous materials (OHM) reported to the Massachusetts Department of Environmental Protection (MassDEP) in accordance with 310 CMR 40.0000, the Massachusetts Contingency Plan (MCP). Brief descriptions of the releases are summarized below.

OHM Release (RTN 3-11815; CLOSED)

Remedial response actions, including soil excavation and confirmatory soil sampling, were implemented at the former 3204 Washington Street property to address a documented release of gasoline originating from three former underground storage tanks (USTs). The release was assigned Release Tracking Number (RTN) 3-11815 by MassDEP. The USTs were removed in 1994. Excavations to address the release were terminated at bedrock (i.e., approximately 0.5 to 8 feet below grade surface). Groundwater was not encountered during excavation activities, and therefore, was assumed not to be impacted.

A Class A-3 Response Action Outcome (RAO) Statement (Rizzo Associates, Inc., 1995) documented the excavation and off-Site disposal of approximately 75 cubic yards (yds^3) of gasoline-impacted soil and the analytical results for confirmatory soil samples collected from the final limits of the excavation area. Soil sample results revealed residual concentrations of total petroleum hydrocarbons (TPH) and volatile organic compounds (VOCs) above MCP Method 1 risk-based soil standards (S-1/GW-2 and S-1/GW-3) and therefore, an Activity and Use Limitation (AUL) was recorded for a portion of this Disposal Site (i.e., excavation area) to restrict certain uses and to maintain a condition of No Significant Risk (NSR).

A Revised Permanent Solution Statement (PSS) (AEI Consultants, 2016) was prepared for the Site to document the excavation and off-Site recycling or disposal of approximately 230 yds^3 yards of gasoline-impacted soil, soil screening and testing results and termination of the AUL. Analytical results for soil samples collected along the final limits of the excavation area revealed detections of volatile petroleum hydrocarbon (VPH) and EPH below the MCP Method 1 risk-based soil standards (S-1/GW-2 and S-1/GW-3); therefore, the former AUL was terminated.

OHM Release (RTN 3-34104; OPEN)

From September 2016 through January 2017, ESS performed a pre-characterization study of soil/urban fill (Historic Fill) across the Site to facilitate the development of on-Site and/or off-Site soil handling and management approaches to be followed during construction activities. The study included the excavation of test pits and the collection of soil samples for disposal parameters generally accepted by in-state and out-of-state soil receiving facilities. Results of the study revealed the detection of lead, certain semi-volatile organic compounds (SVOCs), and C11-C22 aromatics hydrocarbons in soil at one test pit location (designated as ESS-TP-4) above respective MCP Reportable Concentrations (RCs) for soil category RCS-1, which triggered a 120-day reporting condition to MassDEP under the MCP. It should be noted that one SVOC [benzo(a)pyrene] was detected at test pit ESS-TP-2 and lead was detected at test pit ESS-TP-3 at concentrations above their respective MCP RCS-1 standards; however, these contaminants were considered to be exempt

from reporting to MassDEP pursuant to 310 CMR 40.0317(8) and (9), respectively. 3200 Washington Street LLC reported the release condition to the MassDEP on February 14, 2017. MassDEP assigned RTN 3-34104 to the release condition.

3200 Washington Street LLC plans to address RTN 3-34104 as a Release Abatement Measure (RAM) under the MCP, as summarized in a RAM Plan submitted to MassDEP on March 30, 2017. Proposed RAM activities include the excavation and off-Site disposal of approximately 200 yds^3 of impacted soil from an area around test pit ESS-TP-4 located east of the former Plumbing and Heating building. Soil will be removed at depths ranging from surface grade to approximately three feet below grade or upon encountering bedrock, whichever is encountered first. Refer to the Site Plan included as **Figure 2** for the location of test pits/soil samples and the proposed RAM excavation area. RAM activities are scheduled to occur immediately following demolition of the Site buildings in June 2017.

GROUNDWATER SAMPLING, ANALYSIS & RESULTS

On May 24, 2017, ESS collected one groundwater sample from monitoring well ESS-MW-3 installed to evaluate groundwater quality in the area of three former hydraulic lifts during ESS investigations conducted in January 2017. Note that ESS-MW-3 is also located in the vicinity where remedial response actions were performed to address RTN 3-11815. The sample was collected in clean glassware (preserved and non-preserved), labeled in the field, stored on ice, and submitted under standard chain-of-custody protocol to Alpha Analytical (Alpha) of Westborough, Massachusetts for analysis of hardness and with the exception of ethanol the inorganics, non-halogenated volatile organic compounds (VOCs), halogenated VOCs, non-halogenated semi-VOCs, halogenated semi-VOCs, and fuel parameters listed in categories a through f, respectively, of Appendix VII of the RGP. Additionally, at the time of sample collection, ESS analyzed the groundwater sample for temperature and pH.

Sample hold times (i.e., 24 hours) were exceeded for certain parameters (i.e., total residual chlorine (TRC) and hexavalent chromium) requested for the groundwater sample collected on May 24, 2017, and therefore, an additional groundwater sample was collected from ESS-MW-3 on May 26, 2017. The sample was submitted to Alpha for TRC and hexavalent chromium.

Laboratory analytical results for groundwater revealed the detection of hardness, chloride, total suspended solids (TSS), arsenic, cadmium, chromium, copper, iron, lead, nickel, zinc, and Aroclor 1242 above the laboratory's Reporting Limit (RL) and ammonia, antimony, mercury, selenium, cyanide, tetrachloroethene, bis(2-ethylhexyl)phthalate, and phenanthrene above the laboratory's Method Detection Limits (MDL), as summarized in **Table 1**. Only parameters listed in Table 2 of the RGP are included in **Table 1**. With the exception of TSS and Aroclor 1242, the detected concentrations do not exceed applicable Technology-Based Effluent Limitations (TBELs) or Water Quality-Based Effluent Limitations (WQBELs). WQBELs were calculated in accordance with Appendix V of the RGP for the parameters detected. Note that gasoline constituents, including benzene, toluene, ethyl-benzene, and xylene, were not detected in the groundwater sample above the laboratory RL and MDL, and therefore, it is the opinion of ESS that ethanol is not expected to be present in groundwater at the Site, therefore the groundwater sample was not analyzed for ethanol. Documentation of NOI support calculations is included as **Attachment B**. Copies of the Alpha's Analytical Reports are included in **Attachment C**. Refer to **Figure 2** (Site Plan) for the approximate location where the receiving water sample was collected.

It should also be noted that PCBs were not detected above the laboratory RL of 0.1 micrograms per liter (ug/l) during a recent groundwater sampling event performed by ESS in relation to the former hydraulic lifts. .

RECEIVING WATER CLASSIFICATION, INFORMATION AND SAMPLING

The effluent from the on-Site treatment processes is proposed for discharge to a BWSC storm drain system that outfalls at the Charles River Basin section of the Charles River. As discussed above, the outfall is identified by BWSC No. CSO-023. According to 314 CMR 4.06, the Charles River Basin is designated as Class B with qualifiers identified as Warm Water and Combined Sewer Overflow (CSO).

ESS consulted the on-line United States Geological Survey (USGS) StreamStats program (https://streamstatsags.cr.usgs.gov/streamstats/) to determine the 7Q10 flow rate of the Charles River at the BWSC storm drain outfall. The data obtained from the StreamStats Report indicated that the calculated 7Q10 flow rate is 29.2 cubic feet per second (ft^3/s). A copy of the StreamStats Report is included as **Attachment D**.

On May 24, 2017, ESS collected a sample (designated as RCVG-W-052417) of the Charles River at a location upstream of the BWSC storm drain outfall. The approximate latitude and longitude for the sample location is approximately 42° 21' 6.00'' north and 71° 6' 2.72'' east, respectively. The sample was collected in clean glassware (preserved or non-preserved), labeled in the field, stored on ice and submitted under standard chain-of-custody protocol to Alpha for the parameters listed at Section 4.2 (NOI Monitoring Requirements) of the RGP. Additionally, at the time of sample collection, ESS analyzed the surface water sample for temperature and pH. Laboratory analytical results for the receiving water are summarized on **Table 2** and a copy of the Alpha Analytical Report is included in **Attachment C**. Refer to **Figure 5** (Receiving Water Sampling Plan) for the approximate location where the receiving water sample was collected.

CONSTRUCTION SITE DEWATERING, TREATMENT, AND DISCHARGE

Dewatering is expected for groundwater and storm-water runoff encountered during construction activities. The water will be pumped via electric submersible pumps to a 21,000 gallon frac tank or 18,000 gallon weir tank staged on-Site for settling and temporary storage. The recovered water will then be pumped via an electric submersible pump through bag filters, two (2) 1,000-pound capacity liquid granular activated carbon vessels, cartridge filters in series and a flow meter in series prior to being discharged to the catch basin located along Iffley Street. The average flow rate of the system is expected to be less than 50 gallons per minute (gpm). The pumping capacity of the water treatment system is approximately 100 gpm based upon the capacity of the proposed submersible pumps. A schematic of the treatment system is shown on Figure 6.

The water treatment system shall be inspected and monitored by a Grade II Wastewater Treatment Plant Operator as required in accordance with the RGP. Influent and effluent samples shall be collected prior to discharge and submitted to a Massachusetts-certified laboratory for analysis of contaminants of concern and any additional monitoring parameters required by the RGP. Additional mid-point samples will be collected as needed to further monitor the treatment system for potential break-through.

A Best Management Practices (BMP) Plan meeting the requirements of the RGP has been prepared and will be posted at the Site and implemented during the time period that temporary construction dewatering

is occurring. Note that dewatering is expected to occur during the period from June 2017 through September 2018.

ENVIRONMENTAL RECEPTORS

According to the Massachusetts Office of Geographic Information Systems (MassGIS) online MassDEP Phase 1 Site Assessment Map (http://maps.massgis.state.ma.us/images/dep/mcp/mcp.htm) and Natural Heritage Endangered Species Program (NHESP) online maps, no Priority Habitat of Rare Species or Estimated Habitats of Rare Wildlife are located within the work area or at the proposed discharge location. In addition, the MassGIS maps do not depict any Areas of Critical Environmental Concern on or within one-half mile of the Site.

As part of the Endangered Species Act eligibility determination, ESS utilized the U.S. Fish and Wildlife Service's (FWS's) online Information for Planning and Consultation (IPaC) System found at https://ecos.fws.gov/ipac/ to generate letters describing threatened and/or endangered species and critical habitats that may occur within the boundary of the proposed project or that may be affected by the proposed project. According to the FWS letter generated for the Site, one threatened species, the Red Knot (*Calidris canutus rufa*), should be considered in an effects analysis for the project. The letter further indicates that no critical habitats for the Red Knot exist within the proposed project area. Therefore, the proposed project will have "no effect" on the Red Knot, and as such, the proposed project meets FWS Criterion C. Copies of the FWS letters generated for the proposed project are included as **Attachment E**.

REVIEW OF NATIONAL REGISTER OF HISTORIC PLACES (CEA)

On June 6, 2017, ESS obtained a list of all Historic Places within the Jamaica Plain section of Boston, Massachusetts from the Massachusetts Cultural Resources Information System (MACRIS) online database at http://mhc-macris.net/. The database indicates that numerous historic places are located within Jamaica Plain; however, no historic places are located within the boundaries of the Site.

According to the National Park Service' (NPS) National Register of Historic Places online geospatial database, the storm-drain system that is proposed to convey treated water from the Site to the outfall at the Charles River passes through areas containing Historic Places; however, the proposed project does not involve the demolition or redevelopment of Historic Places identified in the MACRIS or NPS database and the storm-drain system is located underground and primarily along roadways. Based on the foregoing, the discharge and discharge related activities will not have the potential to affect historic properties, and therefore, the project meets the National Historic Preservation Act (NHPA) Criterion B.

Should you have any questions regarding this submittal or require additional information, please contact the undersigned via email at cparadis@essgroup.com or by phone at (781) 419-7714.

Sincerely,

ESS GROUP, INC.

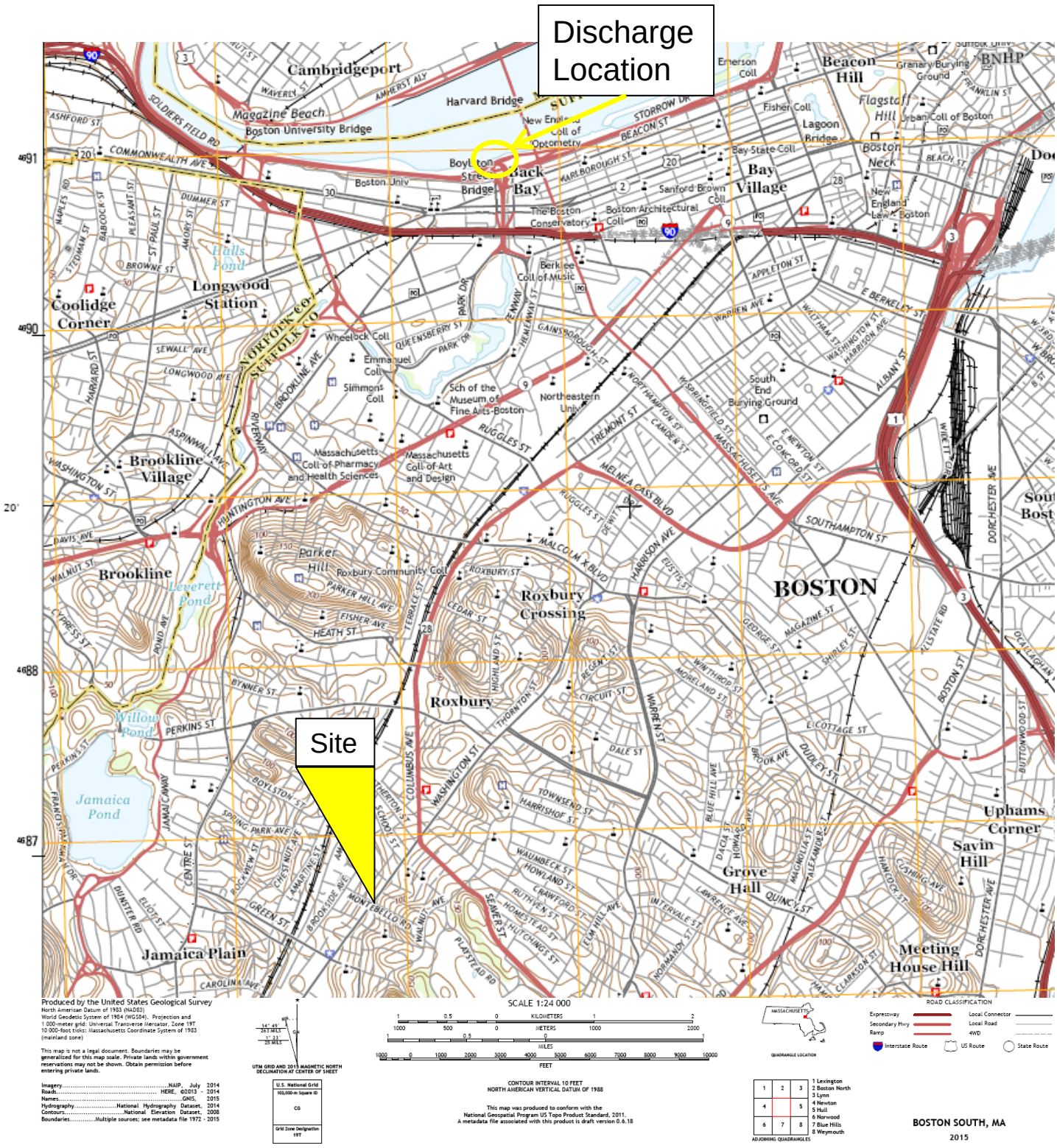
Craig C. Paradis
Project Scientist III
Environmental Geosciences and
Engineering Division

Attachments: Figure 1 – Site Locus Map
Figure 2 – Site Plan
Figure 3 – Storm-Drain Discharge Flow Plan
Figure 4 – Storm-Drain Outfall Plan
Figure 5 – Receiving Water Sample Location Map
Figure 6 – Schematic of Treatment System

Attachment A – RGP Notice of Intent
Attachment B – Dilution Factor and WQBEL Calculations
Attachment C - Laboratory Analytical Reports (Groundwater & Receiving Water)
Attachment D - StreamStats Report
Attachment E – FWS IPaC Letters

C: Eric Ekman (3200 Washington Street LLC)

Figures



Site Locus Map

Figure 1

3190-3204 Washington Street & 50 Montebello Road
Boston, Massachusetts

Source: USGS Boston South Quadrangle 7.5 Minute Topographic Map
Scale: As shown above

environmental consulting
& engineering services


IFFLEY ROAD
WASHINGTON STREET
MONTEBELLO ROAD
GRANITE CURB
CONCRETE SIDEWALK
3190-3204 WASHINGTON STREET
FORMER HEATING & PLUMBING BUILDING
FORMER GARAGE
FORMER AUTO BODY REPAIR / GAS STATION
50 MONTEBELLO ROAD
ESS-TP-1
ESS-TP-2
ESS-TP-3
ESS-TP-4
ESS-TP-4A
ESS-TP-4B
ESS-TP-4C
ESS-TP-5
ESS-TP-6
ESS-MW-1
ESS-MW-2
ESS-MW-3
FENCE
GATE
LEGEND
EXISTING BUILDING/STRUCTURE
PROPERTY LINE
ESS-TP-#
ESS TEST PIT/SOIL SAMPLE LOCATION
LIGHT POLE
UTILITY POLE
AREA OF PROPOSED EXCAVATION
MONTIORING WELL
N
0
20
40
FT
SOURCE: ORIGINAL BASE PLAN PROVIDED BY SDD (SPATIAL DATA & DESIGN)

NOTES:

1. BASE PLAN PREPARED USING AN ELECTRONIC FILE ENTITLED "3190 WASHINGTON 122414.dwg" PROVIDED BY SHERWOOD CONSULTING AND DESIGN, LLC.
2. LIMITS OF PROPOSED EXCAVATION IS ARE APPROXIMATE AND SUBJECT TO CHANGE BASED ON FIELD OBSERVATIONS AND FUTURE ANALYTICAL TESTING.

ess group
environmental consulting & engineering services

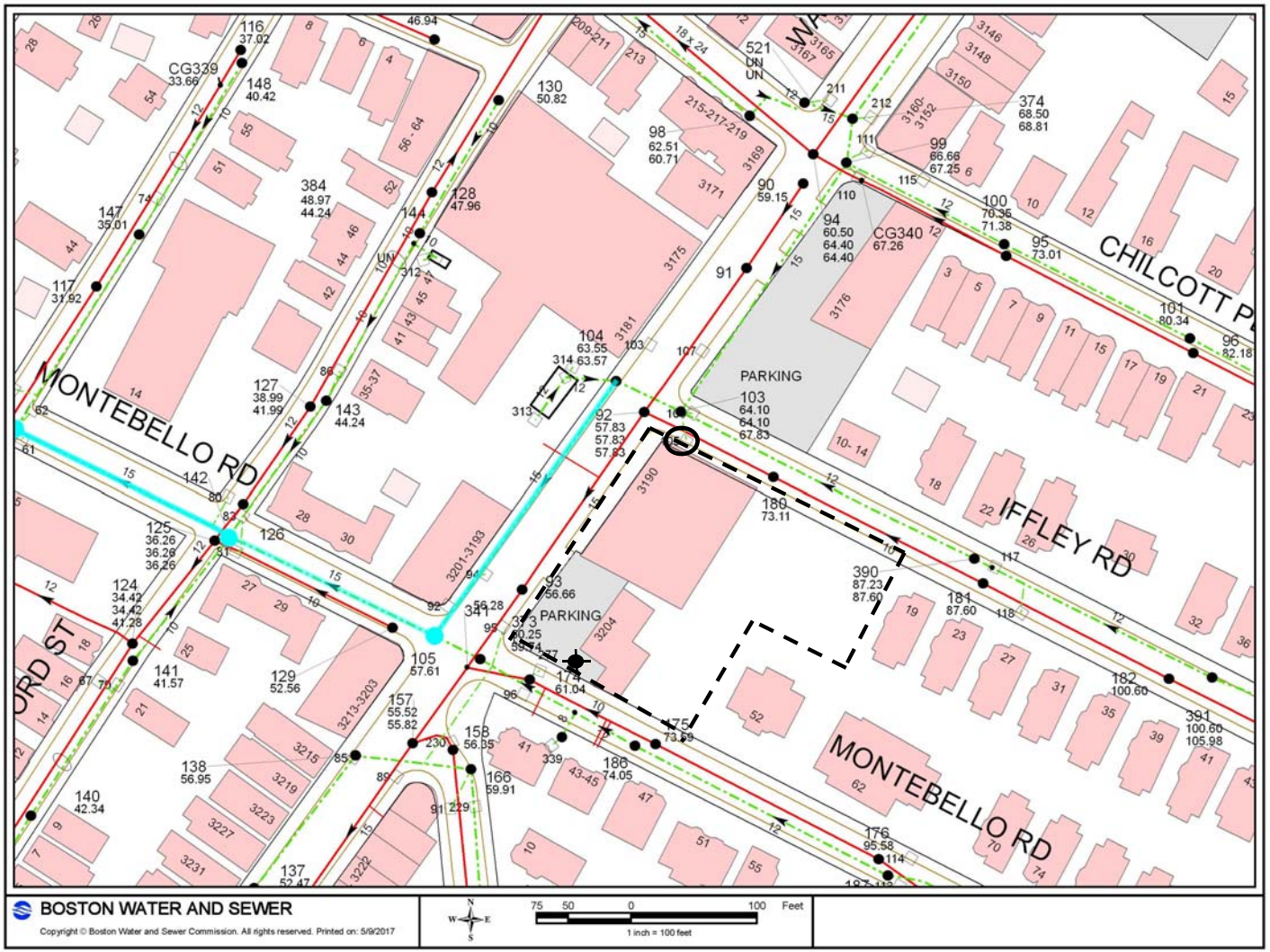
100 Fifth Avenue, 5th Floor
Waltham, Massachusetts 02451
p 781.419.7696
www.essgroup.com

No.	REVISION	DATE	APP BY
DRAWN BY:		CHECKED BY:	
DESIGNED BY:		APPROVED BY:	

BERKLEY INVESTMENTS, INC
3190-3204 WASHINGTON ST
BOSTON, MASSACHUSETTS

FIGURE 2: SITE PLAN

PROJECT No.: B451-001	DRAWING No.
DATE OF ISSUE: 10/03/2016	
SHEET No.: 1	
SCALE: 1"=10'	



LEGEND

- APPROXIMATE LOCATION OF CATCH BASIN USED FOR DISCHARGE
- APPROXIMATE PROJECT BOUNDARY
- APPROXIMATE LOCATION OF ESS-MW-3 USED TO COLLECT INFLUENT SAMPLE FOR NOI

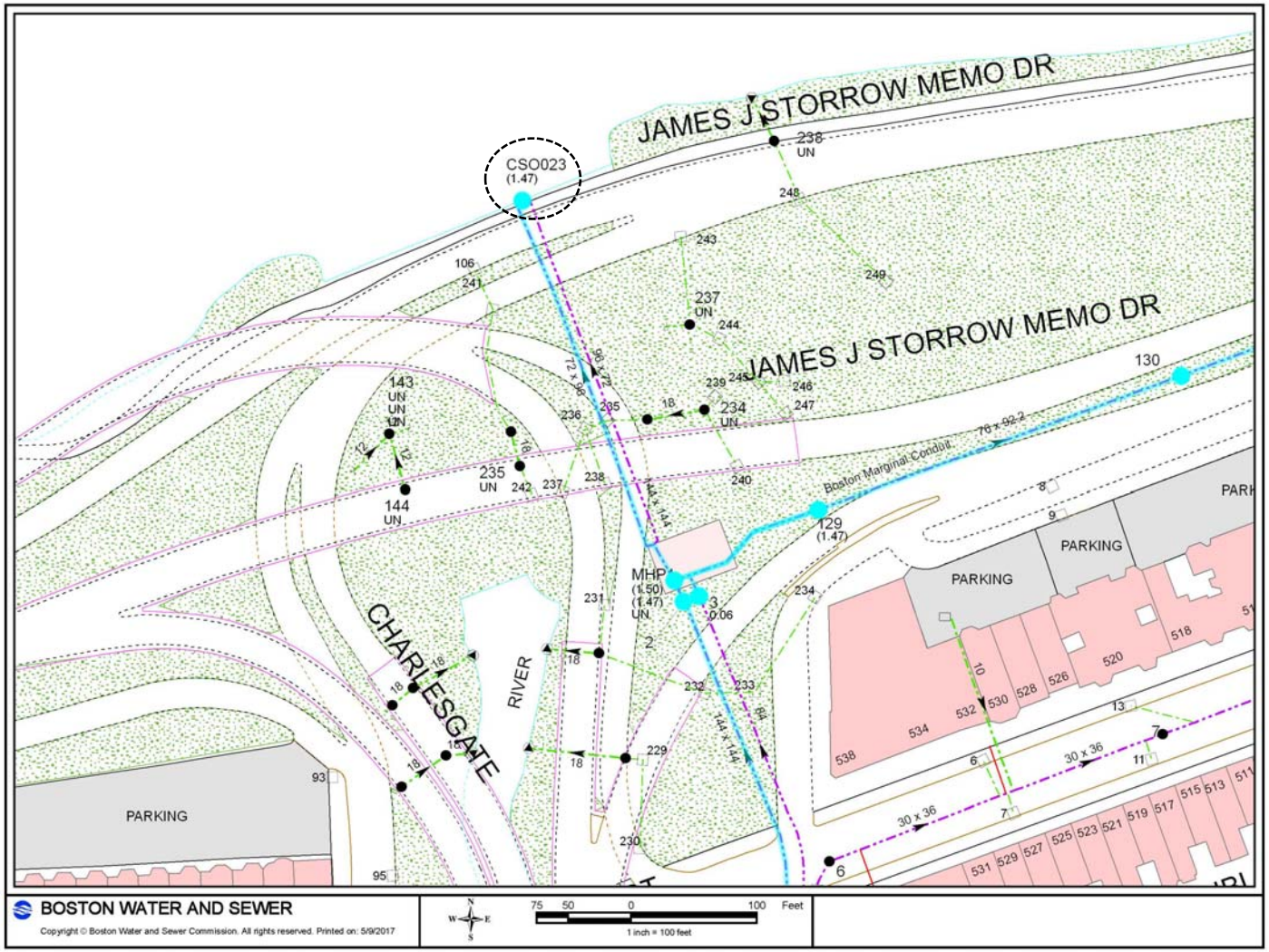
environmental consulting & engineering services

3190-3204 Washington Street & 50 Montebello Road
Boston, Massachusetts

Source: Obtained from the Boston Water & Sewer Commission on May 9, 2017.
Scale: As shown above

STORM-DRAIN DISCHARGE FLOW PLAN

Figure 3



LEGEND

APPROXIMATE LOCATION OF STORM DRAIN OUTFALL (DISCHARGE LOCATION)

ess group
environmental consulting
& engineering services

3190-3204 Washington Street & 50 Montebello Road
Boston, Massachusetts

Source: Obtained from the Boston Water & Sewer Commission on May 9, 2017.
Scale: As shown above

STORM-DRAIN OUTFALL PLAN

Figure 4

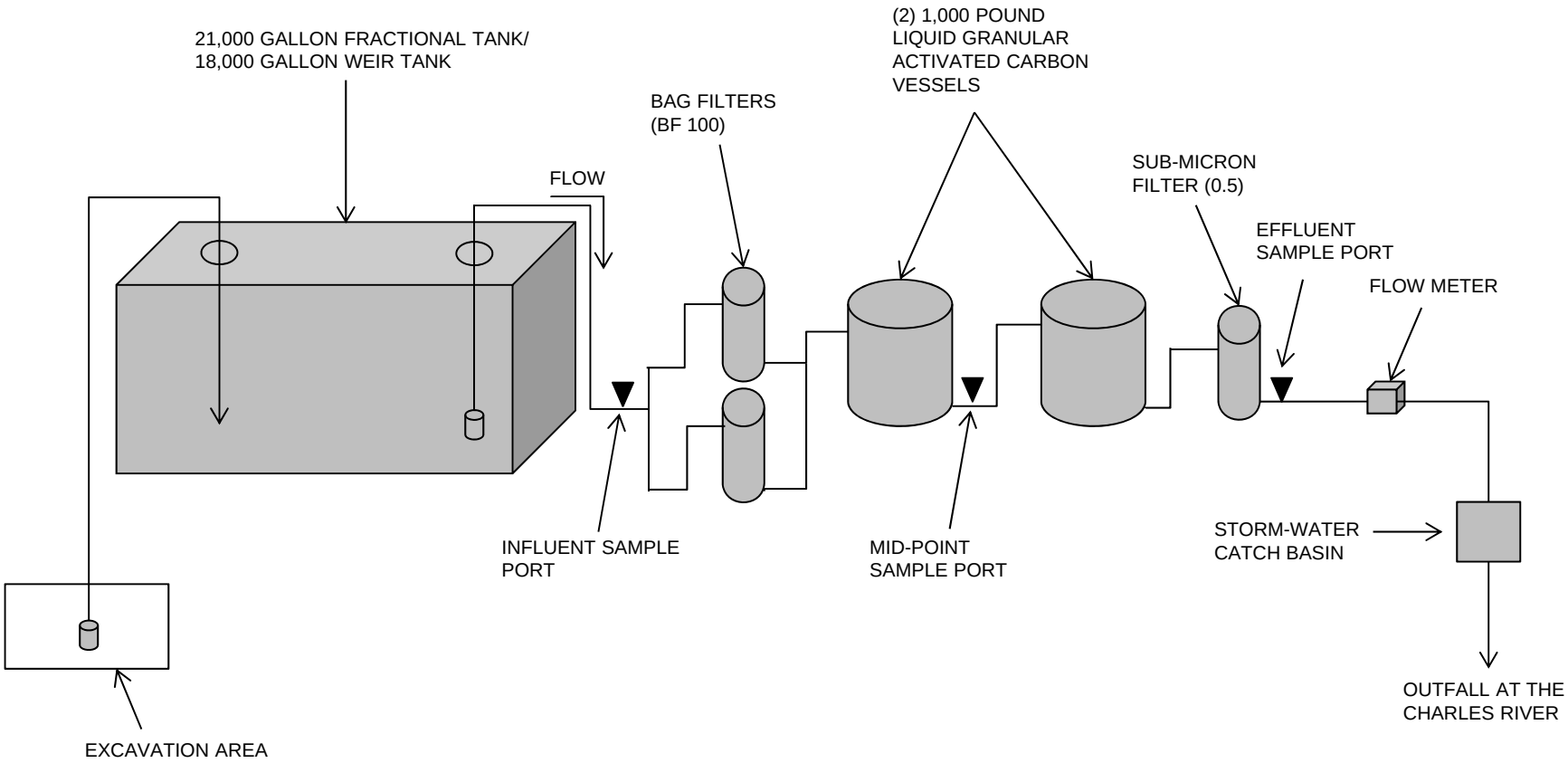
environmental consulting
& engineering services

3190-3204 Washington Street & 50 Montebello Road
Boston, Massachusetts

Source: Google Maps (June 7, 2017)
Scale: As shown above

Receiving Water Sample Location Map

Figure 5



environmental consulting
& engineering services

3190-3204 Washington Street & 50 Montebello Road
Boston, Massachusetts

Scale: Not to scale.

Treatment System Schematic

Figure 6

Tables

TABLE 1 - SUMMARY OF GROUNDWATER ANALYTICAL DATA

3200 WASHINGTON LLC
3190-3204 WASHINGTON STREET & 50 MONTEBELLO ROAD
JAMAICA PLAIN, MASSACHUSETTS

		LOCATION		ESS-MW-3		ESS-MW-3	
		SAMPLING DATE		5/24/2017		5/26/2017	
		Applicable Effluent Limitations					
Parameters	Units	TBEL	WQBEL	Results	Qual	Results	Qual
Hardness	ug/l	NA	NA	**176,500**		-	-
A. Inorganics							
Nitrogen, Ammonia	mg/l	Report mg/L		**0.047**	J	-	-
Chloride	mg/l	Report mg/L		**519**		-	-
Chlorine, Total Residual	ug/l	200	NA	-	-	20	U
Solids, Total Suspended	mg/l	30		**410**		-	-
Antimony, Total	ug/l	206	NA	**1.5**	J	-	-
Arsenic, Total	ug/l	104	NA	**6.26**		-	-
Cadmium, Total	ug/l	10.2	NA	**0.59**		-	-
Chromium, Trivalent	ug/l	323	NA	10	U	-	-
Chromium, Hexavalent	ug/l	323	NA	10	U	10	U
Copper, Total	ug/l	242	NA	**22.41**		-	-
Iron, Total	ug/l	5,000	NA	**1780**		-	-
Lead, Total	ug/l	160	NA	**83.68**		-	-
Mercury, Total	ug/l	0.739	NA	**0.07**	J	-	-
Nickel, Total	ug/l	1,450	NA	**4.45**		-	-
Selenium, Total	ug/l	235.8	NA	**3.58**	J	-	-
Silver, Total	ug/l	35.1	NA	1	U	-	-
Zinc, Total	ug/l	420	NA	**46.14**		-	-
Cyanide, Total	mg/l	178	NA	**0.002**	J	-	-
B. Non-Halogenated Volatile Organic Compounds							
Total BTEX	ug/l	100		ND		-	-
Benzene	ug/l	5.0		0.5	U	-	-
Toluene	ug/l	As Total BTEX		0.75	U	-	-
Ethylbenzene	ug/l			0.5	U	-	-
p/m-Xylene	ug/l			1	U	-	-
o-Xylene	ug/l			1	U	-	-
Xylenes, Total	ug/l			1	U	-	-
1,4-Dioxane	ug/l	200		3	U	-	-
Acetone	ug/l	7.97		5	U	-	-
Phenol	ug/l	1,080	NA	5	U	-	-
C. Halogenated VOCs							
Carbon tetrachloride	ug/l	4.4	NA	0.5	U	-	-
1,2-Dichlorobenzene	ug/l	600		2.5	U	-	-
1,3-Dichlorobenzene	ug/l	320		2.5	U	-	-
1,4-Dichlorobenzene	ug/l	5.0		2.5	U	-	-
1,1-Dichloroethane	ug/l	70		0.75	U	-	-
1,2-Dichloroethane	ug/l	5.0		0.5	U	-	-
1,1-Dichloroethene	ug/l	3.2		0.5	U	-	-
1,2-Dibromoethane	ug/l	0.05		0.011	U	-	-
Methylene chloride	ug/l	4.6		3	U	-	-
1,1,1-Trichloroethane	ug/l	200		0.5	U	-	-
1,1,2-Trichloroethane	ug/l	5.0		0.75	U	-	-
Trichloroethene	ug/l	5.0		0.5	U	-	-
Tetrachloroethene	ug/l	5.0	NA	**0.23**	J	-	-
cis-1,2-Dichloroethene	ug/l	70		0.5	U	-	-
Vinyl chloride	ug/l	2.0		1	U	-	-
D. Non-Halogenated Semi-Volatile Organic Compounds							
Total Phthalates	ug/l	190	NA	**2.1**	J	-	-
Bis(2-ethylhexyl)phthalate	ug/l	101	NA	**2.1**	J	-	-
Benzo(a)anthracene	ug/l	1.0	NA	0.1	U	-	-
Benzo(a)pyrene	ug/l	As Total Group I Polycyclic Aromatic Hydrocarbons	NA	0.1	U	-	-
Benzo(b)fluoranthene	ug/l		NA	0.1	U	-	-
Benzo(k)fluoranthene	ug/l		NA	0.1	U	-	-
Chrysene	ug/l		NA	0.1	U	-	-
Dibenzo(a,h)anthracene	ug/l		NA	0.1	U	-	-
Indeno(1,2,3-cd)pyrene	ug/l		NA	0.1	U	-	-
Total Group I PAHs	ug/l	100		0.1	U	-	-
Acenaphthene	ug/l	As Total Group II Polycyclic Aromatic Hydrocarbons	NA	0.1	U	-	-
Acenaphthylene	ug/l		NA	0.1	U	-	-
Anthracene	ug/l		NA	0.1	U	-	-
Benzo(ghi)perylene	ug/l		NA	0.1	U	-	-
Fluoranthene	ug/l		NA	0.1	U	-	-
Fluorene	ug/l		NA	0.1	U	-	-
Phenanthrene	ug/l		NA	**0.06**	J	-	-
Pyrene	ug/l		NA	0.1	U	-	-
Total Group II PAHs	ug/l	100		**0.06**	J	-	-
Naphthalene	ug/l	20		0.1	U	-	-
E. Halogenated Semi-Volatile Organic Compounds							
Aroclor 1016	ug/l	As Total Polychlorinated Bipheyls	NA	0.25	U	-	-
Aroclor 1221	ug/l		NA	0.25	U	-	-
Aroclor 1232	ug/l		NA	0.25	U	-	-
Aroclor 1242	ug/l		NA	**1.17**		-	-
Aroclor 1248	ug/l		NA	0.25	U	-	-
Aroclor 1254	ug/l		NA	0.25	U	-	-
Aroclor 1260	ug/l		NA	0.2	U	-	-
Total PCBs	ug/l	0.000064		**1.17**		-	-
Pentachlorophenol	ug/l	1.0		0.8	U	-	-
F. Fuel Parameters							
TPH	mg/l	5.0		4.00	U	-	-
Methyl tert butyl ether	ug/l	70	NA	1	U	-	-
tert-Butyl Alcohol	ug/l	120		10	U	-	-
tert-Amyl Methyl Ether	ug/l	90		2	U	-	-

Notes:
TBEL = technology-based effluent limitations
WQBEL = water quality-based effluent limitations (Calculated in accordance with Appendix V fo the RGP.)
Qual = Qualifier
ug/l = micrograms per liter
mg/l = milligrams per liter
NA = Not Applicable. Based on WQBEL calculations.
U = Undetected
ND = Not Detected
J = J-Flag (Concentreation detected between the Method Detection Limit and Reporting Limit.)
- = Not tested
Bold = Concentration detected above the Method Detection Limit and/or Reporting Limit
Bold Red = Concentration detected above the applicable TBEL or WQBEL

TABLE 2 - SUMMARY OF RECEIVING WATER ANALYTICAL DATA

3200 WASHINGTON LLC
3190-3204 WASHINGTON STREET & 50 MONTEBELLO ROAD
JAMAICA PLAIN, MASSACHUSETTS

SAMPLE ID		RCVG-W-052417		RCVG-W-052417	
SAMPLING DATE		5/24/2017		5/26/2017	
Parameter	Units	Results	Qual	Results	Qual
Anions by Ion Chromatography					
Chloride	ug/l	**162000**		-	-
General Chemistry					
Chromium, Trivalent	ug/l	10	U	-	-
SALINITY	SU	2	U	-	-
Nitrogen, Ammonia	ug/l	**184**		-	-
Chromium, Hexavalent	ug/l	**5**	J	**5**	J
Total Hardness (by calculation)					
Hardness	ug/l	**81320**		-	-
Total Metals					
Antimony, Total	ug/l	**0.79**	J	-	-
Arsenic, Total	ug/l	**1.03**		-	-
Cadmium, Total	ug/l	0.2	U	-	-
Chromium, Total	ug/l	**0.9**	J	-	-
Copper, Total	ug/l	**4.1**		-	-
Iron, Total	ug/l	**818**		-	-
Lead, Total	ug/l	**3.63**		-	-
Mercury, Total	ug/l	0.2	U	-	-
Nickel, Total	ug/l	**1.07**	J	-	-
Selenium, Total	ug/l	5	U	-	-
Silver, Total	ug/l	0.4	U	-	-
Zinc, Total	ug/l	**10.57**		-	-

Notes:
Qual = Qualifier
U = Undetected
J = J- Flag (Detected between the Method Detection Limit and Reporting Limit.
- = Not tested
Bold = Detected above the Method Detection Limit and/or Reporting Limit

Attachment A

RGP Notice of Intent

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:
3190-3204 WASHINGTON STREET</td><td colspan="3">Site address: 3190-3204 WASHINGTON STREET & 50 MONTEBELLO ROAD
Street:</td></tr>
<tr><td>City: BOSTON</td><td>State: MA</td><td>Zip: 02130</td></tr>
<tr><td rowspan="4">2. Site owner
3200 WASHINGTON STREET LLC

Owner is (check one): ☐ Federal ☐ State/Tribal ■ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: ERIC EKMAN, *AS AUTHORIZED PERSON</td></tr>
<tr><td colspan="2">Telephone: 617-439-0088</td><td>Email: EEKMAN@BERKINV.COM</td></tr>
<tr><td colspan="3">Mailing address: 280 CONGRESS STREET, SUITE 1350
Street:</td></tr>
<tr><td>City: BOSTON</td><td>State: MA</td><td>Zip: 02210</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
Reynolds Construction Services, Inc.</td><td colspan="3">Contact Person: Brian Hoeg, Project Supervisor</td></tr>
<tr><td colspan="2">Telephone: 774-343-4900</td><td>Email: brian@reyconservices.com</td></tr>
<tr><td colspan="3">Mailing address:
Street: 14 Apollo 11 Road, Suite 1</td></tr>
<tr><td>City: Plymouth</td><td>State: MA</td><td>Zip: 02360</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):
RTN 3-11815 (CLOSED), 3-34104 (OPEN)
☐ 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):
CHARLES RIVER	LOWER WATERSHED	CLASS B

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. 303(d) list water. Impaired uses include aesthetic, fish consumption, fish, other aquatic life and wildlife, primary contact recreation, and secondary

4. Indicate the seven day-ten-year low flow (7Q10) of the receiving water determined in accordance with the instructions in Appendix V for sites located in Massachusetts and Appendix VI for sites located in New Hampshire.	29.2 CFS
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.	263.118

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: June 7, 2017

7. Has the operator attached a summary of receiving water sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ■ Yes ☐ No

C. Source water information:

1. Source water(s) is (check any that apply):

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

2. Source water contaminants: Inorganics, NonHalogenated Semi-VOCs, Non-Halogenated Semi-VOCs, Halogenated Semi-VOCs (See Table 1).	
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): Proposed discharge to a Boston Water and Sewer Commission (BWSC) storm-drain catch basin that discharges to the Charles River. The outfall is identified by BWSC as CSO023. See attached figure for outfall location.	Outfall location(s): (Latitude, Longitude) LATITUDE: 42 degrees, 21 minutes, 5.904 seconds LONGITUDE: -71 degrees, 5 minutes, 33.5688 seconds
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: 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): UPON APPROVAL - JUNE 2017 Indicate if the discharge is expected to occur over a duration of: ☐ less than 12 months ■ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ■ Yes ☐ No	

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

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

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

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✔	1	4500H3-B	0.075 mg/l	0.047 mg/l		Report mg/L	---
Chloride		✔	1	EPA 300.0	25,000 ug/l	519,000 ug/l		Report µg/l	---
Total Residual Chlorine	✔		1	4500CL-D	20 ug/l	<20 ug/l		0.2 mg/L	2894 ug/l
Total Suspended Solids		✔	1	SM 2540	5 ug/l	410 ug/l		30 mg/L	---
Antimony		✔	1	3, 200.8	4 ug/l	1.5J ug/l		206 µg/L	168188 ug/l
Arsenic		✔	1	3, 200.8	1 ug/l	6.26 ug/l		104 µg/L	2361 ug/l
Cadmium		✔	1	3, 200.8	0.2 ug/l	0.59 ug/l		10.2 µg/L	0.2329 ug/l
Chromium III	✔		1	107	10 ug/l	<10 ug/l		323 µg/L	19212.6 ug/l
Chromium VI	✔		1	1,7196A	10 ug/l	<10 ug/l		323 µg/L	3008.6 ug/l
Copper		✔	1	3, 200.8	1 ug/l	22.41 ug/l		242 µg/L	990.2 ug/l
Iron		✔	1	19,200.7	50 ug/l	1,780 ug/l		5,000 µg/L	48705 ug/l
Lead		✔	1	3, 200.8	0.5 ug/l	83.68 ug/l		160 µg/L	2.46 ug/l
Mercury		✔	1	3,245.1	0.2 ug/l	0.07J ug/l		0.739 µg/L	238.35 ug/l
Nickel		✔	1	3, 200.8	2 ug/l	4.45 ug/l		1,450 µg/L	11285.2 ug/l
Selenium		✔	1	3, 200.8	5 ug/l	3.58J ug/l		235.8 µg/L	1315.6 ug/l
Silver	✔		1	3, 200.8	1 ug/l	<1 ug/l		35.1 µg/L	703.1 ug/l
Zinc		✔	1	3, 200.8	10 ug/l	46.14 ug/l		420 µg/L	23788.3 ug/l
Cyanide	✔		1	SM4500	0.005	<0.002 mg/l		178 mg/L	1368.2 ug/l
B. Non-Halogenated VOCs									
Total BTEX			1	8260C	0.5 - 1 ug/l	<0.5 - <1.0 ug		100 µg/L	---
Benzene	✔		1	8260C	0.5 ug/l	<0.5 ug/l		5.0 µg/L	---
1,4 Dioxane	✔		1	8260CSIM	3 ug/l	<3 ug/l		200 µg/L	---
Acetone	✔		1	8260C	5 ug/l	<5 ug/l		7.97 mg/L	---
Phenol	✔		1	8270 D	5.0 ug/l	<5.0 ug/l		1,080 µg/L	78935 ug/l

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✔		1	8260C	0.5 ug/l	<0.5 ug/l		4.4 µg/L	421.0 ug/l
1,2 Dichlorobenzene	✔		1	8260C	2.5 ug/l	<2.5 ug/l		600 µg/L	---
1,3 Dichlorobenzene	✔		1	8260C	2.5 ug/l	<2.5 ug/l		320 µg/L	---
1,4 Dichlorobenzene	✔		1	8260C	2.5 ug/l	<2.5 ug/l		5.0 µg/L	---
Total dichlorobenzene								763 µg/L in NH	---
1,1 Dichloroethane	✔		1	8260C	0.75 ug/l	<0.75 ug/l		70 µg/L	---
1,2 Dichloroethane	✔		1	8260C	0.5 ug/l	<0.5 ug/l		5.0 µg/L	---
1,1 Dichloroethylene	✔		1	8260C	0.5 ug/l	<0.5 ug/l		3.2 µg/L	---
Ethylene Dibromide	✔		1	EPA 504	0.011 ug/l	<0.011 ug/l		0.05 µg/L	---
Methylene Chloride	✔		1	8260C	3 ug/l	<3 ug/l		4.6 µg/L	---
1,1,1 Trichloroethane	✔		1	8260C	0.5 ug/l	<0.5 ug/l		200 µg/L	---
1,1,2 Trichloroethane	✔		1	8260C	0.75 ug/l	<0.75 ug/l		5.0 µg/L	---
Trichloroethylene	✔		1	8260C	0.5 ug/l	<0.5 ug/l		5.0 µg/L	---
Tetrachloroethylene		✔	1	8260C	0.5 ug/l	0.23J ug/l		5.0 µg/L	868.3 ug/l
cis-1,2 Dichloroethylene	✔		1	8260C	0.5 ug/l	<0.5 ug/l		70 µg/L	---
Vinyl Chloride	✔		1	8260C	1 ug/l	<1 ug/l		2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates		✔	1	1,8270D	3.0 ug/l	21 ug/l		190 µg/L	578.9 ug/l
Diethylhexyl phthalate		✔	1	1,8270D	3.0 ug/l	2.1 ug/l		101 µg/L	578.9 ug/l
Total Group I PAHs			1	8270-SIM	0.10 ug/l	<0.10 ug/l		1.0 µg/L	---
Benzo(a)anthracene	✔		1	8270-SIM	0.10 ug/l	<0.10 ug/l		As Total PAHs	0.9998 ug/l
Benzo(a)pyrene	✔		1	8270-SIM	0.10 ug/l	<0.10 ug/l			0.9998 ug/l
Benzo(b)fluoranthene	✔		1	8270-SIM	0.10 ug/l	<0.10 ug/l			0.9998 ug/l
Benzo(k)fluoranthene	✔		1	8270-SIM	0.10 ug/l	<0.10 ug/l			0.9998 ug/l
Chrysene	✔		1	8207-SIM	0.10 ug/l	<0.10 ug/l			0.9998 ug/l
Dibenzo(a,h)anthracene	✔		1	8207-SIM	0.10 ug/l	<0.10 ug/l			0.9998 ug/l
Indeno(1,2,3-cd)pyrene	✔		1	8207-SIM	0.10 ug/l	<0.10 ug/l			0.9998 ug/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	8207-SIM	0.10 ug/l	<0.10 ug/l		100 µg/L	---
Naphthalene	✔		1	8207-SIM	0.10 ug/l	<0.10 ug/l		20 µg/L	---
E. Halogenated SVOCs									
Total PCBs		✔	1	EPA 608	0.2 ug/l	1.17 ug/l		0.000064 µg/L	---
Pentachlorophenol	✔		1	8207-SIM	0.80 ug/l	<0.80 ug/l		1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons	✔		1	74, 1664	4 mg/l	<4 mg/l		5.0 mg/L	---
Ethanol								Report mg/L	---
Methyl-tert-Butyl Ether	✔		1	1,8260C	1.0 ug/l	<1.0 ug/l		70 µg/L	5262 ug/l
tert-Butyl Alcohol	✔		1	1,8260C	10 ug/l	<10 ug/l		120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✔		1	1,8260C	2.0 ug/l	<2.0 ug/l		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		✔	1	4500-H+B	0	7.3			
Temperature		✔	1	2550-B	0	12.5			
Hardness		✔	1	1,6020A	176,500	2,700			

E. Treatment system information

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

☐ Adsorption/Absorption ☐ Advanced Oxidation Processes ☐ Air Stripping ■ Granulated Activated Carbon ("GAC")/Liquid Phase Carbon Adsorption

☐ Ion Exchange ☐ Precipitation/Coagulation/Flocculation ■ Separation/Filtration ☐ Other; if so, specify:

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

Electric submersible pumps will be utilized to pump groundwater and stormwater to a 21,000 gallon fractional (frac) tank. The water will be pumped from the frac tank, through bag filters, two 1,000 pound liquid granular activated carbon (LGAC) vessels, cartridge filters, and a flow meter prior to being discharged to a storm-drain catch basin located along Iffley Street.

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: The proposed treatment system will include liquid granular activated carbon (LGAC), cartridge filters, a flow meter and sample ports.

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: Liquid granular activated carbon (LGAC) with a design flow rate of 100 gpm Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	
Provide the proposed maximum effluent flow in gpm.	100
Provide the average effluent flow in gpm.	50
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	

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

F. Chemical and additive information

1. Indicate the type(s) of chemical or additive that will be applied to effluent prior to discharge or that may otherwise be present in the discharge(s): (check all that apply)

☐ Algaecides/biocides ☐ Antifoams ☐ Coagulants ☐ Corrosion/scale inhibitors ☐ Disinfectants ☐ Flocculants ☐ Neutralizing agents ☐ Oxidants ☐ Oxygen ☐ scavengers ☐ pH conditioners ☐ Bioremedial agents, including microbes ☐ Chlorine or chemicals containing chlorine ☐ Other; if so, specify:

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

Proposed activities have no potential to affect historic properties. The dewatering of groundwater and storm-water at the Site will be temporary and intermittent. The discharge will be controlled and monitored. The treatment system will consist of a temporary equipment.

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.

Please see attached figures, data tables, laboratory analytical reports, and supporting documentation for supplemental information.

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

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

J. Certification requirement

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

BMPP certification statement: A Best Management Practices Plan (BMPP) has been prepared and a copy will be maintained on-site.

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. SEE COVER LETTER 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: Eric Ekman Date: 6/6/17

Print Name and Title: ERIC EKMAN - AUTHORIZED PERSON

Attachment B

Dilution Factor and WQBEL Calculations

Enter number values in green boxes below

Enter values in the units specified

↓

18.8725	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

↓

263.118

Enter values in the units specified

↓

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

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

↓

7.1	pH in **Standard Units**
11	Temperature in **°C**
0.184	Ammonia in **mg/L**
81.32	Hardness in **mg/L** $CaCO_3$
	Salinity in **ppt**
0.79	Antimony in **µg/L**
1.03	Arsenic in **µg/L**
0	Cadmium in **µg/L**
0	Chromium III in **µg/L**
0	Chromium VI in **µg/L**
4.1	Copper in **µg/L**
818	Iron in **µg/L**
3.63	Lead in **µg/L**
0	Mercury in **µg/L**
1.07	Nickel in **µg/L**
0	Selenium in **µg/L**
0	Silver in **µg/L**
10.57	Zinc in **µg/L**

Enter **influent** concentrations in the units specified

↓

0	TRC in **µg/L**
0.047	Ammonia in **mg/L**
1.5	Antimony in **µg/L**
1	Arsenic in **µg/L**
0.2	Cadmium in **µg/L**
0	Chromium III in **µg/L**
0	Chromium VI in **µg/L**
1	Copper in **µg/L**
50	Iron in **µg/L**
0.5	Lead in **µg/L**
0.2	Mercury in **µg/L**
2	Nickel in **µg/L**
5	Selenium in **µg/L**
1	Silver in **µg/L**
10	Zinc in **µg/L**
2	Cyanide in **µg/L**
0	Phenol in **µg/L**
0	Carbon Tetrachloride in **µg/L**
0.23	Tetrachloroethylene in **µg/L**
2.1	Total Phthalates in **µg/L**
2.1	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
Downstream 7Q10 an optional entry for Q_R; leave 0 if no entry

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

Leave 0 if no entry

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

I. Dilution Factor Calculation Method

A. 7Q10

Refer to Appendix V for determining critical low flow; must be approved by State before use in calculations.

B. Dilution Factor

Calculated as follows:

$$Df = \frac{Q_R + Q_P}{Q_P}$$

Q_R = 7Q10 in MGD

Q_P = Discharge flow, in MGD

II. Effluent Limitation Calculation Method

A. Calculate Water Quality Criterion:

Step 1. Downstream hardness, calculated as follows:

$$C_r = \frac{Q_d C_d + Q_s C_s}{Q_r}$$

C_r = Downstream hardness in mg/L

Q_d = Discharge flow in MGD

C_d = Discharge hardness in mg/L

Q_s = Upstream flow (7Q10) in MGD

C_s = Upstream (receiving water) hardness in mg/L

Q_r = Downstream receiving water flow in MGD

Step 2. Total recoverable water quality criteria for hardness-dependent metals, calculated as follows:

Total Recoverable Criteria = $\exp\{m_c [\ln(h)] + b_c\}$

m_c = Pollutant-specific coefficient (m_a for silver)

b_c = Pollutant-specific coefficient (b_a for silver)

ln = Natural logarithm

h = Hardness calculated in Step 1

Step 3. Total recoverable water quality criteria for non-hardness-dependent metals, calculated as follows:

$$\text{WQC in µg/L} = \frac{\text{dissolved WQC in µg/L}}{\text{dissolved to total recoverable factor}}$$

B. Calculate WQBEL:

Step 1. WQBEL calculated as follows for parameter sampled in and detected in the receiving water:

$$C_d = \frac{Q_r C_r - Q_s C_s}{Q_d}$$

C_r = Water quality criterion in µg/L

Q_d = Discharge flow in MGD

C_d = WQBEL in µg/L

Q_s = Upstream flow (7Q10) in MGD

C_s = Ustream (receiving water) concentration in µg/L

Q_r = Downstream receiving water flow in MGD

Step 2. WQBEL calculated as follows for parameter not sampled in or not detected in receiving water:

$$C_d = (Q_r/Q_d) \times C_r$$

C_r = Water quality criterion in µg/L

Q_d = Discharge flow in MGD

Q_r = Downstream receiving water flow in MGD

C. Determine if a WQBEL applies:

Step 1. For parameter sampled in and detected in receiving water, downstream concentrations calculated as follows:

$$C_r = \frac{Q_d C_d + Q_s C_s}{Q_r}$$

C_r = Downstream concentration in µg/L

Q_d = Discharge flow in MGD

C_d = Influent concentration in µg/L

Q_s = Upstream flow (7Q10) in MGD

C_s = Upstream (receiving water) concentration in µg/L

Q_r = Downstream receiving water flow in MGD

The WQBEL applies if:

1) the projected downstream concentration calculated in accordance with Step 1, above, and the discharge concentration of a parameter are greater than the WQC calculated for that parameter in accordance with II.A, above

AND

2) the WQBEL determined for that parameter in accordance with II.B, above, is less than the TBEL in Part 2.1.1 of the RGP for that parameter. Otherwise, the TBEL in Part 2.1.1

of the RGP for that parameter applies.

Step 2. For a parameter not sampled in or not detected in receiving water, the WQBEL applies if:

1) the discharge concentration of a parameter is greater than the WQBEL determined for that parameter in accordance with II.A or II.B, above;

AND

2) the WQBEL determined for that parameter in accordance with II.A or II.B, above is less than the TBEL in Part 2.1.1 of the RGP for that parameter. Otherwise, the TBEL in

Part 2.1.1 of the RGP for that parameter applies.

Dilution Factor	263.1					
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	2894	µg/L	---	µg/L
Total Suspended Solids	**30**	mg/L	---			
Antimony	**206**	µg/L	168188	µg/L		
Arsenic	**104**	µg/L	2361	µg/L		
Cadmium	**10.2**	µg/L	0.2329	µg/L		
Chromium III	**323**	µg/L	19212.6	µg/L		
Chromium VI	**323**	µg/L	3008.6	µg/L		
Copper	**242**	µg/L	990.2	µg/L		
Iron	**5000**	µg/L	48705	µg/L		
Lead	**160**	µg/L	2.46	µg/L		
Mercury	**0.739**	µg/L	238.35	µg/L		
Nickel	**1450**	µg/L	11285.2	µg/L		
Selenium	**235.8**	µg/L	1315.6	µg/L		
Silver	**35.1**	µg/L	703.1	µg/L		
Zinc	**420**	µg/L	23788.3	µg/L		
Cyanide	**178**	mg/L	1368.2	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	**7970**	µg/L	---			
Phenol	**1,080**	µg/L	78935	µg/L		
C. Halogenated VOCs						
Carbon Tetrachloride	**4.4**	µg/L	421.0	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	868.3	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	578.9	µg/L		
Total Group I Polycyclic Aromatic Hydrocarbons	**1.0**	µg/L	---			
Benzo(a)anthracene	**1.0**	µg/L	0.9998	µg/L	---	µg/L
Benzo(a)pyrene	**1.0**	µg/L	0.9998	µg/L	---	µg/L
Benzo(b)fluoranthene	**1.0**	µg/L	0.9998	µg/L	---	µg/L
Benzo(k)fluoranthene	**1.0**	µg/L	0.9998	µg/L	---	µg/L
Chrysene	**1.0**	µg/L	0.9998	µg/L	---	µg/L

Dibenzo(a,h)anthracene	**1.0**	µg/L	0.9998	µg/L	---	µg/L
Indeno(1,2,3-cd)pyrene	**1.0**	µg/L	0.9998	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	5262	µg/L		
tert-Butyl Alcohol	**120**	µg/L	---			
tert-Amyl Methyl Ether	**90**	µg/L	---			

Craig Paradis

From: Vakalopoulos, Catherine (DEP) <Catherine.Vakalopoulos@MassMail.State.MA.US>
Sent: Wednesday, June 07, 2017 6:32 PM
To: Craig Paradis
Subject: RE: EPA RGP (7Q10)

Hi Craig,
I've confirmed the 7Q10 of 29.2 cfs (= 18.87 MGD). Using two decimal places for the 7Q10 and the max flow (= design flow) of 50 gpm (0.072 MGD), I get a dilution factor of 263.0833. So reporting a dilution factor of 263.1 is fine. You don't have to go out to that many decimal places (and it shouldn't make a difference in the limits).

I'd like to point out to you (in case you haven't seen it already) a useful spreadsheet that Shauna posted at:
https://www3.epa.gov/region1/npdes/rgp.html.
It's under Appendix V as an Additional Resource and is called "Fillable Electronic Format" - it calculates the WQBELs.

Cathy

Cathy Vakalopoulos, Massachusetts Department of Environmental Protection
1 Winter St., Boston, MA 02108, 617-348-4026

From: Craig Paradis [mailto:cparadis@essgroup.com]
Sent: Monday, June 05, 2017 3:47 PM
To: Vakalopoulos, Catherine (DEP)
Subject: EPA RGP (7Q10)

Hi Cathy,

I appreciate the email below. Thank you. We are in the process of preparing a Remediation General Permit (RGP) Notice of Intent (NOI) to discharge treated water to a storm-water system that outfalls at the Charles River. I have determined the 7Q10 and calculated a dilution factor for the Site. Could you please provide confirmation on the numbers?

I have attached the Stream Stats Report that indicates a 7Q10 of 29.2 cubic feet per second (CFS). I anticipate that the maximum flow of the treatment system will be ~50 gallons per minute (gpm), which equates to 72,000 gpd (or 0.072 million gallons/day [MGD]). Based on this information, I have calculated a dilution factor of 263.118.

Please feel free to contact me with any questions or comments. It is easiest to reach me via email or by phone at 508-341-8103.

Thank you,
Craig

Craig Paradis | **ESS Group, Inc.**
p 781.419.7714 | c 508.341.8103 | cparadis@essgroup.com

From: Vakalopoulos, Catherine (DEP) [mailto:Catherine.Vakalopoulos@MassMail.State.MA.US]
Sent: Thursday, May 11, 2017 7:21 PM
To: Craig Paradis

Attachment C

Laboratory Analytical Reports (Groundwater and Receiving Water)

JOB: L1717151 REPORT STYLE: Data Usability Report
0010: Alpha Analytical Report Cover Page - OK
0015: Sample Cross Reference Summary - OK
0060: Case Narrative - OK
0100: Volatiles Cover Page - OK
0110: Volatiles Sample Results - OK
0120: Volatiles Method Blank Report - OK
0130: Volatiles LCS Report - OK
0150: Volatiles Matrix SpikeReport - OK
0180: Semivolatiles Cover Page - OK
0190: Semivolatiles Sample Results - OK
0200: Semivolatiles Method Blank Report - OK
0210: Semivolatiles LCS Report - OK
0700: PCBs Cover Page - OK
0710: PCBs Sample Results - OK
0720: PCBs Method Blank Report - OK
0730: PCBs LCS Report - OK
0750: PCBs Matrix Spike Report - OK
0760: PCBs Duplicate Report - OK
1005: Metals Sample Results - OK
1010: Metals Method Blank Report - OK
1020: Metals LCS Report - OK
1040: Metals Matrix Spike Report - OK
1050: Metals Duplicate Report - OK
1180: Inorganics Cover Page - OK
1200: Wet Chemistry Sample Results - OK
1210: Wet Chemistry Method Blank Report - OK
1220: Wet Chemistry LCS Report - OK
1240: Wet Chemistry Matrix Spike Report - OK
1250: Wet Chemistry Duplicate Report - OK
5100: Sample Receipt & Container Information Report - OK
5200: Glossary - OK
5400: References - OK

ANALYTICAL REPORT

Lab Number:	L1717151
Client:	ESS Group, Inc. 100 Fifth Avenue 5th Floor Waltham, MA 02451
ATTN:	Craig Paradis
Phone:	(781) 419-7714
Project Name:	3190 WASHINGTON STREET
Project Number:	B451-001.09
Report Date:	06/02/17

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717151
Report Date: 06/02/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1717151-01	ESS-MW-3	WATER	3190-3204 WASHINGTON ST	05/24/17 15:30	05/25/17
L1717151-02	TRIP BLANK	WATER	3190-3204 WASHINGTON ST	05/24/17 00:00	05/25/17
L1717151-03	ESS-MW-3	WATER	3190-3204 WASHINGTON ST	05/26/17 08:00	05/26/17

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717151
Report Date: 06/02/17

Case Narrative

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

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

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

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

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

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

Project Name:	3190 WASHINGTON STREET	**Lab Number:**	L1717151
Project Number:	B451-001.09	**Report Date:**	06/02/17

Case Narrative (continued)

Report Submission

This is a partial report. A final report will be issued as soon as the results of all requested analyses become available.

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

Sample Receipt

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

Semivolatile Organics

The WG1007833-2/-3 LCS/LCSD recoveries, associated with L1717151-01, are below the acceptance criteria for benzoic acid (0%/0%); however, it has been identified as a "difficult" analyte. The results of the associated sample are reported.

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

Authorized Signature: Melissa Cripps Melissa Cripps

Title: Technical Director/Representative Date: 06/02/17

ORGANICS

VOLATILES

Project Name: 3190 WASHINGTON STREET **Lab Number:** L1717151

Project Number: B451-001.09 **Report Date:** 06/02/17

SAMPLE RESULTS

Lab ID: L1717151-01
Client ID: ESS-MW-3
Sample Location: 3190-3204 WASHINGTON ST

Date Collected: 05/24/17 15:30
Date Received: 05/25/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C
Analytical Date: 05/30/17 10:14
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	0.68	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
Chloroform	ND		ug/l	0.75	0.16	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.8	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Tetrachloroethene	0.23	J	ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.17	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	0.75	0.16	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
Chloromethane	ND		ug/l	2.5	0.18	1
Bromomethane	ND		ug/l	1.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	1.0	0.13	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
1,2-Dichloroethene, Total	ND		ug/l	0.50	0.16	1
Trichloroethene	ND		ug/l	0.50	0.18	1

Project Name: 3190 WASHINGTON STREET **Lab Number:** L1717151

Project Number: B451-001.09 **Report Date:** 06/02/17

SAMPLE RESULTS

Lab ID: L1717151-01 Date Collected: 05/24/17 15:30

Client ID: ESS-MW-3 Date Received: 05/25/17

Sample Location: 3190-3204 WASHINGTON ST Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.33	1
Xylenes, Total	ND		ug/l	1.0	0.33	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Dibromomethane	ND		ug/l	5.0	0.36	1
1,4-Dichlorobutane	ND		ug/l	5.0	0.46	1
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Acetone	ND		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	0.31	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Ethyl methacrylate	ND		ug/l	5.0	0.61	1
Acrylonitrile	ND		ug/l	5.0	0.43	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Tetrahydrofuran	ND		ug/l	5.0	0.83	1
2,2-Dichloropropane	ND		ug/l	2.5	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.5	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16	1
Bromobenzene	ND		ug/l	2.5	0.15	1
n-Butylbenzene	ND		ug/l	0.50	0.19	1
sec-Butylbenzene	ND		ug/l	0.50	0.18	1
tert-Butylbenzene	ND		ug/l	2.5	0.18	1
o-Chlorotoluene	ND		ug/l	2.5	0.17	1
p-Chlorotoluene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
Hexachlorobutadiene	ND		ug/l	0.50	0.22	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
p-Isopropyltoluene	ND		ug/l	0.50	0.19	1
Naphthalene	ND		ug/l	2.5	0.22	1
n-Propylbenzene	ND		ug/l	0.50	0.17	1

Project Name: 3190 WASHINGTON STREET **Lab Number:** L1717151

Project Number: B451-001.09 **Report Date:** 06/02/17

SAMPLE RESULTS

Lab ID: L1717151-01 Date Collected: 05/24/17 15:30

Client ID: ESS-MW-3 Date Received: 05/25/17

Sample Location: 3190-3204 WASHINGTON ST Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.17	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.18	1
Ethyl ether	ND		ug/l	2.5	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	89		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	98		70-130
Dibromofluoromethane	92		70-130

Project Name: 3190 WASHINGTON STREET
Lab Number: L1717151
Project Number: B451-001.09
Report Date: 06/02/17

SAMPLE RESULTS

Lab ID: L1717151-01
Client ID: ESS-MW-3
Sample Location: 3190-3204 WASHINGTON ST
Date Collected: 05/24/17 15:30
Date Received: 05/25/17
Field Prep: Not Specified

Matrix: Water
Analytical Method: 1,8260C-SIM(M)
Analytical Date: 05/30/17 10:14
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS-SIM - Westborough Lab						
1,4-Dioxane	ND		ug/l	3.0	0.76	1

Project Name: 3190 WASHINGTON STREET
Lab Number: L1717151
Project Number: B451-001.09
Report Date: 06/02/17

SAMPLE RESULTS

Lab ID: L1717151-01
Client ID: ESS-MW-3
Sample Location: 3190-3204 WASHINGTON ST

Matrix: Water
Analytical Method: 14,504.1
Analytical Date: 05/30/17 17:30
Analyst: NS

Date Collected: 05/24/17 15:30
Date Received: 05/25/17
Field Prep: Not Specified
Extraction Method: EPA 504.1
Extraction Date: 05/30/17 14:22

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Microextractables by GC - Westborough Lab							
1,2-Dibromoethane	ND		ug/l	0.011	0.004	1	A
1,2-Dibromo-3-chloropropane	ND		ug/l	0.011	0.005	1	A

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09
Lab Number: L1717151
Report Date: 06/02/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/30/17 08:33
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1008036-5					
Methylene chloride	ND		ug/l	3.0	0.68
1,1-Dichloroethane	ND		ug/l	0.75	0.21
Chloroform	ND		ug/l	0.75	0.16
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.8	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14
2-Chloroethylvinyl ether	ND		ug/l	10	0.40
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	0.50	0.18
Trichlorofluoromethane	ND		ug/l	2.5	0.16
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,3-Dichloropropene, Total	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.17
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	0.75	0.16
Ethylbenzene	ND		ug/l	0.50	0.17
Chloromethane	ND		ug/l	2.5	0.18
Bromomethane	ND		ug/l	1.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	1.0	0.13
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09
Lab Number: L1717151
Report Date: 06/02/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/30/17 08:33
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1008036-5					
1,2-Dichloroethene, Total	ND		ug/l	0.50	0.16
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19
Methyl tert butyl ether	ND		ug/l	1.0	0.17
p/m-Xylene	ND		ug/l	1.0	0.33
o-Xylene	ND		ug/l	1.0	0.33
Xylenes, Total	ND		ug/l	1.0	0.33
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19
Dibromomethane	ND		ug/l	5.0	0.36
1,4-Dichlorobutane	ND		ug/l	5.0	0.46
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	5.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	0.30
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	0.31
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Ethyl methacrylate	ND		ug/l	5.0	0.61
Acrylonitrile	ND		ug/l	5.0	0.43
Bromochloromethane	ND		ug/l	2.5	0.15
Tetrahydrofuran	ND		ug/l	5.0	0.83
2,2-Dichloropropane	ND		ug/l	2.5	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.5	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09
Lab Number: L1717151
Report Date: 06/02/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/30/17 08:33
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1008036-5					
Bromobenzene	ND		ug/l	2.5	0.15
n-Butylbenzene	ND		ug/l	0.50	0.19
sec-Butylbenzene	ND		ug/l	0.50	0.18
tert-Butylbenzene	ND		ug/l	2.5	0.18
o-Chlorotoluene	ND		ug/l	2.5	0.17
p-Chlorotoluene	ND		ug/l	2.5	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35
Hexachlorobutadiene	ND		ug/l	0.50	0.22
Isopropylbenzene	ND		ug/l	0.50	0.19
p-Isopropyltoluene	ND		ug/l	0.50	0.19
Naphthalene	ND		ug/l	2.5	0.22
n-Propylbenzene	ND		ug/l	0.50	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.17
1,3,5-Trichlorobenzene	ND		ug/l	2.0	0.14
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.18
Halothane	ND		ug/l	2.5	0.29
Ethyl ether	ND		ug/l	2.5	0.16
Methyl Acetate	ND		ug/l	10	0.23
Ethyl Acetate	ND		ug/l	10	0.72
Isopropyl Ether	ND		ug/l	2.0	0.42
Cyclohexane	ND		ug/l	10	0.27
Tert-Butyl Alcohol	ND		ug/l	10	1.4
Ethyl-Tert-Butyl-Ether	ND		ug/l	2.0	0.18
Tertiary-Amyl Methyl Ether	ND		ug/l	2.0	0.28
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND		ug/l	10	0.15
Methyl cyclohexane	ND		ug/l	10	0.40

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09
Lab Number: L1717151
Report Date: 06/02/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C
Analytical Date: 05/30/17 08:33
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1008036-5					
p-Diethylbenzene	ND		ug/l	2.0	0.39
4-Ethyltoluene	ND		ug/l	2.0	0.34
1,2,4,5-Tetramethylbenzene	ND		ug/l	2.0	0.54

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	95		70-130
Toluene-d8	101		70-130
4-Bromofluorobenzene	88		70-130
Dibromofluoromethane	93		70-130

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09
Lab Number: L1717151
Report Date: 06/02/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8260C-SIM(M)
Analytical Date: 05/30/17 08:33
Analyst: MM

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1008038-5					
1,4-Dioxane	ND		ug/l	3.0	0.76

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09
Lab Number: L1717151
Report Date: 06/02/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 14,504.1
Analytical Date: 05/30/17 15:17
Analyst: NS

Extraction Method: EPA 504.1
Extraction Date: 05/30/17 14:22

Parameter	Result	Qualifier	Units	RL	MDL	
Microextractables by GC - Westborough Lab for sample(s): 01 Batch: WG1008107-1						
1,2-Dibromoethane	ND		ug/l	0.010	0.004	A
1,2-Dibromo-3-chloropropane	ND		ug/l	0.010	0.005	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3190 WASHINGTON STREET

Project Number: B451-001.09

Lab Number: L1717151

Report Date: 06/02/17

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: WG1008036-3 WG1008036-4								
Methylene chloride	110		110		70-130	0		20
1,1-Dichloroethane	100		100		70-130	0		20
Chloroform	100		98		70-130	2		20
Carbon tetrachloride	97		95		63-132	2		20
1,2-Dichloropropane	100		98		70-130	2		20
Dibromochloromethane	98		98		63-130	0		20
1,1,2-Trichloroethane	96		100		70-130	4		20
2-Chloroethylvinyl ether	**140**	Q	130		70-130	7		20
Tetrachloroethene	100		100		70-130	0		20
Chlorobenzene	97		100		75-130	3		25
Trichlorofluoromethane	100		110		62-150	10		20
1,2-Dichloroethane	100		100		70-130	0		20
1,1,1-Trichloroethane	100		100		67-130	0		20
Bromodichloromethane	100		100		67-130	0		20
trans-1,3-Dichloropropene	100		100		70-130	0		20
cis-1,3-Dichloropropene	110		110		70-130	0		20
1,1-Dichloropropene	110		100		70-130	10		20
Bromoform	110		100		54-136	10		20
1,1,2,2-Tetrachloroethane	110		96		67-130	14		20
Benzene	100		100		70-130	0		25
Toluene	100		110		70-130	10		25
Ethylbenzene	97		100		70-130	3		20
Chloromethane	100		100		64-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717151
Report Date: 06/02/17

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: WG1008036-3 WG1008036-4								
Bromomethane	99		100		39-139	1		20
Vinyl chloride	100		100		55-140	0		20
Chloroethane	97		96		55-138	1		20
1,1-Dichloroethene	100		100		61-145	0		25
trans-1,2-Dichloroethene	100		110		70-130	10		20
Trichloroethene	99		99		70-130	0		25
1,2-Dichlorobenzene	120		100		70-130	18		20
1,3-Dichlorobenzene	110		97		70-130	13		20
1,4-Dichlorobenzene	110		100		70-130	10		20
Methyl tert butyl ether	100		100		63-130	0		20
p/m-Xylene	105		110		70-130	5		20
o-Xylene	95		95		70-130	0		20
cis-1,2-Dichloroethene	99		100		70-130	1		20
Dibromomethane	100		96		70-130	4		20
1,4-Dichlorobutane	110		100		70-130	10		20
1,2,3-Trichloropropane	110		110		64-130	0		20
Styrene	100		110		70-130	10		20
Dichlorodifluoromethane	100		99		36-147	1		20
Acetone	100		98		58-148	2		20
Carbon disulfide	79		79		51-130	0		20
2-Butanone	110		110		63-138	0		20
Vinyl acetate	100		99		70-130	1		20
4-Methyl-2-pentanone	100		100		59-130	0		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3190 WASHINGTON STREET

Project Number: B451-001.09

Lab Number: L1717151

Report Date: 06/02/17

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: WG1008036-3 WG1008036-4								
2-Hexanone	100		100		57-130	0		20
Ethyl methacrylate	100		100		70-130	0		20
Acrylonitrile	110		110		70-130	0		20
Bromochloromethane	100		95		70-130	5		20
Tetrahydrofuran	110		110		58-130	0		20
2,2-Dichloropropane	100		100		63-133	0		20
1,2-Dibromoethane	98		99		70-130	1		20
1,3-Dichloropropane	100		100		70-130	0		20
1,1,1,2-Tetrachloroethane	97		100		64-130	3		20
Bromobenzene	100		96		70-130	4		20
n-Butylbenzene	130		120		53-136	8		20
sec-Butylbenzene	120		100		70-130	18		20
tert-Butylbenzene	120		100		70-130	18		20
o-Chlorotoluene	110		100		70-130	10		20
p-Chlorotoluene	100		96		70-130	4		20
1,2-Dibromo-3-chloropropane	100		110		41-144	10		20
Hexachlorobutadiene	110		110		63-130	0		20
Isopropylbenzene	110		98		70-130	12		20
p-Isopropyltoluene	120		120		70-130	0		20
Naphthalene	100		100		70-130	0		20
n-Propylbenzene	110		100		69-130	10		20
1,2,3-Trichlorobenzene	110		110		70-130	0		20
1,2,4-Trichlorobenzene	120		110		70-130	9		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3190 WASHINGTON STREET

Project Number: B451-001.09

Lab Number: L1717151

Report Date: 06/02/17

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: WG1008036-3 WG1008036-4								
1,3,5-Trimethylbenzene	110		92		64-130	18		20
1,3,5-Trichlorobenzene	120		110		70-130	9		20
1,2,4-Trimethylbenzene	110		99		70-130	11		20
trans-1,4-Dichloro-2-butene	110		110		70-130	0		20
Halothane	100		100		70-130	0		20
Ethyl ether	100		100		59-134	0		20
Methyl Acetate	97		100		70-130	3		20
Ethyl Acetate	100		100		70-130	0		20
Isopropyl Ether	100		100		70-130	0		20
Cyclohexane	100		100		70-130	0		20
Tert-Butyl Alcohol	122		116		70-130	5		20
Ethyl-Tert-Butyl-Ether	100		100		70-130	0		20
Tertiary-Amyl Methyl Ether	100		110		66-130	10		20
1,1,2-Trichloro-1,2,2-Trifluoroethane	110		100		70-130	10		20
Methyl cyclohexane	110		100		70-130	10		20
p-Diethylbenzene	130		120		70-130	8		20
4-Ethyltoluene	110		100		70-130	10		20
1,2,4,5-Tetramethylbenzene	120		110		70-130	9		20

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717151
Report Date: 06/02/17

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: WG1008036-3 WG1008036-4								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	98		99		70-130
Toluene-d8	99		102		70-130
4-Bromofluorobenzene	110		101		70-130
Dibromofluoromethane	100		103		70-130

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3190 WASHINGTON STREET

Project Number: B451-001.09

Lab Number: L1717151

Report Date: 06/02/17

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: WG1008038-3 WG1008038-4								
1,4-Dioxane	90		88		70-130	2		25

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3190 WASHINGTON STREET

Project Number: B451-001.09

Lab Number: L1717151

Report Date: 06/02/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Microextractables by GC - Westborough Lab	Associated sample(s): 01		Batch: WG1008107-2						
1,2-Dibromoethane	99		-		70-130	-			A
1,2-Dibromo-3-chloropropane	99		-		70-130	-			A

Matrix Spike Analysis

Batch Quality Control

Project Name: 3190 WASHINGTON STREET

Project Number: B451-001.09

Lab Number: L1717151

Report Date: 06/02/17

Parameter	*Native Sample*	*MS Added*	*MS Found*	*MS %Recovery*	*Qual*	*MSD Found*	*MSD %Recovery*	*Qual*	*Recovery Limits*	*RPD*	*Qual*	*RPD Limits*	*Column*
Microextractables by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1008107-3 QC Sample: L1716974-01 Client ID: MS Sample													
1,2-Dibromoethane	ND	0.264	0.312	118		-	-		65-135	-		20	A
1,2-Dibromo-3-chloropropane	ND	0.264	0.290	110		-	-		65-135	-		20	A

SEMIVOLATILES

Project Name: 3190 WASHINGTON STREET
Lab Number: L1717151
Project Number: B451-001.09
Report Date: 06/02/17

SAMPLE RESULTS

Lab ID: L1717151-01
Client ID: ESS-MW-3
Sample Location: 3190-3204 WASHINGTON ST

Matrix: Water
Analytical Method: 1,8270D
Analytical Date: 06/01/17 01:33
Analyst: ALS

Date Collected: 05/24/17 15:30
Date Received: 05/25/17
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 05/27/17 23:57

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Benzidine	ND		ug/l	20	8.1	1
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.66	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.67	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.73	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.69	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.71	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.4	1
2,4-Dinitrotoluene	ND		ug/l	5.0	0.84	1
2,6-Dinitrotoluene	ND		ug/l	5.0	1.1	1
Azobenzene	ND		ug/l	2.0	0.75	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.62	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.73	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.70	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.63	1
Hexachlorocyclopentadiene	ND		ug/l	20	7.8	1
Isophorone	ND		ug/l	5.0	0.60	1
Nitrobenzene	ND		ug/l	2.0	0.75	1
NDPA/DPA	ND		ug/l	2.0	0.64	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.70	1
Bis(2-ethylhexyl)phthalate	2.1	J	ug/l	3.0	0.91	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.3	1
Di-n-butylphthalate	ND		ug/l	5.0	0.69	1
Di-n-octylphthalate	ND		ug/l	5.0	1.1	1
Diethyl phthalate	ND		ug/l	5.0	0.63	1
Dimethyl phthalate	ND		ug/l	5.0	0.65	1
Biphenyl	ND		ug/l	2.0	0.76	1
Aniline	ND		ug/l	2.0	0.65	1
4-Chloroaniline	ND		ug/l	5.0	0.63	1
2-Nitroaniline	ND		ug/l	5.0	1.1	1
3-Nitroaniline	ND		ug/l	5.0	1.2	1

Project Name: 3190 WASHINGTON STREET **Lab Number:** L1717151

Project Number: B451-001.09 **Report Date:** 06/02/17

SAMPLE RESULTS

Lab ID: L1717151-01 Date Collected: 05/24/17 15:30

Client ID: ESS-MW-3 Date Received: 05/25/17

Sample Location: 3190-3204 WASHINGTON ST Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
4-Nitroaniline	ND		ug/l	5.0	1.3	1
Dibenzofuran	ND		ug/l	2.0	0.66	1
n-Nitrosodimethylamine	ND		ug/l	2.0	0.67	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.68	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.62	1
2-Chlorophenol	ND		ug/l	2.0	0.63	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.77	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.6	1
2-Nitrophenol	ND		ug/l	10	1.5	1
4-Nitrophenol	ND		ug/l	10	1.8	1
2,4-Dinitrophenol	ND		ug/l	20	5.5	1
4,6-Dinitro-o-cresol	ND		ug/l	10	2.1	1
Phenol	ND		ug/l	5.0	1.9	1
2-Methylphenol	ND		ug/l	5.0	1.0	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.1	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.72	1
Benzoic Acid	ND		ug/l	50	13.	1
Benzyl Alcohol	ND		ug/l	2.0	0.72	1
Carbazole	ND		ug/l	2.0	0.63	1
Pyridine	ND		ug/l	3.5	1.9	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	51		21-120
Phenol-d6	31		10-120
Nitrobenzene-d5	93		23-120
2-Fluorobiphenyl	84		15-120
2,4,6-Tribromophenol	67		10-120
4-Terphenyl-d14	89		41-149

Project Name: 3190 WASHINGTON STREET
Lab Number: L1717151
Project Number: B451-001.09
Report Date: 06/02/17

SAMPLE RESULTS

Lab ID: L1717151-01
Client ID: ESS-MW-3
Sample Location: 3190-3204 WASHINGTON ST

Matrix: Water
Analytical Method: 1,8270D-SIM
Analytical Date: 05/30/17 13:03
Analyst: KL

Date Collected: 05/24/17 15:30
Date Received: 05/25/17
Field Prep: Not Specified
Extraction Method: EPA 3510C
Extraction Date: 05/28/17 00:05

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS-SIM - Westborough Lab						
Acenaphthene	ND		ug/l	0.10	0.04	1
2-Chloronaphthalene	ND		ug/l	0.20	0.04	1
Fluoranthene	ND		ug/l	0.10	0.04	1
Hexachlorobutadiene	ND		ug/l	0.50	0.04	1
Naphthalene	ND		ug/l	0.10	0.04	1
Benzo(a)anthracene	ND		ug/l	0.10	0.02	1
Benzo(a)pyrene	ND		ug/l	0.10	0.04	1
Benzo(b)fluoranthene	ND		ug/l	0.10	0.02	1
Benzo(k)fluoranthene	ND		ug/l	0.10	0.04	1
Chrysene	ND		ug/l	0.10	0.04	1
Acenaphthylene	ND		ug/l	0.10	0.04	1
Anthracene	ND		ug/l	0.10	0.04	1
Benzo(ghi)perylene	ND		ug/l	0.10	0.04	1
Fluorene	ND		ug/l	0.10	0.04	1
Phenanthrene	0.06	J	ug/l	0.10	0.02	1
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.04	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.04	1
Pyrene	ND		ug/l	0.10	0.04	1
1-Methylnaphthalene	ND		ug/l	0.10	0.04	1
2-Methylnaphthalene	ND		ug/l	0.10	0.05	1
Pentachlorophenol	ND		ug/l	0.80	0.22	1
Hexachlorobenzene	ND		ug/l	0.80	0.03	1
Hexachloroethane	ND		ug/l	0.80	0.03	1

Project Name: 3190 WASHINGTON STREET **Lab Number:** L1717151

Project Number: B451-001.09 **Report Date:** 06/02/17

SAMPLE RESULTS

Lab ID: L1717151-01 Date Collected: 05/24/17 15:30

Client ID: ESS-MW-3 Date Received: 05/25/17

Sample Location: 3190-3204 WASHINGTON ST Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor

Semivolatile Organics by GC/MS-SIM - Westborough Lab

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	30		21-120
Phenol-d6	19		10-120
Nitrobenzene-d5	58		23-120
2-Fluorobiphenyl	54		15-120
2,4,6-Tribromophenol	53		10-120
4-Terphenyl-d14	51		41-149

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09
Lab Number: L1717151
Report Date: 06/02/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 05/31/17 10:57
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 05/27/17 23:57

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1007833-1					
Acenaphthene	ND		ug/l	2.0	0.59
Benzidine	ND		ug/l	20	8.1
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.66
Hexachlorobenzene	ND		ug/l	2.0	0.58
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.67
2-Chloronaphthalene	ND		ug/l	2.0	0.64
1,2-Dichlorobenzene	ND		ug/l	2.0	0.73
1,3-Dichlorobenzene	ND		ug/l	2.0	0.69
1,4-Dichlorobenzene	ND		ug/l	2.0	0.71
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.4
2,4-Dinitrotoluene	ND		ug/l	5.0	0.84
2,6-Dinitrotoluene	ND		ug/l	5.0	1.1
Azobenzene	ND		ug/l	2.0	0.75
Fluoranthene	ND		ug/l	2.0	0.57
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.62
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.73
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.70
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.63
Hexachlorobutadiene	ND		ug/l	2.0	0.72
Hexachlorocyclopentadiene	ND		ug/l	20	7.8
Hexachloroethane	ND		ug/l	2.0	0.68
Isophorone	ND		ug/l	5.0	0.60
Naphthalene	ND		ug/l	2.0	0.68
Nitrobenzene	ND		ug/l	2.0	0.75
NDPA/DPA	ND		ug/l	2.0	0.64
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.70
Bis(2-ethylhexyl)phthalate	1.3	J	ug/l	3.0	0.91
Butyl benzyl phthalate	ND		ug/l	5.0	1.3
Di-n-butylphthalate	ND		ug/l	5.0	0.69

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09
Lab Number: L1717151
Report Date: 06/02/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 05/31/17 10:57
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 05/27/17 23:57

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1007833-1					
Di-n-octylphthalate	ND		ug/l	5.0	1.1
Diethyl phthalate	ND		ug/l	5.0	0.63
Dimethyl phthalate	ND		ug/l	5.0	0.65
Benzo(a)anthracene	ND		ug/l	2.0	0.61
Benzo(a)pyrene	ND		ug/l	2.0	0.54
Benzo(b)fluoranthene	ND		ug/l	2.0	0.64
Benzo(k)fluoranthene	ND		ug/l	2.0	0.60
Chrysene	ND		ug/l	2.0	0.54
Acenaphthylene	ND		ug/l	2.0	0.66
Anthracene	ND		ug/l	2.0	0.64
Benzo(ghi)perylene	ND		ug/l	2.0	0.61
Fluorene	ND		ug/l	2.0	0.62
Phenanthrene	ND		ug/l	2.0	0.61
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.55
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.71
Pyrene	ND		ug/l	2.0	0.57
Biphenyl	ND		ug/l	2.0	0.76
Aniline	ND		ug/l	2.0	0.65
4-Chloroaniline	ND		ug/l	5.0	0.63
1-Methylnaphthalene	ND		ug/l	2.0	0.67
2-Nitroaniline	ND		ug/l	5.0	1.1
3-Nitroaniline	ND		ug/l	5.0	1.2
4-Nitroaniline	ND		ug/l	5.0	1.3
Dibenzofuran	ND		ug/l	2.0	0.66
2-Methylnaphthalene	ND		ug/l	2.0	0.72
n-Nitrosodimethylamine	ND		ug/l	2.0	0.67
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.68
p-Chloro-m-cresol	ND		ug/l	2.0	0.62
2-Chlorophenol	ND		ug/l	2.0	0.63

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09
Lab Number: L1717151
Report Date: 06/02/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 05/31/17 10:57
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 05/27/17 23:57

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1007833-1					
2,4-Dichlorophenol	ND		ug/l	5.0	0.77
2,4-Dimethylphenol	ND		ug/l	5.0	1.6
2-Nitrophenol	ND		ug/l	10	1.5
4-Nitrophenol	ND		ug/l	10	1.8
2,4-Dinitrophenol	ND		ug/l	20	5.5
4,6-Dinitro-o-cresol	ND		ug/l	10	2.1
Pentachlorophenol	ND		ug/l	10	3.4
Phenol	ND		ug/l	5.0	1.9
2-Methylphenol	ND		ug/l	5.0	1.0
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	1.1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.72
Benzoic Acid	ND		ug/l	50	13.
Benzyl Alcohol	ND		ug/l	2.0	0.72
Carbazole	ND		ug/l	2.0	0.63
Pyridine	ND		ug/l	3.5	1.9
Tentatively Identified Compounds					
No Tentatively Identified Compounds	ND		ug/l		

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09
Lab Number: L1717151
Report Date: 06/02/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D
Analytical Date: 05/31/17 10:57
Analyst: PS

Extraction Method: EPA 3510C
Extraction Date: 05/27/17 23:57

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01 Batch: WG1007833-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	43		21-120
Phenol-d6	30		10-120
Nitrobenzene-d5	72		23-120
2-Fluorobiphenyl	64		15-120
2,4,6-Tribromophenol	65		10-120
4-Terphenyl-d14	71		41-149

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09
Lab Number: L1717151
Report Date: 06/02/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 05/29/17 14:20
Analyst: KL

Extraction Method: EPA 3510C
Extraction Date: 05/28/17 00:05

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1007837-1					
Acenaphthene	ND		ug/l	0.10	0.04
2-Chloronaphthalene	ND		ug/l	0.20	0.04
Fluoranthene	ND		ug/l	0.10	0.04
Hexachlorobutadiene	ND		ug/l	0.50	0.04
Naphthalene	ND		ug/l	0.10	0.04
Benzo(a)anthracene	ND		ug/l	0.10	0.02
Benzo(a)pyrene	ND		ug/l	0.10	0.04
Benzo(b)fluoranthene	ND		ug/l	0.10	0.02
Benzo(k)fluoranthene	ND		ug/l	0.10	0.04
Chrysene	ND		ug/l	0.10	0.04
Acenaphthylene	ND		ug/l	0.10	0.04
Anthracene	ND		ug/l	0.10	0.04
Benzo(ghi)perylene	ND		ug/l	0.10	0.04
Fluorene	ND		ug/l	0.10	0.04
Phenanthrene	ND		ug/l	0.10	0.02
Dibenzo(a,h)anthracene	ND		ug/l	0.10	0.04
Indeno(1,2,3-cd)pyrene	ND		ug/l	0.10	0.04
Pyrene	ND		ug/l	0.10	0.04
1-Methylnaphthalene	ND		ug/l	0.10	0.04
2-Methylnaphthalene	ND		ug/l	0.10	0.05
Pentachlorophenol	ND		ug/l	0.80	0.22
Hexachlorobenzene	ND		ug/l	0.80	0.03
Hexachloroethane	ND		ug/l	0.80	0.03

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09
Lab Number: L1717151
Report Date: 06/02/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 1,8270D-SIM
Analytical Date: 05/29/17 14:20
Analyst: KL

Extraction Method: EPA 3510C
Extraction Date: 05/28/17 00:05

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS-SIM - Westborough Lab for sample(s): 01 Batch: WG1007837-1					

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	37		21-120
Phenol-d6	27		10-120
Nitrobenzene-d5	74		23-120
2-Fluorobiphenyl	70		15-120
2,4,6-Tribromophenol	95		10-120
4-Terphenyl-d14	77		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3190 WASHINGTON STREET

Project Number: B451-001.09

Lab Number: L1717151

Report Date: 06/02/17

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: WG1007833-2 WG1007833-3								
Acenaphthene	68		75		37-111	10		30
Benzidine	31		29		10-75	7		30
1,2,4-Trichlorobenzene	64		77		39-98	18		30
Hexachlorobenzene	87		97		40-140	11		30
Bis(2-chloroethyl)ether	80		73		40-140	9		30
2-Chloronaphthalene	88		78		40-140	12		30
1,2-Dichlorobenzene	63		61		40-140	3		30
1,3-Dichlorobenzene	53		58		40-140	9		30
1,4-Dichlorobenzene	51		60		36-97	16		30
3,3'-Dichlorobenzidine	77		80		40-140	4		30
2,4-Dinitrotoluene	83		92		48-143	10		30
2,6-Dinitrotoluene	111		92		40-140	19		30
Azobenzene	78		84		40-140	7		30
Fluoranthene	80		90		40-140	12		30
4-Chlorophenyl phenyl ether	79		84		40-140	6		30
4-Bromophenyl phenyl ether	83		94		40-140	12		30
Bis(2-chloroisopropyl)ether	56		69		40-140	21		30
Bis(2-chloroethoxy)methane	73		94		40-140	25		30
Hexachlorobutadiene	64		66		40-140	3		30
Hexachlorocyclopentadiene	42		49		40-140	15		30
Hexachloroethane	55		71		40-140	25		30
Isophorone	92		100		40-140	8		30
Naphthalene	76		74		40-140	3		30

Lab Control Sample Analysis
Batch Quality Control

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717151
Report Date: 06/02/17

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: WG1007833-2 WG1007833-3								
Nitrobenzene	83		102		40-140	21		30
NDPA/DPA	78		83		40-140	6		30
n-Nitrosodi-n-propylamine	85		96		29-132	12		30
Bis(2-ethylhexyl)phthalate	83		87		40-140	5		30
Butyl benzyl phthalate	80		89		40-140	11		30
Di-n-butylphthalate	78		86		40-140	10		30
Di-n-octylphthalate	83		88		40-140	6		30
Diethyl phthalate	78		84		40-140	7		30
Dimethyl phthalate	108		92		40-140	16		30
Benzo(a)anthracene	80		83		40-140	4		30
Benzo(a)pyrene	81		87		40-140	7		30
Benzo(b)fluoranthene	84		90		40-140	7		30
Benzo(k)fluoranthene	80		86		40-140	7		30
Chrysene	79		84		40-140	6		30
Acenaphthylene	94		82		45-123	14		30
Anthracene	75		82		40-140	9		30
Benzo(ghi)perylene	78		76		40-140	3		30
Fluorene	75		82		40-140	9		30
Phenanthrene	74		85		40-140	14		30
Dibenzo(a,h)anthracene	79		71		40-140	11		30
Indeno(1,2,3-cd)pyrene	80		77		40-140	4		30
Pyrene	79		89		26-127	12		30
Biphenyl	93		80		40-140	15		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3190 WASHINGTON STREET

Project Number: B451-001.09

Lab Number: L1717151

Report Date: 06/02/17

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: WG1007833-2 WG1007833-3								
Aniline	56		51		40-140	9		30
4-Chloroaniline	82		78		40-140	5		30
1-Methylnaphthalene	67		78		41-103	15		30
2-Nitroaniline	122		104		52-143	16		30
3-Nitroaniline	76		80		25-145	5		30
4-Nitroaniline	85		93		51-143	9		30
Dibenzofuran	73		80		40-140	9		30
2-Methylnaphthalene	62		71		40-140	14		30
n-Nitrosodimethylamine	33		34		22-74	3		30
2,4,6-Trichlorophenol	113		99		30-130	13		30
p-Chloro-m-cresol	79		93		23-97	16		30
2-Chlorophenol	82		70		27-123	16		30
2,4-Dichlorophenol	79		102		30-130	25		30
2,4-Dimethylphenol	91		98		30-130	7		30
2-Nitrophenol	94		110		30-130	16		30
4-Nitrophenol	56		53		10-80	6		30
2,4-Dinitrophenol	93		103		20-130	10		30
4,6-Dinitro-o-cresol	95		107		20-164	12		30
Pentachlorophenol	79		85		9-103	7		30
Phenol	35		30		12-110	15		30
2-Methylphenol	68		84		30-130	21		30
3-Methylphenol/4-Methylphenol	71		88		30-130	21		30
2,4,5-Trichlorophenol	119		100		30-130	17		30

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3190 WASHINGTON STREET

Project Number: B451-001.09

Lab Number: L1717151

Report Date: 06/02/17

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: WG1007833-2 WG1007833-3								
Benzoic Acid	**0**	Q	**0**	Q	10-164	NC		30
Benzyl Alcohol	73		78		26-116	7		30
Carbazole	75		85		55-144	13		30
Pyridine	27		28		10-66	4		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	47		48		21-120
Phenol-d6	39		32		10-120
Nitrobenzene-d5	83		110		23-120
2-Fluorobiphenyl	105		88		15-120
2,4,6-Tribromophenol	99		106		10-120
4-Terphenyl-d14	82		94		41-149

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3190 WASHINGTON STREET

Project Number: B451-001.09

Lab Number: L1717151

Report Date: 06/02/17

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: WG1007837-2 WG1007837-3								
Acenaphthene	72		59		37-111	20		40
2-Chloronaphthalene	72		61		40-140	17		40
Fluoranthene	75		62		40-140	19		40
Hexachlorobutadiene	65		56		40-140	15		40
Naphthalene	66		56		40-140	16		40
Benzo(a)anthracene	76		61		40-140	22		40
Benzo(a)pyrene	76		61		40-140	22		40
Benzo(b)fluoranthene	80		64		40-140	22		40
Benzo(k)fluoranthene	74		60		40-140	21		40
Chrysene	72		58		40-140	22		40
Acenaphthylene	82		69		40-140	17		40
Anthracene	73		59		40-140	21		40
Benzo(ghi)perylene	76		60		40-140	24		40
Fluorene	98		79		40-140	21		40
Phenanthrene	67		55		40-140	20		40
Dibenzo(a,h)anthracene	82		64		40-140	25		40
Indeno(1,2,3-cd)pyrene	80		64		40-140	22		40
Pyrene	75		61		26-127	21		40
1-Methylnaphthalene	74		62		40-140	18		40
2-Methylnaphthalene	73		62		40-140	16		40
Pentachlorophenol	64		50		9-103	25		40
Hexachlorobenzene	69		56		40-140	21		40
Hexachloroethane	63		55		40-140	14		40

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3190 WASHINGTON STREET

Project Number: B451-001.09

Lab Number: L1717151

Report Date: 06/02/17

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: WG1007837-2 WG1007837-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	42		34		21-120
Phenol-d6	33		25		10-120
Nitrobenzene-d5	79		67		23-120
2-Fluorobiphenyl	77		64		15-120
2,4,6-Tribromophenol	102		80		10-120
4-Terphenyl-d14	76		61		41-149

PCBS

Project Name: 3190 WASHINGTON STREET
Lab Number: L1717151
Project Number: B451-001.09
Report Date: 06/02/17

SAMPLE RESULTS

Lab ID: L1717151-01
Client ID: ESS-MW-3
Sample Location: 3190-3204 WASHINGTON ST

Matrix: Water
Analytical Method: 5,608
Analytical Date: 05/31/17 09:15
Analyst: HT

Date Collected: 05/24/17 15:30
Date Received: 05/25/17
Field Prep: Not Specified
Extraction Method: EPA 608
Extraction Date: 05/30/17 07:08
Cleanup Method: EPA 3665A
Cleanup Date: 05/30/17
Cleanup Method: EPA 3660B
Cleanup Date: 05/31/17

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.250	0.042	1	A
Aroclor 1221	ND		ug/l	0.250	0.056	1	A
Aroclor 1232	ND		ug/l	0.250	0.024	1	A
Aroclor 1242	1.17		ug/l	0.250	0.028	1	A
Aroclor 1248	ND		ug/l	0.250	0.028	1	A
Aroclor 1254	ND		ug/l	0.250	0.043	1	A
Aroclor 1260	ND		ug/l	0.200	0.045	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		30-150	A
Decachlorobiphenyl	67		30-150	A

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09
Lab Number: L1717151
Report Date: 06/02/17

Method Blank Analysis
Batch Quality Control

Analytical Method: 5,608
Analytical Date: 05/31/17 09:28
Analyst: JW

Extraction Method: EPA 608
Extraction Date: 05/30/17 07:08
Cleanup Method: EPA 3665A
Cleanup Date: 05/30/17
Cleanup Method: EPA 3660B
Cleanup Date: 05/31/17

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01 Batch: WG1007930-1						
Aroclor 1016	ND		ug/l	0.250	0.042	A
Aroclor 1221	ND		ug/l	0.250	0.056	A
Aroclor 1232	ND		ug/l	0.250	0.024	A
Aroclor 1242	ND		ug/l	0.250	0.028	A
Aroclor 1248	ND		ug/l	0.250	0.028	A
Aroclor 1254	ND		ug/l	0.250	0.043	A
Aroclor 1260	ND		ug/l	0.200	0.045	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	74		30-150	A
Decachlorobiphenyl	70		30-150	A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3190 WASHINGTON STREET

Project Number: B451-001.09

Lab Number: L1717151

Report Date: 06/02/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 Batch: WG1007930-2									
Aroclor 1016	81		-		30-150	-		30	A
Aroclor 1260	84		-		30-150	-		30	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71				30-150	A
Decachlorobiphenyl	71				30-150	A

Matrix Spike Analysis

Batch Quality Control

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09
Lab Number: L1717151
Report Date: 06/02/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1007930-3 QC Sample: L1716950-01 Client ID: MS Sample													
Aroclor 1016	ND	3.29	2.79	85		-	-		40-126	-		30	A
Aroclor 1260	ND	3.29	2.73	83		-	-		40-127	-		30	A

Surrogate	MS % Recovery	MS Qualifier	MSD % Recovery	MSD Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	77				30-150	A
Decachlorobiphenyl	53				30-150	A

Lab Duplicate Analysis
Batch Quality Control

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717151
Report Date: 06/02/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits	
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1007930-4 QC Sample: L1716950-02 Client ID: DUP Sample							
Aroclor 1016	ND	ND	ug/l	NC		30	A
Aroclor 1221	ND	ND	ug/l	NC		30	A
Aroclor 1232	ND	ND	ug/l	NC		30	A
Aroclor 1242	ND	ND	ug/l	NC		30	A
Aroclor 1248	ND	ND	ug/l	NC		30	A
Aroclor 1254	ND	ND	ug/l	NC		30	A
Aroclor 1260	ND	ND	ug/l	NC		30	A

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		79		30-150	A
Decachlorobiphenyl	55		55		30-150	A

METALS

Project Name: 3190 WASHINGTON STREET
Lab Number: L1717151
Project Number: B451-001.09
Report Date: 06/02/17

SAMPLE RESULTS

Lab ID: L1717151-01
Client ID: ESS-MW-3
Sample Location: 3190-3204 WASHINGTON ST
Matrix: Water
Date Collected: 05/24/17 15:30
Date Received: 05/25/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	0.00150	J	mg/l	0.00400	0.00042	1	05/26/17 06:40	05/30/17 09:18	EPA 3005A	3,200.8	AM
Arsenic, Total	0.00626		mg/l	0.00100	0.00016	1	05/26/17 06:40	05/30/17 09:18	EPA 3005A	3,200.8	AM
Cadmium, Total	0.00059		mg/l	0.00020	0.00005	1	05/26/17 06:40	05/30/17 09:18	EPA 3005A	3,200.8	AM
Chromium, Total	0.00522		mg/l	0.00100	0.00017	1	05/26/17 06:40	05/30/17 09:18	EPA 3005A	3,200.8	AM
Copper, Total	0.02241		mg/l	0.00100	0.00038	1	05/26/17 06:40	05/30/17 09:18	EPA 3005A	3,200.8	AM
Iron, Total	1.78		mg/l	0.050	0.009	1	05/26/17 06:40	05/31/17 02:30	EPA 3005A	19,200.7	AB
Lead, Total	0.08368		mg/l	0.00050	0.00034	1	05/26/17 06:40	05/30/17 09:18	EPA 3005A	3,200.8	AM
Mercury, Total	0.00007	J	mg/l	0.00020	0.00006	1	05/30/17 11:24	05/30/17 17:20	EPA 245.1	3,245.1	EA
Nickel, Total	0.00445		mg/l	0.00200	0.00055	1	05/26/17 06:40	05/30/17 09:18	EPA 3005A	3,200.8	AM
Selenium, Total	0.00358	J	mg/l	0.00500	0.00173	1	05/26/17 06:40	05/30/17 09:18	EPA 3005A	3,200.8	AM
Silver, Total	ND		mg/l	0.00100	0.00026	1	05/26/17 06:40	05/30/17 09:18	EPA 3005A	3,200.8	AM
Zinc, Total	0.04614		mg/l	0.01000	0.00341	1	05/26/17 06:40	05/30/17 09:18	EPA 3005A	3,200.8	AM
Total Hardness (by calculation) - Mansfield Lab											
Hardness	176.5		mg/l	2.700	NA	5	05/26/17 06:40	05/30/17 13:59	EPA 3005A	1,6020A	AM
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.010	1		05/30/17 09:18	NA	107,-	

Project Name: 3190 WASHINGTON STREET **Lab Number:** L1717151

Project Number: B451-001.09 **Report Date:** 06/02/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1007284-1										
Antimony, Total	0.00094	J	mg/l	0.00400	0.00042	1	05/26/17 06:40	05/30/17 09:06	3,200.8	AM
Arsenic, Total	ND		mg/l	0.0010	0.0002	1	05/26/17 06:40	05/30/17 09:06	3,200.8	AM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	05/26/17 06:40	05/30/17 09:06	3,200.8	AM
Chromium, Total	ND		mg/l	0.00100	0.00017	1	05/26/17 06:40	05/30/17 09:06	3,200.8	AM
Copper, Total	ND		mg/l	0.00100	0.00038	1	05/26/17 06:40	05/30/17 09:06	3,200.8	AM
Lead, Total	ND		mg/l	0.00050	0.00034	1	05/26/17 06:40	05/30/17 09:06	3,200.8	AM
Nickel, Total	ND		mg/l	0.00200	0.00055	1	05/26/17 06:40	05/30/17 09:06	3,200.8	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	05/26/17 06:40	05/30/17 09:06	3,200.8	AM
Silver, Total	ND		mg/l	0.00100	0.00026	1	05/26/17 06:40	05/30/17 09:06	3,200.8	AM
Zinc, Total	ND		mg/l	0.01000	0.00341	1	05/26/17 06:40	05/30/17 09:06	3,200.8	AM

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1007285-1										
Iron, Total	ND		mg/l	0.050	0.009	1	05/26/17 06:40	05/31/17 02:14	19,200.7	AB

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness (by calculation) - Mansfield Lab for sample(s): 01 Batch: WG1007286-1										
Hardness	ND		mg/l	0.5400	NA	1	05/26/17 06:40	05/30/17 09:06	1,6020A	AM

Prep Information

Digestion Method: EPA 3005A

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09
Lab Number: L1717151
Report Date: 06/02/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1008032-1										
Mercury, Total	ND		mg/l	0.00020	0.00006	1	05/30/17 11:24	05/30/17 17:05	3,245.1	EA

Prep Information

Digestion Method: EPA 245.1

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3190 WASHINGTON STREET

Project Number: B451-001.09

Lab Number: L1717151

Report Date: 06/02/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1007284-2								
Antimony, Total	95		-		85-115	-		
Arsenic, Total	102		-		85-115	-		
Cadmium, Total	105		-		85-115	-		
Chromium, Total	101		-		85-115	-		
Copper, Total	100		-		85-115	-		
Lead, Total	108		-		85-115	-		
Nickel, Total	101		-		85-115	-		
Selenium, Total	110		-		85-115	-		
Silver, Total	99		-		85-115	-		
Zinc, Total	100		-		85-115	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1007285-2								
Iron, Total	98		-		85-115	-		
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01 Batch: WG1007286-2								
Hardness	105		-		80-120	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1008032-2								
Mercury, Total	105		-		85-115	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717151
Report Date: 06/02/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1007284-3 QC Sample: L1717151-01 Client ID: ESS-MW-3												
Antimony, Total	0.00150J	0.5	0.5085	102		-	-		70-130	-		20
Arsenic, Total	0.00626	0.12	0.1326	105		-	-		70-130	-		20
Cadmium, Total	0.00059	0.051	0.05476	106		-	-		70-130	-		20
Chromium, Total	0.00522	0.2	0.2037	99		-	-		70-130	-		20
Copper, Total	0.02241	0.25	0.2626	96		-	-		70-130	-		20
Lead, Total	0.08368	0.51	0.6168	104		-	-		70-130	-		20
Nickel, Total	0.00445	0.5	0.4983	99		-	-		70-130	-		20
Selenium, Total	0.00358J	0.12	0.1387	116		-	-		70-130	-		20
Silver, Total	ND	0.05	0.05025	100		-	-		70-130	-		20
Zinc, Total	0.04614	0.5	0.5599	103		-	-		70-130	-		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1007284-5 QC Sample: L1717124-01 Client ID: MS Sample												
Antimony, Total	0.0005J	0.5	0.5267	105		-	-		70-130	-		20
Arsenic, Total	0.0005J	0.12	0.1256	105		-	-		70-130	-		20
Cadmium, Total	ND	0.051	0.05442	107		-	-		70-130	-		20
Chromium, Total	ND	0.2	0.2036	102		-	-		70-130	-		20
Copper, Total	0.0158	0.25	0.2624	99		-	-		70-130	-		20
Lead, Total	0.0142	0.51	0.5468	104		-	-		70-130	-		20
Nickel, Total	ND	0.5	0.5176	104		-	-		70-130	-		20
Selenium, Total	ND	0.12	0.1296	108		-	-		70-130	-		20
Silver, Total	ND	0.05	0.04952	99		-	-		70-130	-		20
Zinc, Total	ND	0.5	0.5009	100		-	-		70-130	-		20

Matrix Spike Analysis
Batch Quality Control

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717151
Report Date: 06/02/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1007285-3 QC Sample: L1717151-01 Client ID: ESS-MW-3									
Iron, Total	1.78	1	2.69	91	-	-	75-125	-	20
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1007286-3 QC Sample: L1717151-01 Client ID: ESS-MW-3									
Hardness	176.5	66.2	238.6	94	-	-	75-125	-	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1008032-3 QC Sample: L1717138-01 Client ID: MS Sample									
Mercury, Total	ND	0.005	0.00501	100	-	-	70-130	-	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1008032-5 QC Sample: L1717557-01 Client ID: MS Sample									
Mercury, Total	ND	0.005	0.00513	103	-	-	70-130	-	20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717151
Report Date: 06/02/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1007284-4 QC Sample: L1717151-01 Client ID: ESS-MW-3						
Antimony, Total	0.00150J	0.00218J	mg/l	NC		20
Arsenic, Total	0.00626	0.0063	mg/l	0		20
Cadmium, Total	0.00059	0.00061	mg/l	3		20
Chromium, Total	0.00522	0.00512	mg/l	2		20
Copper, Total	0.02241	0.02143	mg/l	4		20
Lead, Total	0.08368	0.08346	mg/l	0		20
Nickel, Total	0.00445	0.00384	mg/l	15		20
Selenium, Total	0.00358J	0.00340J	mg/l	NC		20
Silver, Total	ND	ND	mg/l	NC		20
Zinc, Total	0.04614	0.04460	mg/l	3		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1007284-6 QC Sample: L1717124-01 Client ID: DUP Sample						
Copper, Total	0.0158	0.01629	mg/l	3		20
Lead, Total	0.0142	0.01445	mg/l	2		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1007285-4 QC Sample: L1717151-01 Client ID: ESS-MW-3						
Iron, Total	1.78	1.70	mg/l	5		20
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1007286-4 QC Sample: L1717151-01 Client ID: ESS-MW-3						
Hardness	176.5	173.2	mg/l	2		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717151
Report Date: 06/02/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1008032-4 QC Sample: L1717138-01 Client ID: DUP Sample					
Mercury, Total	ND	ND	mg/l	NC	20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1008032-6 QC Sample: L1717557-01 Client ID: DUP Sample					
Mercury, Total	ND	ND	mg/l	NC	20

INORGANICS
&
MISCELLANEOUS

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09
Lab Number: L1717151
Report Date: 06/02/17

SAMPLE RESULTS

Lab ID: L1717151-01
Client ID: ESS-MW-3
Sample Location: 3190-3204 WASHINGTON ST
Matrix: Water

Date Collected: 05/24/17 15:30
Date Received: 05/25/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Solids, Total Suspended	410		mg/l	5.0	NA	1	-	05/26/17 05:45	121,2540D	VB
Cyanide, Total	0.002	J	mg/l	0.005	0.001	1	05/30/17 10:55	05/31/17 12:13	121,4500CN-CE	JO
Nitrogen, Ammonia	0.047	J	mg/l	0.075	0.022	1	05/26/17 15:18	05/31/17 22:40	121,4500NH3-BH	AT
TPH, SGT-HEM	ND		mg/l	4.00	1.24	1	05/31/17 17:00	05/31/17 23:06	74,1664A	ML
Phenolics, Total	0.015	J	mg/l	0.030	0.010	1	05/30/17 09:53	05/30/17 14:00	4,420.1	AW
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	05/27/17 01:15	05/27/17 01:32	1,7196A	VB
Anions by Ion Chromatography - Westborough Lab										
Chloride	519.		mg/l	25.0	4.20	50	-	05/30/17 22:23	44,300.0	AU

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09
Lab Number: L1717151
Report Date: 06/02/17

SAMPLE RESULTS

Lab ID: L1717151-03
Client ID: ESS-MW-3
Sample Location: 3190-3204 WASHINGTON ST
Matrix: Water

Date Collected: 05/26/17 08:00
Date Received: 05/26/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chlorine, Total Residual	ND		mg/l	0.02	0.01	1	-	05/27/17 01:42	121,4500CL-D	VB
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	05/27/17 01:15	05/27/17 01:32	1,7196A	VB

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09
Lab Number: L1717151
Report Date: 06/02/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1007249-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	05/26/17 05:45	121,2540D	VB
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1007513-1										
Nitrogen, Ammonia	ND		mg/l	0.075	0.022	1	05/26/17 15:18	05/31/17 22:28	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01,03 Batch: WG1007624-1										
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	05/27/17 01:15	05/27/17 01:31	1,7196A	VB
General Chemistry - Westborough Lab for sample(s): 03 Batch: WG1007626-1										
Chlorine, Total Residual	ND		mg/l	0.02	0.01	1	-	05/27/17 01:42	121,4500CL-D	VB
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1008002-1										
Cyanide, Total	ND		mg/l	0.005	0.001	1	05/30/17 10:55	05/31/17 11:46	121,4500CN-CE	JO
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1008018-1										
Phenolics, Total	ND		mg/l	0.030	0.010	1	05/30/17 09:53	05/30/17 13:58	4,420.1	AW
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1008572-1										
TPH, SGT-HEM	ND		mg/l	4.00	1.24	1	05/31/17 17:00	05/31/17 23:06	74,1664A	ML
Anions by Ion Chromatography - Westborough Lab for sample(s): 01 Batch: WG1008590-1										
Chloride	ND		mg/l	0.500	0.083	1	-	05/30/17 17:35	44,300.0	AU

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717151
Report Date: 06/02/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1007513-2								
Nitrogen, Ammonia	97		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01,03 Batch: WG1007624-2								
Chromium, Hexavalent	96		-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 03 Batch: WG1007626-2								
Chlorine, Total Residual	101		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1008002-2								
Cyanide, Total	98		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1008018-2								
Phenolics, Total	96		-		70-130	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1008572-2								
TPH	84		-		64-132	-		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 Batch: WG1008590-2								
Chloride	100		-		90-110	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717151
Report Date: 06/02/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1007513-4 QC Sample: L1717181-02 Client ID: MS Sample												
Nitrogen, Ammonia	5.30	4	9.22	98		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01,03 QC Batch ID: WG1007624-4 QC Sample: L1717151-03 Client ID: ESS-MW-3												
Chromium, Hexavalent	ND	0.1	0.095	95		-	-		85-115	-		20
General Chemistry - Westborough Lab Associated sample(s): 03 QC Batch ID: WG1007626-4 QC Sample: L1717151-03 Client ID: ESS-MW-3												
Chlorine, Total Residual	ND	0.248	0.25	101		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1008002-4 QC Sample: L1716950-02 Client ID: MS Sample												
Cyanide, Total	ND	0.2	0.167	**84**	Q	-	-		90-110	-		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1008018-4 QC Sample: L1700005-148 Client ID: MS Sample												
Phenolics, Total	ND	0.4	0.43	107		-	-		70-130	-		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1008572-4 QC Sample: L1717666-01 Client ID: MS Sample												
TPH	8.60	20.4	36.5	**137**	Q	-	-		64-132	-		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1008590-3 QC Sample: L1717117-06 Client ID: MS Sample												
Chloride	11.4	4	15.5	101		-	-		90-110	-		18

Lab Duplicate Analysis
Batch Quality Control

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717151
Report Date: 06/02/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1007249-2 QC Sample: L1717174-01 Client ID: DUP Sample						
Solids, Total Suspended	1100	910	mg/l	19		29
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1007513-3 QC Sample: L1717181-02 Client ID: DUP Sample						
Nitrogen, Ammonia	5.30	5.43	mg/l	2		20
General Chemistry - Westborough Lab Associated sample(s): 01,03 QC Batch ID: WG1007624-3 QC Sample: L1717151-03 Client ID: ESS-MW-3						
Chromium, Hexavalent	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 03 QC Batch ID: WG1007626-3 QC Sample: L1717151-03 Client ID: ESS-MW-3						
Chlorine, Total Residual	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1008002-3 QC Sample: L1716950-01 Client ID: DUP Sample						
Cyanide, Total	0.006J	ND	mg/l	NC		30
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1008018-3 QC Sample: L1700005-148 Client ID: DUP Sample						
Phenolics, Total	ND	ND	mg/l	NC		20
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1008572-3 QC Sample: L1717666-01 Client ID: DUP Sample						
TPH	8.60	7.50	mg/l	14		34
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1008590-4 QC Sample: L1717117-06 Client ID: DUP Sample						
Chloride	11.4	11.4	mg/l	0		18

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717151
Report Date: 06/02/17

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler	
B	Absent
C	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1717151-01A	Vial HCl preserved	B	N/A	5.2	Y	Absent	8260-SIM(14),8260(14)
L1717151-01B	Vial HCl preserved	B	N/A	5.2	Y	Absent	8260-SIM(14),8260(14)
L1717151-01C	Vial HCl preserved	B	N/A	5.2	Y	Absent	8260-SIM(14),8260(14)
L1717151-01D	Vial Na2S2O3 preserved	B	N/A	5.2	Y	Absent	504(14)
L1717151-01E	Vial Na2S2O3 preserved	B	N/A	5.2	Y	Absent	504(14)
L1717151-01F	Vial HCl preserved	B	N/A	5.2	Y	Absent	SUB-ETHANOL(0)
L1717151-01G	Vial HCl preserved	B	N/A	5.2	Y	Absent	SUB-ETHANOL(0)
L1717151-01H	Vial HCl preserved	B	N/A	5.2	Y	Absent	SUB-ETHANOL(0)
L1717151-01J	Plastic 500ml H2SO4 preserved	B	<2	5.2	Y	Absent	NH3-4500(28)
L1717151-01K	Plastic 250ml NaOH preserved	B	>12	5.2	Y	Absent	TCN-4500(14)
L1717151-01L	Plastic 250ml HNO3 preserved	B	<2	5.2	Y	Absent	CD-2008T(180),NI-2008T(180),ZN-2008T(180),CU-2008T(180),FE-UI(180),AG-2008T(180),AS-2008T(180),HG-U(28),SE-2008T(180),HARDT-6020(180),CR-2008T(180),PB-2008T(180),SB-2008T(180)
L1717151-01M	Amber 1000ml Na2S2O3	B	7	5.2	Y	Absent	PCB-608(7)
L1717151-01N	Amber 1000ml Na2S2O3	B	7	5.2	Y	Absent	PCB-608(7)
L1717151-01P	Amber 1000ml unpreserved	B	7	5.2	Y	Absent	8270TCL(7),8270TCL-SIM(7)
L1717151-01Q	Amber 1000ml unpreserved	B	7	5.2	Y	Absent	8270TCL(7),8270TCL-SIM(7)
L1717151-01R	Plastic 950ml unpreserved	B	7	5.2	Y	Absent	CL-300(28)
L1717151-01S	Amber 1000ml HCl preserved	B	N/A	5.2	Y	Absent	TPH-1664(28)
L1717151-01T	Amber 1000ml HCl preserved	B	N/A	5.2	Y	Absent	TPH-1664(28)
L1717151-01U	Amber 950ml H2SO4 preserved	B	<2	5.2	Y	Absent	TPHENOL-420(28)
L1717151-01V	Plastic 950ml unpreserved	B	7	5.2	Y	Absent	TSS-2540(7)
L1717151-02A	Vial HCl preserved	B	N/A	5.2	Y	Absent	HOLD-8260(14)
L1717151-02B	Vial HCl preserved	B	N/A	5.2	Y	Absent	HOLD-8260(14)
L1717151-02C	Vial Na2S2O3 preserved	B	N/A	5.2	Y	Absent	HOLD-504/8011(14)
L1717151-02D	Vial Na2S2O3 preserved	B	N/A	5.2	Y	Absent	HOLD-504/8011(14)
L1717151-03A	Plastic 950ml unpreserved	C	7	3.5	Y	Absent	HEXCR-7196(1),TRC-4500(1)

*Values in parentheses indicate holding time in days

Project Name:	3190 WASHINGTON STREET	**Lab Number:**	L1717151
Project Number:	B451-001.09	**Report Date:**	06/02/17

GLOSSARY

Acronyms

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

Footnotes

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

Terms

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

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

Data Qualifiers

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

Report Format: DU Report with 'J' Qualifiers

Project Name:	3190 WASHINGTON STREET	**Lab Number:**	L1717151
Project Number:	B451-001.09	**Report Date:**	06/02/17

Data Qualifiers

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

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

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

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

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

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	3190 WASHINGTON STREET	**Lab Number:**	L1717151
Project Number:	B451-001.09	**Report Date:**	06/02/17

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.

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

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

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.

LIMITATION OF LIABILITIES

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

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

Certification Information

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

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

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

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

Westborough Facility:

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

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

Mansfield Facility:

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

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

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

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL
8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Date Rec'd in Lab: 5/25/17

ALPHA Job #: L1717151

Client Information

Client: ESS Group, Inc.
Address: 100 FIFTH AVE, 5TH FLOOR
WALTHAM, MA 02451
Phone: 781-419-7714
Email: eparadis@essgroup.com

Project Information

Project Name: 3190 Washington Street
Project Location: 3190-3204 Washington St.
Project #: B451-001.09
Project Manager: Craig Paradis
ALPHA Quote #: 3058

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Report Information - Data Deliverables

☒ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☒ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☒ No CT RCP Analytical Methods
☐ Yes ☒ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☒ No GW1 Standards (Info Required for Metals & EPH with Targets)
☒ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Additional Project Information:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	VOC: ☐ 8260 ☐ 624 ☐ 524.2	SVOC: ☐ ABN ☐ PAH	METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15	METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13	EPH: ☐ Ranges & Targets ☐ Ranges Only	VPH: ☐ Ranges & Targets ☐ Ranges Only	☐ PCB ☐ PEST	TPH: ☐ Quant Only ☐ Fingerprint	NPDES RGP PARAMETERS	HARDNESS	Sample Comments	TOTAL # BOTTLES
1715 1-01	ESS-MW-3	5/24/17	1330	GW	MP									X	X		20

SAMPLE INFO
Filtration ☐ Field ☐ Lab to do
Preservation ☐ Lab to do

Container Type														A,B ✓	P		
Preservative														MANY			

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
M. Pattison	5/25/17 10:28		5/25/17 1120
	5/25/17 1132		5/25/17 1132

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

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

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 5/26/17

ALPHA Job #: L1717151

ALPHA ANALYTICAL
World Class Chemistry
8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Client Information

Client: ESS Group, Inc.
Address: 100 5th Ave, 5th FLR
Waltham, MA 02451
Phone: 781-419-7714
Email: Cparadis@essgroup.com

Project Information

Project Name: 3190 Washington Street
Project Location: 3190-3204 Washington St.
Project #: B451-001.09
Project Manager: C. Paradis
ALPHA Quote #:

Turn-Around Time

☑ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Report Information - Data Deliverables

☐ ADEx ☑ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☑ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☑ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

Additional Project Information:

SHORT HOLDS

ANALYSIS

VOC: ☐ 8260 ☐ 624 ☐ 524.2
SVOC: ☐ ABN ☐ PAH
METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15
METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
EPH: ☐ Ranges & Targets ☐ Ranges Only
VPH: ☐ Ranges & Targets ☐ Ranges Only
☐ PCB ☐ PEST
TPH: ☐ Quant Only ☐ Fingerprint
Hex Cr
TRC-4500 CT

SAMPLE INFO
Filtration ☐ Field ☐ Lab to do
Preservation ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Hex Cr	TRC-4500 CT	Sample Comments	TOTAL # BOTTLES
17151 03	ESS-MW-3	5/26/17	0800	GW	MP	X	X	Short HOLD	

Container Type: P
Preservative: A

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
AAL 5/26/17	5/26/17 1312	AAL	5/26/17 1312
	1743		5/26/17 17:43

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

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

SUB UPS: **Eurofins, Lancaster, PA** (initials)

CHAIN OF CUSTODY

ALPHA ANALYTICAL

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

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

Date Rec'd in Lab:

ALPHA Job #:L1717151

Client Information

Client: Alpha Analytical Lab

Address: 8 Walkup Drive

Westborough, Ma 01581

Phone: 508-898-9220

Fax:

Email: subreports@alphalab.com

☐ These samples have been Previously analyzed by Alpha

Project Information

Project Name:

Project Location: MA

Project #:

Project Manager: Dave Sanford

ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ Rush (ONLY IF PRE-APPROVED)

Due Date: Time:

Report Information Data Deliverables

☐ FAX ☐ EMAIL

☐ ADEx ☐ Add'l Deliverables

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements/Report Limits

State/Fed Program	Criteria

MCP PRESUMPTIVE CERTAINTY-CT REASONABLE CONFIDENCE PROTOCOLS

☐ Yes ☒ No Are MCP Analytical Methods Required?

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

Other Project Specific Requirements/Comments/Detection Limits:

Please reference Alpha Job # **L1717151** on this report.

ANALYSIS

SAMPLE HANDLING

Filtration

☐ Done

☐ Not Needed

☐ Lab to do

Preservation

☐ Lab to do

(Please specify below)

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler's Initials	Ethanol 1671	Sample Specific Comments	TOTAL # BOTTLES
	ESS-MW-3	5/24/17	15:30	Water		x		3

PLEASE ANSWER QUESTIONS ABOVE!

Container Type	Vial	-	-	-	-	-	-	-	-	-	-
Preservative	A	-	-	-	-	-	-	-	-	-	-

IS YOUR PROJECT MA MCP *or* CT RCP?

Relinquished By:	Date/Time	Received By:	Date/Time
(signature)	5/30/17		

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

FORM NO: 01-01(I) (rev. 12-JUL-07)

ANALYTICAL REPORT

Lab Number:	L1717150
Client:	ESS Group, Inc. 100 Fifth Avenue 5th Floor Waltham, MA 02451
ATTN:	Craig Paradis
Phone:	(781) 419-7714
Project Name:	3190 WASHINGTON STREET
Project Number:	B451-001.09
Report Date:	06/02/17

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), NJ NELAP (MA935), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-14-00197).

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

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717150
Report Date: 06/02/17

Alpha Sample ID	Client ID	Matrix	Sample Location	Collection Date/Time	Receive Date
L1717150-01	RCVG-W-052417	WATER	3190-3204 WASHINGTON ST	05/24/17 14:40	05/25/17
L1717150-02	RCVG-W-052417	WATER	3190-3204 WASHINGTON ST	05/26/17 08:40	05/26/17

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717150
Report Date: 06/02/17

Case Narrative

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

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

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

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

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

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

Project Name:	3190 WASHINGTON STREET	**Lab Number:**	L1717150
Project Number:	B451-001.09	**Report Date:**	06/02/17

Case Narrative (continued)

Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

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

Authorized Signature: Melissa Cripps

Title: Technical Director/Representative Date: 06/02/17

METALS

Project Name: 3190 WASHINGTON STREET
Lab Number: L1717150
Project Number: B451-001.09
Report Date: 06/02/17

SAMPLE RESULTS

Lab ID: L1717150-01
Client ID: RCVG-W-052417
Sample Location: 3190-3204 WASHINGTON ST
Matrix: Water
Date Collected: 05/24/17 14:40
Date Received: 05/25/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Antimony, Total	0.00079	J	mg/l	0.00400	0.00042	1	05/31/17 12:23	06/01/17 11:33	EPA 3005A	1,6020A	AM
Arsenic, Total	0.00103		mg/l	0.00050	0.00016	1	05/31/17 12:23	06/01/17 11:33	EPA 3005A	1,6020A	AM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	05/31/17 12:23	06/01/17 11:33	EPA 3005A	1,6020A	AM
Chromium, Total	0.00090	J	mg/l	0.00100	0.00017	1	05/31/17 12:23	06/01/17 11:33	EPA 3005A	1,6020A	AM
Copper, Total	0.00410		mg/l	0.00100	0.00038	1	05/31/17 12:23	06/01/17 11:33	EPA 3005A	1,6020A	AM
Iron, Total	0.818		mg/l	0.0500	0.0191	1	05/31/17 12:23	06/01/17 11:33	EPA 3005A	1,6020A	AM
Lead, Total	0.00363		mg/l	0.00100	0.00034	1	05/31/17 12:23	06/01/17 11:33	EPA 3005A	1,6020A	AM
Mercury, Total	ND		mg/l	0.00020	0.00006	1	05/26/17 10:45	05/30/17 19:55	EPA 7470A	1,7470A	EA
Nickel, Total	0.00107	J	mg/l	0.00200	0.00055	1	05/31/17 12:23	06/01/17 11:33	EPA 3005A	1,6020A	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	05/31/17 12:23	06/01/17 11:33	EPA 3005A	1,6020A	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	05/31/17 12:23	06/01/17 11:33	EPA 3005A	1,6020A	AM
Zinc, Total	0.01057		mg/l	0.01000	0.00341	1	05/31/17 12:23	06/01/17 11:33	EPA 3005A	1,6020A	AM
Total Hardness (by calculation) - Mansfield Lab											
Hardness	81.32		mg/l	0.5400	NA	1	05/31/17 12:23	06/01/17 11:33	EPA 3005A	1,6020A	AM
General Chemistry - Mansfield Lab											
Chromium, Trivalent	ND		mg/l	0.010	0.010	1		06/01/17 11:33	NA	107,-	

Project Name: 3190 WASHINGTON STREET **Lab Number:** L1717150

Project Number: B451-001.09 **Report Date:** 06/02/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1007403-1										
Mercury, Total	ND		mg/l	0.00020	0.00006	1	05/26/17 10:45	05/30/17 19:30	1,7470A	EA

Prep Information

Digestion Method: EPA 7470A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01 Batch: WG1008431-1										
Antimony, Total	0.00075	J	mg/l	0.00400	0.00042	1	05/31/17 12:23	06/01/17 11:13	1,6020A	AM
Arsenic, Total	ND		mg/l	0.00050	0.00016	1	05/31/17 12:23	06/01/17 11:13	1,6020A	AM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	05/31/17 12:23	06/01/17 11:13	1,6020A	AM
Chromium, Total	ND		mg/l	0.00100	0.00017	1	05/31/17 12:23	06/01/17 11:13	1,6020A	AM
Copper, Total	ND		mg/l	0.00100	0.00038	1	05/31/17 12:23	06/01/17 11:13	1,6020A	AM
Iron, Total	ND		mg/l	0.0500	0.0191	1	05/31/17 12:23	06/01/17 11:13	1,6020A	AM
Lead, Total	ND		mg/l	0.00100	0.00034	1	05/31/17 12:23	06/01/17 11:13	1,6020A	AM
Nickel, Total	ND		mg/l	0.00200	0.00055	1	05/31/17 12:23	06/01/17 11:13	1,6020A	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	05/31/17 12:23	06/01/17 11:13	1,6020A	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	05/31/17 12:23	06/01/17 11:13	1,6020A	AM
Zinc, Total	ND		mg/l	0.01000	0.00341	1	05/31/17 12:23	06/01/17 11:13	1,6020A	AM

Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Hardness (by calculation) - Mansfield Lab for sample(s): 01 Batch: WG1008431-1										
Hardness	ND		mg/l	0.5400	NA	1	05/31/17 12:23	06/01/17 11:13	1,6020A	AM

Prep Information

Digestion Method: EPA 3005A

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3190 WASHINGTON STREET

Project Number: B451-001.09

Lab Number: L1717150

Report Date: 06/02/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1007403-2								
Mercury, Total	101		-		80-120	-		
Total Metals - Mansfield Lab Associated sample(s): 01 Batch: WG1008431-2								
Antimony, Total	97		-		80-120	-		
Arsenic, Total	105		-		80-120	-		
Cadmium, Total	102		-		80-120	-		
Chromium, Total	105		-		80-120	-		
Copper, Total	99		-		80-120	-		
Iron, Total	112		-		80-120	-		
Lead, Total	104		-		80-120	-		
Nickel, Total	101		-		80-120	-		
Selenium, Total	108		-		80-120	-		
Silver, Total	100		-		80-120	-		
Zinc, Total	106		-		80-120	-		
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01 Batch: WG1008431-2								
Hardness	106		-		80-120	-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717150
Report Date: 06/02/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1007403-3 WG1007403-4 QC Sample: L1716963-03 Client ID: MS Sample												
Mercury, Total	ND	0.005	0.00487	98		0.00480	96		75-125	2		20
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1008431-3 QC Sample: L1717227-01 Client ID: MS Sample												
Antimony, Total	0.0163	0.5	0.6443	**126**	Q	-	-		75-125	-		20
Arsenic, Total	0.0120	0.12	0.1354	103		-	-		75-125	-		20
Cadmium, Total	0.0005	0.051	0.05555	108		-	-		75-125	-		20
Chromium, Total	0.0303	0.2	0.2262	98		-	-		75-125	-		20
Copper, Total	0.1540	0.25	0.3868	93		-	-		75-125	-		20
Iron, Total	32.7	1	31.3	**0**	Q	-	-		75-125	-		20
Lead, Total	0.0144	0.51	0.5277	101		-	-		75-125	-		20
Nickel, Total	0.0289	0.5	0.5192	98		-	-		75-125	-		20
Selenium, Total	ND	0.12	0.132	110		-	-		75-125	-		20
Silver, Total	0.0003J	0.05	0.04994	100		-	-		75-125	-		20
Zinc, Total	0.6203	0.5	1.082	92		-	-		75-125	-		20
Total Hardness (by calculation) - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1008431-3 QC Sample: L1717227-01 Client ID: MS Sample												
Hardness	1251.	66.2	1243	**0**	Q	-	-		75-125	-		20

Lab Duplicate Analysis
Batch Quality Control

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717150
Report Date: 06/02/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01 QC Batch ID: WG1008431-4 QC Sample: L1717227-01 Client ID: DUP Sample						
Iron, Total	32.7	31.7	mg/l	3		20

INORGANICS
&
MISCELLANEOUS

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09
Lab Number: L1717150
Report Date: 06/02/17

SAMPLE RESULTS

Lab ID: L1717150-01
Client ID: RCVG-W-052417
Sample Location: 3190-3204 WASHINGTON ST
Matrix: Water
Date Collected: 05/24/17 14:40
Date Received: 05/25/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
SALINITY	ND		SU	2.0	2.0	1	-	06/01/17 20:50	121,2520B	AS
Nitrogen, Ammonia	0.184		mg/l	0.075	0.022	1	05/26/17 15:18	05/31/17 22:39	121,4500NH3-BH	AT
Chromium, Hexavalent	0.005	J	mg/l	0.010	0.003	1	05/27/17 01:15	05/27/17 01:27	1,7196A	VB
Anions by Ion Chromatography - Westborough Lab										
Chloride	162.		mg/l	25.0	4.20	50	-	05/30/17 22:11	44,300.0	AU

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09
Lab Number: L1717150
Report Date: 06/02/17

SAMPLE RESULTS

Lab ID: L1717150-02
Client ID: RCVG-W-052417
Sample Location: 3190-3204 WASHINGTON ST
Matrix: Water

Date Collected: 05/26/17 08:40
Date Received: 05/26/17
Field Prep: Not Specified

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab										
Chromium, Hexavalent	0.005	J	mg/l	0.010	0.003	1	05/27/17 01:15	05/27/17 01:27	1,7196A	VB

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09
Lab Number: L1717150
Report Date: 06/02/17

Method Blank Analysis
Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01 Batch: WG1007513-1										
Nitrogen, Ammonia	ND		mg/l	0.075	0.022	1	05/26/17 15:18	05/31/17 22:28	121,4500NH3-BH	AT
General Chemistry - Westborough Lab for sample(s): 01-02 Batch: WG1007625-1										
Chromium, Hexavalent	ND		mg/l	0.010	0.003	1	05/27/17 01:15	05/27/17 01:26	1,7196A	VB
Anions by Ion Chromatography - Westborough Lab for sample(s): 01 Batch: WG1008590-1										
Chloride	ND		mg/l	0.500	0.083	1	-	05/30/17 17:35	44,300.0	AU

Lab Control Sample Analysis

Batch Quality Control

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717150
Report Date: 06/02/17

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1007513-2								
Nitrogen, Ammonia	97		-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 Batch: WG1007625-2								
Chromium, Hexavalent	96		-		85-115	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 Batch: WG1008590-2								
Chloride	100		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01 Batch: WG1009022-1								
SALINITY	100		-			-		

Matrix Spike Analysis
Batch Quality Control

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717150
Report Date: 06/02/17

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1007513-4 QC Sample: L1717181-02 Client ID: MS Sample												
Nitrogen, Ammonia	5.30	4	9.22	98		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1007625-4 QC Sample: L1717150-02 Client ID: RCVG-W-052417												
Chromium, Hexavalent	0.005J	0.1	0.097	97		-	-		85-115	-		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1008590-3 QC Sample: L1717117-06 Client ID: MS Sample												
Chloride	11.4	4	15.5	101		-	-		90-110	-		18

Lab Duplicate Analysis
Batch Quality Control

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717150
Report Date: 06/02/17

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1007513-3 QC Sample: L1717181-02 Client ID: DUP Sample						
Nitrogen, Ammonia	5.30	5.43	mg/l	2		20
General Chemistry - Westborough Lab Associated sample(s): 01-02 QC Batch ID: WG1007625-3 QC Sample: L1717150-02 Client ID: RCVG-W-052417						
Chromium, Hexavalent	0.005J	0.005J	mg/l	NC		20
Anions by Ion Chromatography - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1008590-4 QC Sample: L1717117-06 Client ID: DUP Sample						
Chloride	11.4	11.4	mg/l	0		18
General Chemistry - Westborough Lab Associated sample(s): 01 QC Batch ID: WG1009022-2 QC Sample: L1717150-01 Client ID: RCVG-W-052417						
SALINITY	ND	ND	SU	NC		

Project Name: 3190 WASHINGTON STREET
Project Number: B451-001.09

Lab Number: L1717150
Report Date: 06/02/17

Sample Receipt and Container Information

Were project specific reporting limits specified? YES

Cooler Information Custody Seal

Cooler	
A	Absent
B	Absent

Container Information

Container ID	Container Type	Cooler	pH	Temp deg C	Pres	Seal	Analysis(*)
L1717150-01A	Plastic 250ml HNO3 preserved	A	<2	4.9	Y	Absent	FE-6020T(180),SE-6020T(180),CR-6020T(180),NI-6020T(180),CU-6020T(180),ZN-6020T(180),PB-6020T(180),AS-6020T(180),SB-6020T(180),AG-6020T(180),CD-6020T(180),HARDT-6020(180),HG-T(28)
L1717150-01B	Plastic 250ml unpreserved	A	7	4.9	Y	Absent	CL-300(28),HOLD-WETCHEM()
L1717150-01C	Plastic 500ml H2SO4 preserved	A	<2	4.9	Y	Absent	NH3-4500(28)
L1717150-01D	Amber 250ml unpreserved	A	7	4.9	Y	Absent	SALINITY(28)
L1717150-02A	Plastic 950ml unpreserved	B	7	3.5	Y	Absent	HEXCR-7196(1)

*Values in parentheses indicate holding time in days

Project Name:	3190 WASHINGTON STREET	**Lab Number:**	L1717150
Project Number:	B451-001.09	**Report Date:**	06/02/17

GLOSSARY

Acronyms

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

Footnotes

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

Terms

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

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

Data Qualifiers

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

Report Format: DU Report with 'J' Qualifiers

Project Name:	3190 WASHINGTON STREET	**Lab Number:**	L1717150
Project Number:	B451-001.09	**Report Date:**	06/02/17

Data Qualifiers

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

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

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

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

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

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

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

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

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

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

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

R - Analytical results are from sample re-analysis.

RE - Analytical results are from sample re-extraction.

S - Analytical results are from modified screening analysis.

J - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).

ND - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.

Report Format: DU Report with 'J' Qualifiers

Project Name:	3190 WASHINGTON STREET	**Lab Number:**	L1717150
Project Number:	B451-001.09	**Report Date:**	06/02/17

REFERENCES

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

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

107 Alpha Analytical - In-house calculation method.

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

LIMITATION OF LIABILITIES

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

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

Certification Information

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

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

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

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

Westborough Facility:

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

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

Mansfield Facility:

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

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

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

CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 05/25/17

ALPHA Job #: L1717150

ALPHA ANALYTICAL
Mid Class: Chemistry
8 Walkup Drive
Westboro, MA 01581
Tel: 508-898-9220

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

Client Information

Client: ESS Group, Inc
Address: 100 5th Ave 5th FLR
Waltham, MA 02451
Phone: 781-419-7714
Email: cparadis@essgroup.com

Additional Project Information:

Project Information

Project Name: 3190 Washington Street
Project Location: 3190-3204 Washington Street
Project #: B451-001.09
Project Manager: C. Paradis
ALPHA Quote #:

Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved!)
Date Due:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☒ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☒ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☒ Yes ☐ No NPDES RGP
☐ Other State /Fed Program _____ Criteria _____

ANALYSIS

VOC: ☐ 8260 ☐ 624 ☐ 524.2
SVOC: ☐ ABN ☐ PAH
METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15
METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13
EPH: ☐ Ranges & Targets ☐ Ranges Only
VPH: ☐ Ranges & Targets ☐ Ranges Only
☐ PCB ☐ PEST
TPH: ☐ Quant Only ☐ Fingerprint
Trivalent Cr (NPDES RGP)
Chloride by IC EPA 300.0
Ammonia/Nitrogen (SM 4500)
Hardness, Total Arsenic (SM 3500)
Total Iron, Total Mercury, Total Aluminum, Total Selenium, Total Cd, Cr, Cu, Ni, Pb, Ag, Zn

SAMPLE INFO
Filtration
☐ Field
☐ Lab to do
Preservation
☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Sample Comments	TOTAL # BOTTLES
17150-01	RCVG-W-052417	5/24/17	1440	SW	MP		4

Container Type	P	A	P	A,P	P	P
Preservative	A	A	D	C	C	C

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
M. Pallow	5/25/17 10:28		5/25/17 1028
	5/25/17 1137		5/25/17 1132

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

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

Serial_No:06021717:04

CHAIN OF CUSTODY

PAGE 1 OF 1

ALPHA ANALYTICAL — World Class Chemistry

8 Walkup Drive, Westboro, MA 01581, Tel: 508-898-9220
320 Forbes Blvd, Mansfield, MA 02048, Tel: 508-822-9300

Date Rec'd in Lab: 5/26/17

ALPHA Job #: L1717150

Project Information

Project Name: 3190 Washington Street
Project Location: 3190-3204 Washington St
Project #: B451-001.09
Project Manager: C. Paradis
ALPHA Quote #:

Client Information

Client: ESS Group, Inc.
Address: 100 5th Ave, 5th FLR, Waltham, MA 02451
Phone: 781-419-7714
Email: CParadis@essgroup.com

Additional Project Information:

SHORT HOLD

Turn-Around Time

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

Date Due:

Report Information - Data Deliverables

☐ ADEx ☒ EMAIL

Billing Information

☐ Same as Client info PO #:

Regulatory Requirements & Project Information Requirements

☒ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)
☒ Yes ☐ No NPDES RGP
☐ Other State /Fed Program ____ Criteria ____

ANALYSIS: VOC: ☐ 8260 ☐ 624 ☐ 524.2; SVOC: ☐ ABN ☐ PAH; METALS: ☐ MCP 13 ☐ MCP 14 ☐ RCP 15; METALS: ☐ RCRA5 ☐ RCRA8 ☐ PP13; EPH: ☐ Ranges & Targets ☐ Ranges Only; VPH: ☐ Ranges & Targets ☐ Ranges Only; ☐ PCB ☐ PEST; TPH: ☐ Quant Only ☐ Fingerprint; Hex Cr, CI

SAMPLE INFO — Filtration: ☐ Field ☐ Lab to do; Preservation: ☐ Lab to do

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection Date	Collection Time	Sample Matrix	Sampler Initials	Hex Cr, CI	Sample Comments	TOTAL # BOTTLES
17150.02	RCVG-W-052417	5/26/17	0840	SW	MP	X	Short Hold	

	Hex Cr, CI
Container Type	P
Preservative	A

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

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

Relinquished By:	Date/Time	Received By:	Date/Time
M. Phillips	5/26/17 1312	AAL	5/26/17 1312
AAL	5/26/17 1743	[signature]	5/26/17 1743

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

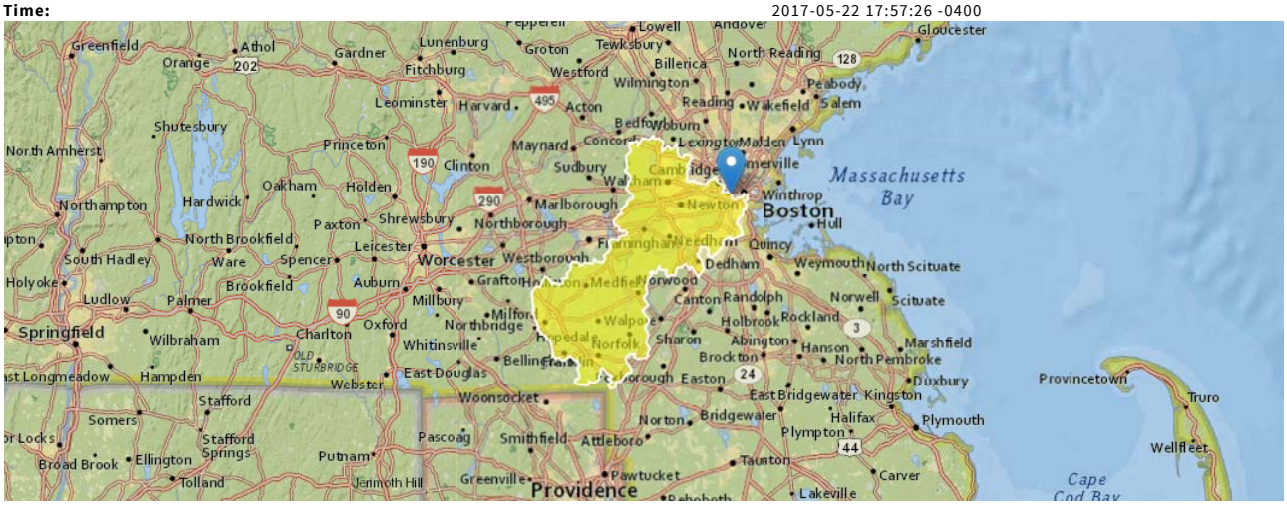
FORM NO: 01-01 (rev. 12-Mar-2012)

Appendix D

StreamStats Report

StreamStats Report

Region ID: MA
Workspace ID: MA20170522155221219000
Clicked Point (Latitude, Longitude): 42.35461, -71.09201
Time: 2017-05-22 17:57:26 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	307	square miles
DRFTPERSTR	Area of stratified drift per unit of stream length	0.25	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless
BSLDEM250	Mean basin slope computed from 1:250K DEM	2.341	percent
FOREST	Percentage of area covered by forest	39.42	percent
PCTSNDGRV	Percentage of land surface underlain by sand and gravel deposits	46.7	percent

Low-Flow Statistics Parameters [100 Percent (307 square miles) Statewide Low Flow WRIR00 4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	307	square miles	1.61	149
DRFTPERSTR	Stratified Drift per Stream Length	0.25	square mile per mile	0	1.29
BSLDEM250	Mean Basin Slope from 250K DEM	2.341	percent	0.32	24.6
MAREGION	Massachusetts Region	0	dimensionless	0	1

Low-Flow Statistics Disclaimers [100 Percent (307 square miles) Statewide Low Flow WRIR00 4135]

One or more of the parameters is outside the suggested range. Estimates were extrapolated with unknown errors

Low-Flow Statistics Flow Report [100 Percent (307 square miles) Statewide Low Flow WRIR00 4135]

Statistic	Value	Unit
7 Day 2 Year Low Flow	57.3	ft^3/s
7 Day 10 Year Low Flow	29.2	ft^3/s

Low-Flow Statistics Citations

Ries, K.G., III,2000, Methods for estimating low-flow statistics for Massachusetts streams: U.S. Geological Survey Water Resources Investigations Report 00-4135, 81 p. (http://pubs.usgs.gov/wri/wri004135/)

Probability Statistics Parameters [100 Percent (307 square miles) Perennial Flow Probability]

Appendix E

FWS IPaC Letters

United States Department of the Interior

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

In Reply Refer To: May 18, 2017
Consultation Code: 05E1NE00-2017-SLI-1590
Event Code: 05E1NE00-2017-E-03207
Project Name: 3190-3204 Washington Street

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 05E1NE00-2017-SLI-1590

Event Code: 05E1NE00-2017-E-03207

Project Name: 3190-3204 Washington Street

Project Type: DEVELOPMENT

Project Description: Site location = 3190-3204 Washington Street & 50 Montebello Ave., Boston, MA
Latitude: 42.312744
Longitude: -71.100938

38,044 square feet

The Site is slatted for mixed residential and retail redevelopment, which includes demolishing the existing Site buildings and construction of new buildings. Proposed activities include dewatering and treating of groundwater and surface water and discharging to a Boston Water and Sewer seperate storm drain. Demolition are expected to begin in May 2017. Construction activities will begin immediately following demolition and will likely continue for 1.5 years.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.312611146564116N71.10082602754679W

Counties: Suffolk, MA

Endangered Species Act Species

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

Birds

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

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

Critical habitats

There are no critical habitats within your project area.

United States Department of the Interior

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

In Reply Refer To: May 18, 2017
Consultation Code: 05E1NE00-2017-SLI-1591
Event Code: 05E1NE00-2017-E-03209
Project Name: Boston Water & Sewer Commission - Discharge Location (Outfall # CSO023)

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 05E1NE00-2017-SLI-1591

Event Code: 05E1NE00-2017-E-03209

Project Name: Boston Water & Sewer Commission - Discharge Location (Outfall # CSO023)

Project Type: DEVELOPMENT

Project Description: Approximate location where effluent from a treatment system operated at 3190-3204 Washington Street, Boston, MA will discharge to the Charles River. Activities are proposed to begin in May 2017 and will likely continue through September 2018.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.351727450922695N71.09240118020513W

Counties: Suffolk, MA

Endangered Species Act Species

There is a total of 0 threatened, endangered, or candidate species on your species list. Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species. See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area. Please contact the designated FWS office if you have questions.

Critical habitats

There are no critical habitats within your project area.