CDW CONSULTANTS, INC.
CIVIL & ENVIRONMENTAL ENGINEERS

April 30, 2020

U.S. Environmental Protection Agency
5 Post Office Square, Suite 100
Mail Code OEP06-4
Boston, MA 02109-3912
ATTN: Remediation General Permit NOI Processing

Re: Notice of Intent for Remediation General Permit
263 Monsignor O'Brien Highway, Cambridge, MA
1 McGrath Highway, Somerville, MA
CDW Project # 1476.10

To Whom It May Concern:

CDW Consultants, Inc. (CDW) is submitting this Notice of Intent (NOI) on behalf of Somerbridge Hotel, LLC for a Remediation General Permit (RGP) under EPA's National Pollutants Discharge Elimination System (NPDES) program. The RGP is required to discharge groundwater encountered during construction activities for development of a new hotel at the above-referenced site.

Construction activities will take place on a property which consists of two parcels of land (the "Site"), one in Cambridge, MA and one in Somerville, MA, totaling approximately 0.75 acres (32,670 square feet). The parcel at 263 Monsignor O'Brien Highway is shown on the City of Cambridge Assessor's Maps as Parcel 7-35 and is also known as 241 and 245 Monsignor O'Brien Highway. The second parcel is known as Parcel 115-B-8 on the City of Somerville Assessor's Maps, and is located at 1 McGrath Highway in Somerville, MA. The property is listed as a disposal site under the Massachusetts Contingency Plan and has been listed as one since December 1993 and again in February 1995 with the Massachusetts Department of Environmental Protection (MassDEP) under Release Tracking Number (RTN) 3-10317 and 3-10852, respectively. Known contaminants in groundwater at the Site include non-chlorinated volatile organic compounds (VOCs), petroleum hydrocarbons, and polycyclic aromatic hydrocarbons (PAHs), poly-chlorinated biphenyl's (PCB's), and heavy metals. The VOCs, petroleum, and PCB's were likely attributed to the historical use of reconditioning used metal drums which included cleaning, rinsing, and repainting the barrels. In addition, a portion of the site served as a gasoline station starting in 1967 until approximately 1988. The dewatering is occurring in conjunction with a Release Abatement Measure (RAM) and EPA TSCA Risk Based Cleanup Plan to manage contaminated soils during excavations for the building foundations and utilities.

To obtain more updated groundwater quality, CDW collected groundwater samples for VOCs, total metals, total petroleum hydrocarbons (TPH), polychlorinated biphenyls (PCBs), total phenols, chloride, total cyanide, total suspended solids (TSS), total residual chlorine (TRC), trivalent chromium, hexavalent chromium, 1,4-dioxane, EDB, and semi-volatile organic compounds (SVOCs) (Table 1). Our proposed groundwater treatment system for this project consists of a frac tank and bag filters to remove suspended solids along with dual carbon treatment units, and ion resin exchange filter and a cartridge filter before entering a catch basin in Monsignor O'Brien Highway and ultimately discharging to the Charles River. Dewatering will be intermittent and will not be encountered at all locations during construction.

CDW reviewed online databases including the Massachusetts Division of Fisheries and Wildlife (NHESP), Massachusetts Geographical Information Systems (MassGIS), Cambridge GIS Viewer, and Massachusetts Cultural Resource Information Viewer (MACRIS). Based on these findings, the Site and the location of proposed discharge, do not appear to be located within an Area of Critical Environmental Concern (Appendix A). Historical Site information from MACRIS showed that there is a historical location listed at the Site, a Boston and Lowell Railroad Retaining Wall from the 19th century. At this time, CDW's opinion is that dewatering of the Site will not affect the retaining wall (Appendix C).

In addition to the NOI application form, we have attached:

- Figure 1A: Water Flow Schematic and Discharge Location
- Figure 1B: Water Flow Schematic and Discharge Location
- Figure 2: Water Treatment System Schematic
- Figure 3: MassDEP Priority Resource Map
- Appendix A: Endangered Species Act Documentation
- Appendix B: StreamStats Flow Statistics Report
- Appendix C: Massachusetts Cultural Resource Information Report
- Appendix D: Effluent Limitations Calculations

Table 1: Influent & Effluent Data Table

- Contest Analytical Influent Data Report
- Contest Analytical Effluent Data Report

Please call if you have any further questions.

Very truly yours,
CDW CONSULTANTS, INC.

Shelby Amsel
Environmental Scientist

cc: Massachusetts Department of Environmental Protection
Division of Watershed Management
205B Lowell Street, Wilmington MA, 01887

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:
Somerbridge</td><td colspan="3">Site address: 263 Monsignor Highway, Cambridge MA
Street:</td></tr>
<tr><td>City: Cambridge</td><td>State: MA</td><td>Zip: 02141</td></tr>
<tr><td rowspan="4">2. Site owner
Somerbridge Hotel, LLC

Owner is (check one): ☐ Federal ☐ State/Tribal ☐ Private ☐ Other; if so, specify:</td><td colspan="3">Contact Person: John Stebbins</td></tr>
<tr><td colspan="2">Telephone: 603-518-2234</td><td>Email: jstebbins@xxshotels.com</td></tr>
<tr><td colspan="3">Mailing address: 1359 Hooksett Rd
Street:</td></tr>
<tr><td>City: Hooksett</td><td>State: NH</td><td>Zip: 03106</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
Same as owner</td><td colspan="3">Contact Person:</td></tr>
<tr><td colspan="2">Telephone:</td><td>Email:</td></tr>
<tr><td colspan="3">Mailing address:
Street:</td></tr>
<tr><td>City:</td><td>State:</td><td>Zip:</td></tr>
<tr><td colspan="2">4. NPDES permit number assigned by EPA:
NA

NPDES permit is (check all that apply: ■ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td><td colspan="2">5. Other regulatory program(s) that apply to the site (check all that apply):
■ MA Chapter 21e; list RTN(s): 3-10317 and 3-10852
☐ 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	Segment MA72-38	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. Chlorophyll-, combined biota / habitat bioassessments, DDT, Dissolved oxygen saturation, escherichia coli, excess algal growth, eutrophication, Oil and Grease, Oxygen, Dissolved, PCB in Fish Tissue, Phosphorus (Total), Secchi disk transparency, Taste and Odor, Temperature, water

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.	24.7 ft3/s
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.	132 MGD

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

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

C. Source water information:

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

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

2. Source water contaminants: VOCs, PCBs, PAH, metals	
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): Monsignor O'Brien Highway catch basin #D03CBN0077 Charles River outfall #1001001	Outfall location(s): (Latitude, Longitude) 42.373494, -71.081270 42.369218, -71.071446
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ■ Indirect discharge, if so, specify: Into storm sewer then into Charles River ☐ 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: Application to be submitted concurrently with submittal of RGP NOI Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ☐ Yes ■ No	
Provide the expected start and end dates of discharge(s) (month/year): June 2020 to May 2021 Indicate if the discharge is expected to occur over a duration of: ■ less than 12 months ☐ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ■ Yes ☐ No	

<table>
<tr><td>2. Activity Category: (check all that apply)</td><td colspan="2">3. Contamination Type Category: (check all that apply)</td></tr>
<tr><td rowspan="5">☐ I – Petroleum-Related Site Remediation
☐ II – Non-Petroleum-Related Site Remediation
■ III – Contaminated Site Dewatering
☐ IV – Dewatering of Pipelines and Tanks
☐ V – Aquifer Pump Testing
☐ VI – Well Development/Rehabilitation
☐ VII – Collection Structure Dewatering/Remediation
☐ VIII – Dredge-Related Dewatering</td><td colspan="2">a. If Activity Category I or II: (check all that apply)

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

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

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia		✔	2	4500 NH3	24	974	698	Report mg/L	---
Chloride		✔	2	300.0	3000	250,000	200,000	Report µg/l	---
Total Residual Chlorine		✔	2	4500 CL G	150	450	390	0.2 mg/L	
Total Suspended Solids		✔	2	2540D	410	860,000	447,500	30 mg/L	---
Antimony	✔		2	200.8	0.35			206 µg/L	
Arsenic		✔	2	200.8	0.64	8.8	4.87	104 µg/L	
Cadmium		✔	2	200.8	0.038	0.055	0.055	10.2 µg/L	
Chromium III		✔	2	Tri Chrom		1.3	1.09	323 µg/L	
Chromium VI		✔	2	200.8	0.24	1.3	1.09	323 µg/L	
Copper		✔	2	200.8	0.87	4.7	3.55	242 µg/L	
Iron		✔	2	200.7	0.038	16	14.5	5,000 µg/L	
Lead		✔	2	200.8	0.085	1.6	1.4	160 µg/L	
Mercury	✔		2	245.1	0.034			0.739 µg/L	
Nickel		✔	2	200.8	0.62	5.5	4.55	1,450 µg/L	
Selenium	✔		2	200.8	1.6	1.8	1.8	235.8 µg/L	
Silver	✔		2	200.8	0.18			35.1 µg/L	
Zinc		✔	2	200.8	2.3	12	9.05	420 µg/L	
Cyanide		✔	2	4500 CN	1	2	2	178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX		✔	2	624.1	5	1438.4	767.135	100 µg/L	---
Benzene		✔	2	624.1	0.9	69.6	35.695	5.0 µg/L	---
1,4 Dioxane	✔		2	624.1	112			200 µg/L	---
Acetone	✔		2	624.1	19.0			7.97 mg/L	---
Phenol		✔	2	624.1	0.050	0.066	0.066	1,080 µg/L	

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✔		2	624.1	0.550			4.4 µg/L	
1,2 Dichlorobenzene	✔		2	624.1	0.800			600 µg/L	---
1,3 Dichlorobenzene	✔		2	624.1	0.600			320 µg/L	---
1,4 Dichlorobenzene	✔		2	624.1	0.650			5.0 µg/L	---
Total dichlorobenzene	✔		2	624.1	2.05			763 µg/L in NH	---
1,1 Dichloroethane	✔		2	624.1	0.800			70 µg/L	---
1,2 Dichloroethane	✔		2	624.1	2.05			5.0 µg/L	---
1,1 Dichloroethylene	✔		2	624.1	1.60			3.2 µg/L	---
Ethylene Dibromide	✔		2	504.1	0.012			0.05 µg/L	---
Methylene Chloride	✔		2	624.1	1.70			4.6 µg/L	---
1,1,1 Trichloroethane	✔		2	624.1	1.00			200 µg/L	---
1,1,2 Trichloroethane	✔		2	624.1	0.800			5.0 µg/L	---
Trichloroethylene	✔		2	624.1	1.20			5.0 µg/L	---
Tetrachloroethylene	✔		2	624.1	0.900			5.0 µg/L	
cis-1,2 Dichloroethylene	✔		2	624.1	0.650			70 µg/L	---
Vinyl Chloride	✔		2	624.1	2.25			2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✔		2	625.1	10			190 µg/L	
Diethylhexyl phthalate	✔		2	625.1	0.225			101 µg/L	
Total Group I PAHs		✔	2	625.1	5	10.6	10.6	1.0 µg/L	---
Benzo(a)anthracene	✔		2	625.1	0.016			As Total PAHs	
Benzo(a)pyrene	✔		2	625.1	0.012				
Benzo(b)fluoranthene	✔		2	625.1	0.015				
Benzo(k)fluoranthene	✔		2	625.1	0.012				
Chrysene	✔		2	625.1	0.015				
Dibenzo(a,h)anthracene	✔		2	625.1	0.017				
Indeno(1,2,3-cd)pyrene	✔		2	625.1	0.018				

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	✔		2	625.1				100 µg/L	---
Naphthalene		✔	2	625.1	0.442	10.6	10.6	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs		✔	2	608.3	0.205	0.676	1.01	0.000064 µg/L	---
Pentachlorophenol	✔		1	625.1	0.33			1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons	✔							5.0 mg/L	---
Ethanol	✔		1	624.1	10.5			Report mg/L	---
Methyl-tert-Butyl Ether	✔		1	624.1	0.250			70 µg/L	
tert-Butyl Alcohol	✔		1	624.1	4.17			120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✔		1	624.1	0.140			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(Influent)				4500 H	6.88				
Temperature (Influent)				2550	9.4 C				
pH (receiving water)				4500 H	7.03				
Temperature (receiving water)				2550	6.65 C				
Ammonia (receiving water)				350.1			66 ug/L		90 ug/L

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:
Cartridge Filtration

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

Groundwater encountered during excavation activities will be pumped into a water treatment system prior to offside discharge. The first element of the water treatment system is a weir tank where solids will settle out. Water is gravity fed from the weir tank into a fractionation tank and then pumped through bag filtration, liquid phase reactivated carbon, cation and anion media exchange, and finally cartridge filtration.

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: cartridge filter

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: suspended solids Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	
Provide the proposed maximum effluent flow in gpm.	100 gpm
Provide the average effluent flow in gpm.	10-20 gpm
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	N/A

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:
NONE

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

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

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

G. Endangered Species Act eligibility determination

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

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

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

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

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

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

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

H. National Historic Preservation Act eligibility determination

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

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

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

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

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

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

I. Supplemental information

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

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

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

J. Certification requirement

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.
BMPP certification statement: A BMPP will be developed and implemented that meets the requirements of this general permit.
Notification provided to the appropriate State, including a copy of this NOI, if required. Check one: Yes ☐ No ■
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested. Check one: Yes ■ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested. Check one: Yes ■ No ☐ NA ☐ Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission. Check one: Yes ☐ No ■ NA ☐
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify: Check one: Yes ☐ No ☐ NA ■
Signature: Date: 4.27.2020
Print Name and Title: John Stebbins - Owner's Representative, Somerbridge Hotel LLC

FIGURES

CDW CONSULTANTS, INC.

263 MONSIGNOUR HIGHWAY
1 MCGRATH HIGHWAY
CAMBRIDGE, MA

Figure 1A - Water Flow Schematic & Discharge Location Map

SOURCE: MASSGIS

SCALE: 1 inch = 633 feet

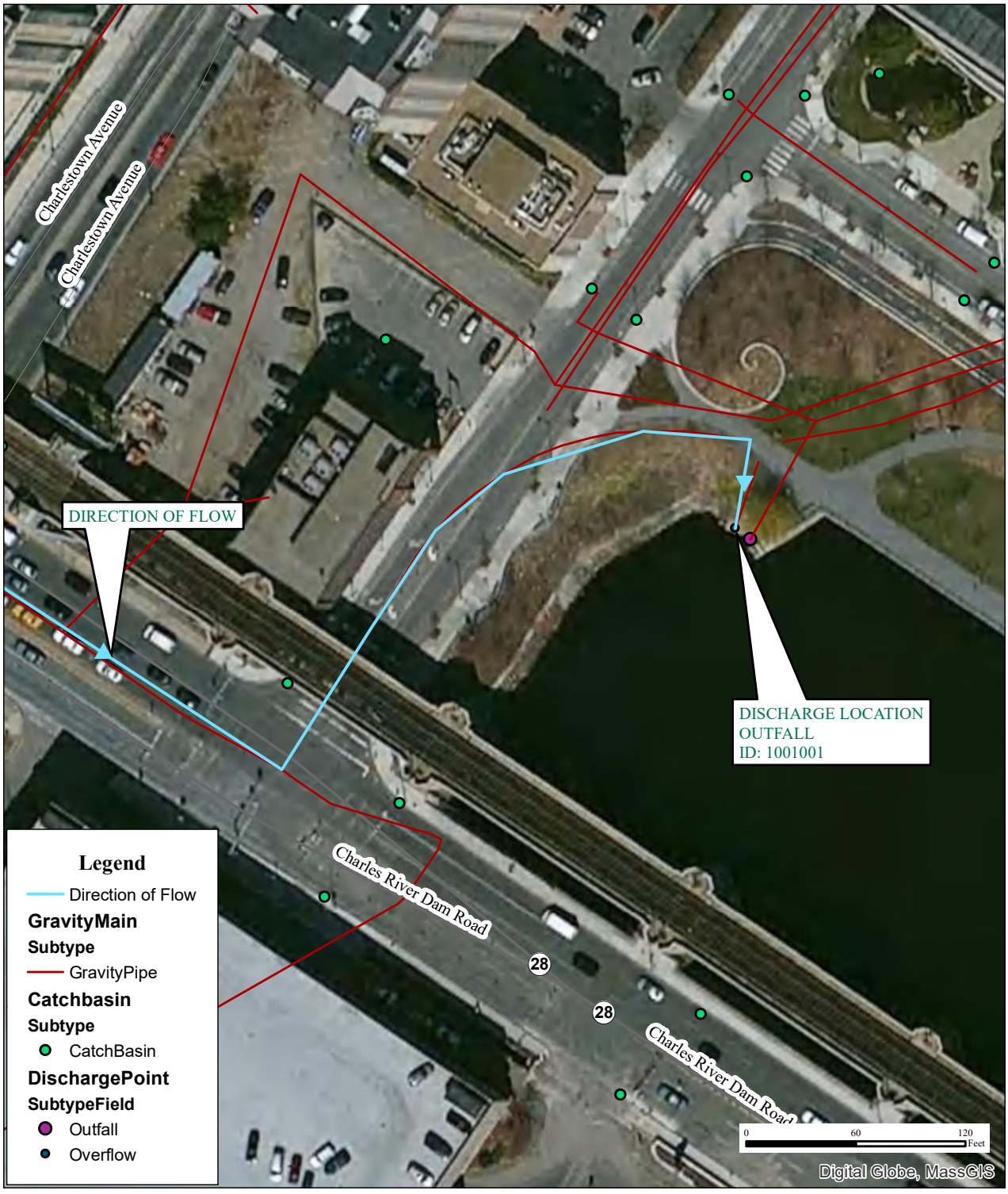
CDW CONSULTANTS, INC.

263 MONSIGNOUR HIGHWAY
1 MCGRATH HIGHWAY
CAMBRIDGE, MA

Figure 1B - Water Flow Schematic & Discharge Location Map

SOURCE: MASSGIS

SCALE: 1 inch = 67 feet



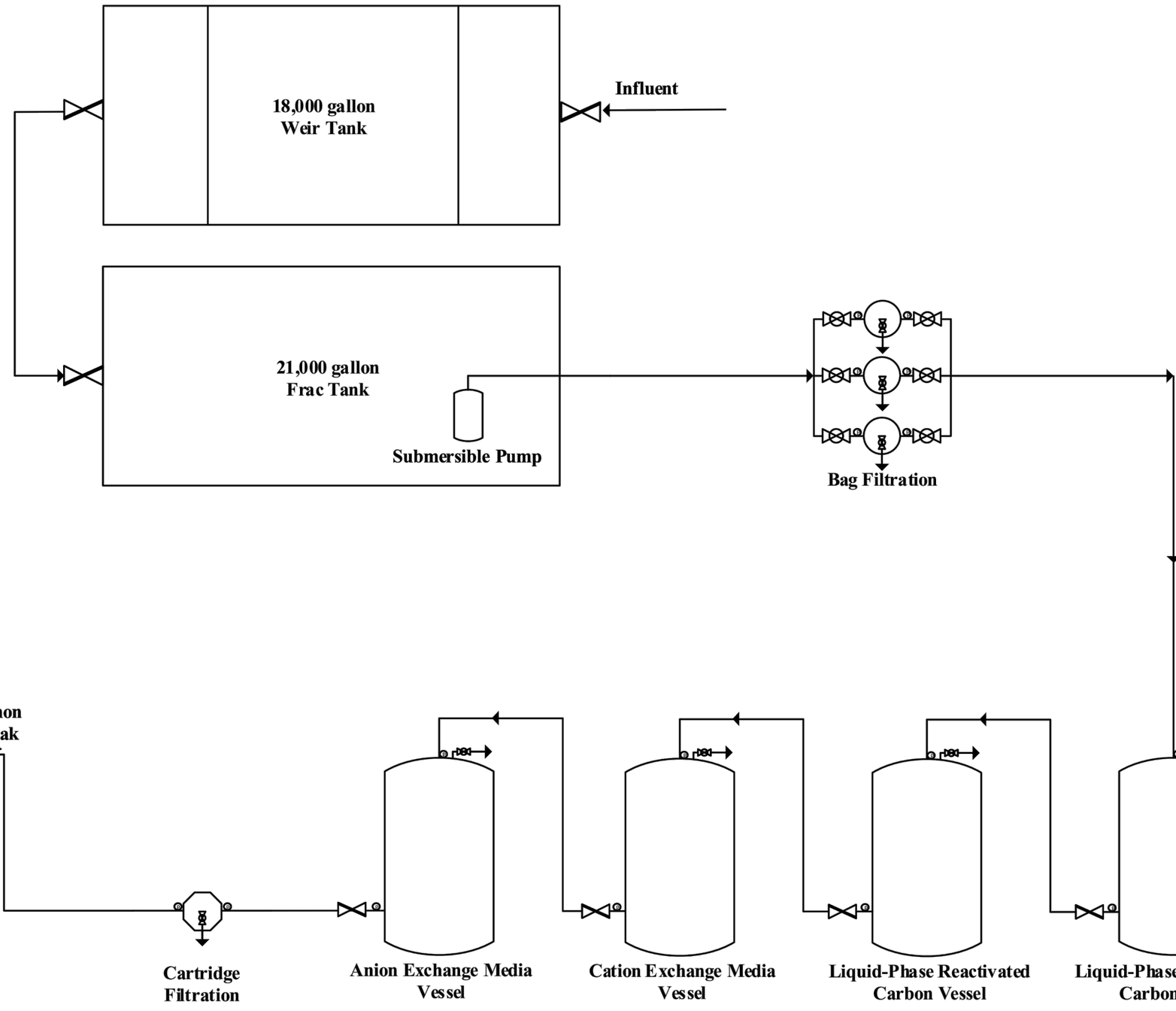
CDW CONSULTANTS, INC.

263 MONSIGNOUR HIGHWAY
1 MCGRATH HIGHWAY
CAMBRIDGE, MA

Figure 1C - Water Flow Schematic & Discharge Location Map

SOURCE: MASSGIS

SCALE: 1 inch = 83 feet



Notes:

1.) Figure is not to scale
2.) Sampling ports located on all treatment system components

NO	DATE	REVISIONS
1	5/21/15	
2	10/31/16	

DATE : 8/3/2015
DRAWN : ESW
SCALE : 1" = 30'

PROPOSED WATER TREATMENT SCHEMATIC
SOMERBRIDGE PROJECT

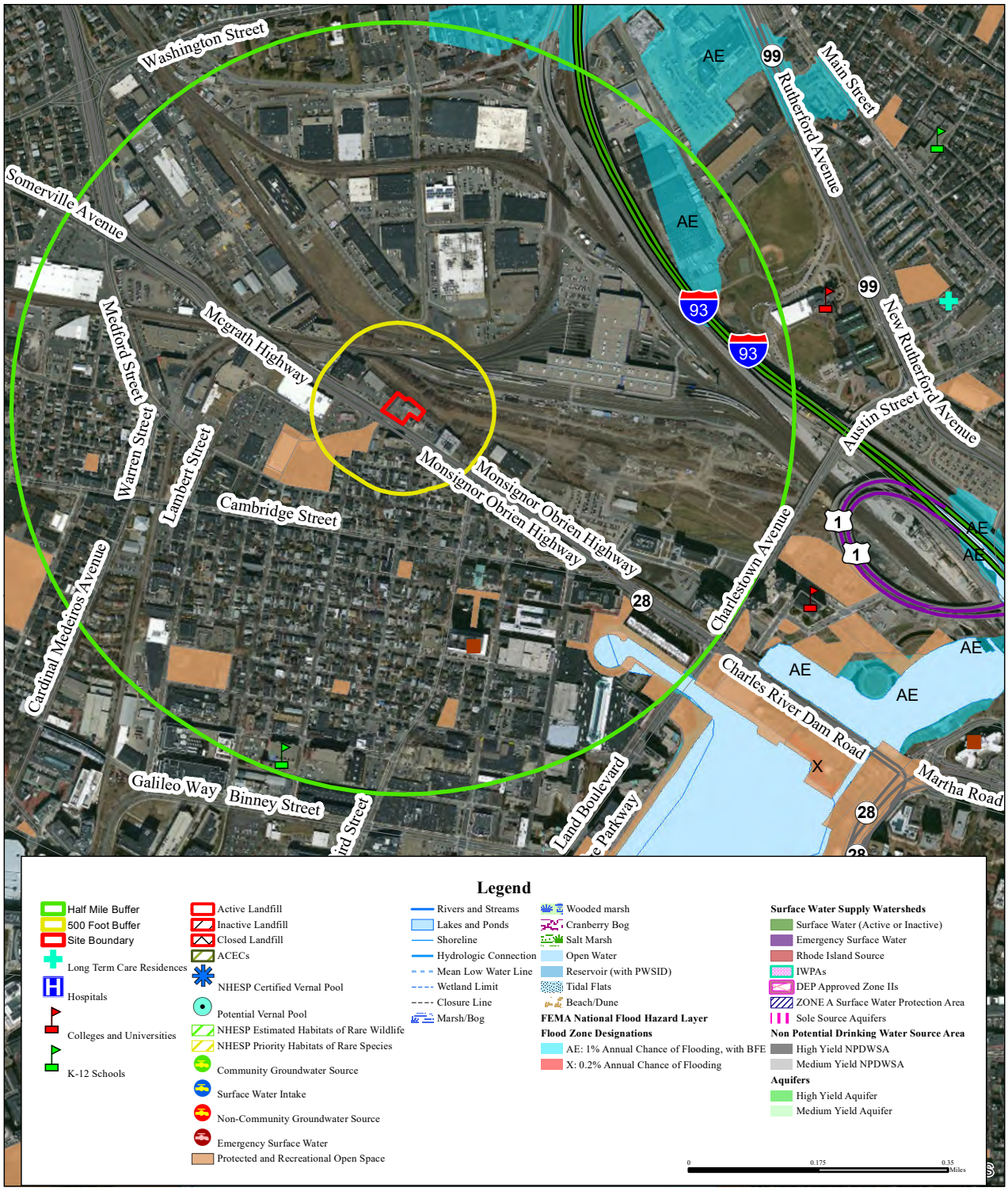
SOMERBRIDGE
245-263 MONSIGNOUR HIGHWAY
CAMBRIDGE, MA

CDW CONSULTANTS, INC.
CIVIL ENVIRONMENTAL ENGINEERS
6 HURON DRIVE
NATICK, MA 01760
TEL. (508) 875-2657 FAX. (508) 875-5617
www.cdwconsultants.com

FIGURE 2

SHEET 1 OF 1

1476.1



CDW CONSULTANTS, INC.

263 MONSIGNOUR HIGHWAY
1 MCGRATH HIGHWAY
CAMBRIDGE, MA

Figure 3 - Priority Resource Areas Map

SOURCE: MASSGIS

SCALE: 1 inch = 1,083 feet

APPENDIX A
ENDANGERED SPECIES ACT DOCUMENTATION

United States Department of the Interior

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

In Reply Refer To: April 23, 2020
Consultation Code: 05E1NE00-2020-SLI-2295
Event Code: 05E1NE00-2020-E-06766
Project Name: 245-263 Monsignour Highway - Somerbridge

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 05E1NE00-2020-SLI-2295

Event Code: 05E1NE00-2020-E-06766

Project Name: 245-263 Monsignour Highway - Somerbridge

Project Type: DEVELOPMENT

Project Description: Construction activities will take place on a 0.75 acre (32,670 square feet) parcel known as 245-263 Monsignor Highway that is listed as a disposal site under the Massachusetts Contingency Plan. The property has been listed as a disposal site since December 1993 and again in February 1995 with the Massachusetts Department of Environmental Protection (MassDEP) under Release Tracking Number (RTN) 3-10317 and 3-10852, respectively. Known contaminants in groundwater at the Site include non-chlorinated volatile organic compounds (VOCs), petroleum hydrocarbons, and polycyclic aromatic hydrocarbons (PAHs), poly-chlorinated biphenyl's (PCB's), and heavy metals. The VOCs, petroleum, and PCB's were attributed to the historical use of reconditioning used metal drums which included cleaning, rinsing, and repainting the barrels. In addition, the site served as a gasoline station starting in 1967 until approximately 1988. The dewatering is occurring in conjunction with a Release Abatement Measure (RAM) to manage contaminated soils during excavations for the building foundations and utilities.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.373805083000065N71.08134346635725W

Counties: Middlesex, MA

Endangered Species Act Species

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

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

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

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

---

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

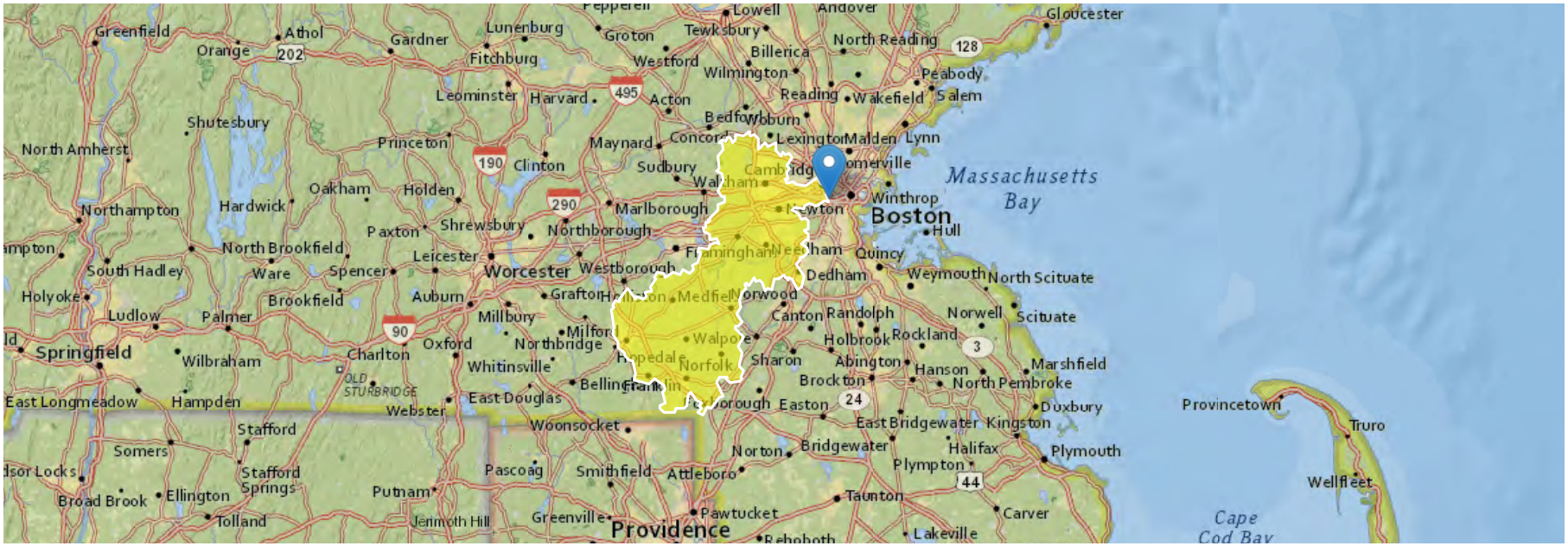
Critical habitats

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

APPENDIX B
STREAMSTATS FLOW STATISTICS REPORT

StreamStats Report

Region ID: MA
Workspace ID: MA20200428135457239000
Clicked Point (Latitude, Longitude): 42.35249, -71.10669
Time: 2020-04-28 09:55:14 -0400



Basin Characteristics

Parameter Code	Parameter Description	Value	Unit
DRNAREA	Area that drains to a point on a stream	283	square miles
BSLDEM250	Mean basin slope computed from 1:250K DEM	2.329	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	0.23	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless
ELEV	Mean Basin Elevation	200	feet
LC06STOR	Percentage of water bodies and wetlands determined from the NLCD 2006	13.11	percent

Low-Flow Statistics Parameters[Statewide Low Flow WRIR00 4135]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	283	square miles	1.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	2.329	percent	0.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.23	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless	0	1

Low-Flow Statistics Disclaimers[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[Statewide Low Flow WRIR00 4135]

Statistic	Value	Unit
7 Day 2 Year Low Flow	49.6	ft^3/s
7 Day 10 Year Low Flow	24.7	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/)

Peak-Flow Statistics Parameters[Peak Statewide 2016 5156]

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	283	square miles	0.16	512
ELEV	Mean Basin Elevation	200	feet	80.6	1948
LC06STOR	Percent Storage from NLCD2006	13.11	percent	0	32.3

Peak-Flow Statistics Flow Report[Peak Statewide 2016 5156]

PII: Prediction Interval-Lower, Plu: Prediction Interval-Upper, SEp: Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PII	Plu	SEp
2 Year Peak Flood	3030	ft^3/s	1550	5940	42.3
5 Year Peak Flood	4740	ft^3/s	2390	9410	43.4

Statistic	Value	Unit	PIl	PIu	SEp
10 Year Peak Flood	6030	ft^3/s	2970	12200	44.7
25 Year Peak Flood	7840	ft^3/s	3740	16500	47.1
50 Year Peak Flood	9330	ft^3/s	4310	20200	49.4
100 Year Peak Flood	10900	ft^3/s	4860	24300	51.8
200 Year Peak Flood	12500	ft^3/s	5440	28800	54.1
500 Year Peak Flood	14800	ft^3/s	6150	35800	57.6

Peak-Flow Statistics Citations

Zarriello, P.J.,2017, Magnitude of flood flows at selected annual exceedance probabilities for streams in Massachusetts: U.S. Geological Survey Scientific Investigations Report 2016–5156, 99 p. (https://dx.doi.org/10.3133/sir20165156)

Application Version: 4.3.11

APPENDIX C
MASSACHUSETTS CULTURAL RESOURCE INFORMATION REPORT

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Cambridge; Place: Lechmere Square;

Inv. No.	Property Name	Street	Town	Year
CAM.B	Lockhart, William L. and Company Coffin Factory		Cambridge	
CAM.914	Lechmere Square Streetcar Station	Cambridge St	Cambridge	1922
CAM.913	East Cambridge Viaduct - Lechmere Viaduct	O'Brien Hwy	Cambridge	1910
CAM.9020	Boston and Lowell Railroad Retaining Wall	O'Brien Hwy	Cambridge	c 1857
CAM.349	Lockhart, William L. Coffin Factory Warehouse	195-199 O'Brien Hwy	Cambridge	1873
CAM.348	Lockhart, William L. Coffin Factory Main Building	201 O'Brien Hwy	Cambridge	r 1870
CAM.272	Lockart, William L. Company Building	209 O'Brien Hwy	Cambridge	c 1859
CAM.1400	Morrell, John and Company Branch House	221 O'Brien Hwy	Cambridge	1929
CAM.1399	Whitehead Metal Products Company	225 O'Brien Hwy	Cambridge	1929

Massachusetts Cultural Resource Information System

Scanned Record Cover Page

Inventory No:	CAM.9020
Historic Name:	Boston and Lowell Railroad Retaining Wall
Common Name:	
Address:	O'Brien Hwy
City/Town:	Cambridge
Village/Neighborhood:	East Cambridge; Lechmere Square
Local No:	1A-XL
Year Constructed:	c 1857
Architect(s):	
Architectural Style(s):	
Use(s):	Other Engineering; Other Rail Related
Significance:	Engineering; Transportation
Area(s):	
Designation(s):	
Building Materials(s):	

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

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

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

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

FORM F – STRUCTURE

MASSACHUSETTS HISTORICAL COMMISSION
MASSACHUSETTS ARCHIVES BUILDING
220 MORRISSEY BOULEVARD
BOSTON, MASSACHUSETTS 02125

Assessor's Number	USGS Quad	Area(s)	Form Number
Cambridge: 1A-XL Somerville:Map 112-N/A	Boston South Boston North		CAM.9020 / SMV.945

Photograph

Topographic or Assessor's Map

See attached Continuation Sheet

Recorded by John J. Daly
Organization: PAL, Pawtucket, RI
Date (*month / year)* January, 2011

Town Somerville / Cambridge

Place *(neighborhood or village)*
Brickbottom, Lechmere Point

Address or Location Monsignor O'Brien Highway Cambridge, McGrath Highway and Chestnut Street, Somerville.

Name Boston & Lowell Railroad Retaining Wall

Ownership _X___ *Public* ____ *Private*

Type of Structure ***(check one)***

___ boat or ship
___ canal
___ carousel
___ dam
___ fort
___ gate
___ kiln
___ lighthouse
___other *(specify)*
___ pound
___ powderhouse
___ street
___ tower
___ tunnel
_X_ wall
___ windmill

Date of Construction 1857-1868/1883-1900

Source Directors of the Boston and Lowell RR 1856, 1857; Maycock 1988; Sanborn Map Co. 1900.

Architect, Engineer or Designer
Boston & Lowell RR, Fitchburg Railroad

Materials Granite and Concrete

Alterations *(with dates)*
Concrete replacement (1922), addition of concrete walls for sidings (1922, 1930)

Condition Good

Moved _X_ **no** ___ **yes** **Date**

Acreage Not applicable

Setting The railroad right-of-way is flanked to the south by 19th and 20th century light industrial and commercial buildings and flanked to the north by the MBTA's Boston Engine Terminal.

RECEIVED
APR 22 2011
MASS. HIST. COMM.

Follow Massachusetts Historical Commission Survey Manual instructions for completing this form.

☐ Recommended for listing in the National Register of Historic Places.
If checked, you must attach a completed National Register Criteria Statement form.

Use as much space as necessary to complete the following entries, allowing text to flow onto additional continuation sheets.

DESIGN ASSESSMENT

Describe important design features and evaluate in terms of other structures within the community.

The Boston & Lowell Railroad Retaining Wall (Retaining Wall) is a simple stone masonry and concrete gravity structure that defines the southern edge of the former Boston & Lowell Railroad's raised earth fill roadbed. The wall extends across the Cambridge-Somerville municipal boundary and runs roughly parallel to and north of Monsignor O'Brien/McGrath Highway (formerly Bridge Street/Somerville Avenue) within the Lechmere Point neighborhood of Cambridge and the Somerville's Brickbottom neighborhood. In Cambridge, the wall and right-of-way is flanked by the MBTA's Boston Engine Terminal (formerly the Boston & Maine Railroad Boston Engine Terminal) to the north and by early twentieth-century light industrial properties organized along Bridge Street to the south. In Somerville, the right of way is flanked to the northeast by late twentieth century light industrial properties that occupy the former Asylum Yard of the Boston & Maine Railroad (the B&M). To the southwest are additional light industrial properties. There is no retaining wall on the north side of the right-of way.

The Retaining Wall begins at a point about 125 feet (ft) north of the Third Street-Monsignor O'Brien Intersection in Cambridge and proceeds for a distance of approximately 2,600 ft to a terminus about 200 ft northeast of the Poplar Street-Chestnut Street intersection in Somerville. The retaining wall and earth fill roadbed rise to a maximum height of approximately 15 ft at the Red Bridge abutments (MHC No. SMV.905). The wall and fill are bisected near their midpoint by the right-of-way of the MBTA Fitchburg Line (formerly the Fitchburg Railroad), just northwest of the Cambridge-Somerville boundary.

The Boston & Lowell right-of-way was formerly carried over that of the Fitchburg on the so-called Red Bridge, the superstructure of which is now demolished. The railroad right-of-way along the wall ranges from 30 to 100 ft in width and formerly accommodated as many as five tracks in some locations. Most of the rail and ties have been removed, excepting two tracks to the north of the former Red Bridge crossing and fragments of track behind the John Morrell & Company Branch House (221 Monsignor O'Brien Highway, CAM.1400).

The Retaining Wall is constructed with stone masonry and concrete in a variety of structural configurations that are typical of the periods in which they were built and represent common railroad solutions to a mundane engineering problem. These different wall segments are described moving from east to west along the structure.

Between Third Street and the John Morrell & Company Branch House is a 35 foot-long section of 0-4 foot-high wall that is of circa 1930 construction. This concrete structure utilizes precast concrete cribbing joined by buttresses that are reinforced with pairs of railroad rail. The rails project from the tops of the buttresses and retain an upper wall course of sawn timbers. The wall is topped by concrete coping. A short piece of this wall is also present on the west side of the Whitehead Metal Products Company building at 225 Monsignor O'Brien Highway, CAM.1399).

Beginning at the point west of the Whitehead Metal building referenced above, and continuing for a distance of 150 ft, is a circa 1855-1868 stone masonry wall. This random-laid, mortared, split-faced wall has a moderate batter and utilizes tabular and irregular stones ranging from 6 inches to several feet in length and width. The majority of the stones are granite, but many of the smaller 6-12 inch stones are Cambridge argillite, a locally-sourced, slate-like stone. The wall is topped with a single course of larger, 2-3 foot-long capstones, which are now topped by concrete coping. Closely-spaced, 0.75 inch diameter drill marks are visible on many of the blocks. Within this section of wall is a brick arch tunnel between Sciarappa (formerly Fourth Street) and Third streets. This substructure is 9 feet tall and 13 feet wide to the outside of the brickwork, with a 10 ft wide and 7.5 foot-high

opening. The brick arch barrel rises from irregular split granite impost blocks that establish a spring line about 2 ft above grade. The tunnel is now filled with earth and its entry is closed with a mortared concrete block wall.

Just to the east of the building at 245 McGrath Highway, the above-described wall transitions into a vertical stone masonry wall with different materials and workmanship. This wall, which continues about 500 ft to a point near the Red Bridge abutment, consists of unevenly-coursed, mortared tabular and square blocks of split-faced granite topped with 1 ft-high concrete coping. The blocks range from 2-9 ft in length and 1-2 ft in height. Leveling courses of 2-6 inch chink stones are often laid between the courses of blocks. Behind 245 McGrath Highway, the wall projects south to form an abutment for a now-missing trestle. Adjacent to the Red Bridge abutment at 51 McGrath Highway in Somerville, approximately 75 ft of stone wall are now covered by an early twentieth century concrete retaining wall that widened the right-of-way for an industrial siding.

The two Red Bridge abutments are approximately 140 ft long. Abutments walls for the southern three spans are composed of massive 2-3 ft-long blocks of evenly-coursed, quarry-faced granite ashlar masonry, topped with a row of larger 3-4 ft long blocks. The northern two spans are plank-formed reinforced concrete. The abutments have been topped across their entire width with concrete bridge seats. The steel bridge superstructure is now missing.

West of the west bridge abutment, the coursed granite masonry described above continues for a distance of approximately 150 ft until it terminates at the A & P Grocery Warehouse and Bakery (3-25 Fitchburg Street SMV.664) in Somerville. From this point to its terminus at Poplar Street, the wall is entirely concrete. This section of wall has a variety of textures and retains impressions and fragments of other structures, indicating that it has likely evolved through a series of industrial occupations.

HISTORICAL NARRATIVE

Explain the history of the structure and how it relates to the development of the community.

The Boston & Lowell/Boston and Maine Railroad Retaining Wall and associated fill is a stone masonry and concrete structure whose appearance and configuration reflect the intensive and shifting transportation-related and industrial activities of East Cambridge and Somerville over a 95-year span from 1835 to 1930. The product of multiple land-making and railroad improvement projects, as well as twentieth century alterations for and/or by abutting industrial landowners; the wall and its associated fill traverse the former Miller's River channel and pass through the formerly working class neighborhoods of Lechmere Point and Brickbottom. This documentation focuses primarily on the oldest portions of wall flanking and to the east of the former bridge of the Boston & Lowell over the Fitchburg Railroad (a/k/a the Red Bridge, see the form for MHC No. SMV.905). The fill and retaining walls west of this crossing are discussed, but in less detail.

The origins of the Boston & Lowell Railroad Wall date to 1830, when the Boston & Lowell Railroad was chartered. This company was the first steam-powered railroad to be organized in New England and came after the two earliest American experiments with steam-powered railroads; the Delaware and Hudson Canal Company's operation of the *Sturbridge Lion* in 1829 and the running of the *Tom Thumb* on the Baltimore & Ohio Railroad in 1830. The founding investors and charter board members of the corporation; most notably Patrick Tracy Jackson, Kirk Boott, and William Appleton; were also founding investors for the textile city of Lowell and held interests in the textile mills there. The railroad was expressly designed to carry freight and passengers between Boston and the mills at Lowell. The engineer for the line was James F. Baldwin, son of the famous Loammi Baldwin, who had designed the Middlesex Canal (Douglas 1992:20–25; Karr 1995:204).

The 26 mile-long railroad opened in 1835. Baldwin's surveyed route focused on achieving a direct and efficient route between Boston and Lowell. This necessitated a heavy preliminary investment to construct the deep cuts and fills necessary to achieve favorable grades and alignments for trains. Provision was also made at the outset for a second track (installed 1841). After leaving its Boston depot in the West End, the Boston & Lowell crossed the Charles River via a wood trestle into East Cambridge at Lechmere Point, ran parallel to and just northeast of Monsignor O'Brien Highway/McGrath Highway (formerly the Northern Artery, formerly Bridge Street and Somerville Avenue); then across Miller's River (now filled), which was then open water

between present-day Third Street and Rufo Road. The waterway defined the boundary between Cambridge to the south and east and Somerville to the north and west. It is likely that the approaches and parts of the actual Miller's River crossing were made on fill, with only a short wood trestle section allowing for flow of the tidal Miller's River. After passing into Somerville, the line crossed Washington Street at grade before entering cuts along the northeastern slopes of Prospect and Central Hills (Draper 1852; Karr 1995:204; Kennedy 1951a:57, 62; Kennedy 1951b:86; Massachusetts General Court 1832:12; Maycock 1988; Merchant's Magazine and Commercial Review 1861:14; New Hampshire Statesman and State Journal 1833; Stott 1988; Waters 1836).

The second important step in the evolution of the wall and fill came in 1842. In that year, the Fitchburg Railroad was chartered to construct a line from Charlestown to Fitchburg. This route reached Waltham in 1843 and Fitchburg in 1845. The railroad traversed the tidal flats along the Miller's River's northern bank in Somerville on a built-up embankment, crossed the Boston & Lowell at grade via a shared alignment, and then followed the upper reaches of the Miller's River. The Fitchburg and Boston & Lowell railroads quickly eliminated the shared alignment in 1845, replacing it with a simple crossing at grade circa 1844-1846 (Boyton 1846; The Daily Atlas 1844; Karr 1995:201–204;Walling 1854).

The growing success of both railroads made the grade crossing of the Boston & Lowell and Fitchburg an increasingly difficult traffic management challenge. In 1856, the two railroads agreed to eliminate the grade crossing by raising the Boston & Lowell onto a wood bridge and by lowering the Fitchburg. This structure, which in later iterations would come to be known as the Red Bridge, was begun the same year and completed in 1857. The total cost expended by the Boston & Lowell was $23,550.72 and was broken down as follows in the railroad's annual report: "Grading-$10,965.58; Masonry-$4,032.66; Bridges-$3,955.68; Superstructure-$3,551.60; Engineering and Agencies-$1,045.20" (Directors of the Boston and Lowell Railroad 1858:5-6, 13). The Fitchburg did not report its outlay for the project. As the line item for masonry indicates, erection of the bridge required construction of abutments and wingwalls to stabilize the fill to the east and west of the bridge (Directors of the Fitchburg Railroad Company 1858, 1859; Samuels and Kimball 1897:93).

The extant random-laid stone masonry and associated brick tunnel between Sciarappa Street (formerly Fourth Street) and Third Street in Cambridge likely dates to circa 1855-1868, and may be a product of the bridge construction in 1857 or nearby industrial activity during the same period. The wall's location loosely conforms to that of the Bay State Glass Works, which had begun operations in 1849 south of the railroad on Bridge Street. In 1855, the glass company acquired a triangular piece of made land between the railroad and the Miller's River proceeded to expand its premises along both sides of the railroad embankment. The glass factory buildings directly abutted the railroad's property line and the proprietors tunneled beneath the embankment to allow circulation through the premises. The first of these tunnel structures is identified near the end of Sciarappa Street on an 1868 map, where a "bridge" is adjacent to a coal pile along the Miller's River in the approximate location of the current tunnel beneath the embankment. The label probably referenced a railroad bridge over the tunnel; as the difference in elevation between the glass works and the railroad grade would have made the alternative impractical. Later maps show a second tunnel further to the east near the end of Third Street. Any remnants of this tunnel are now obscured by the behind the industrial buildings of the John Morrell & Company Branch House and Whitehead Metal Products Company at 221 and 225 Monsignor O'Brien Highway. The glassworks ceased operations in 1873. Most of the buildings were demolished by 1888 and replaced with lumber yards and coal wharves, although the main factory building survived into the twentieth century.

The distinct shift in the wall's workmanship to the east of 245 Monsignor O'Brien Highway probably represents the structure's approximate western terminus at the Miller's River channel and the western edge of the glass works (Franklin View Company 1877; Maycock 1988:188; Sanborn Map Company 1888; 1900; Sanborn Map Company 1868, reproduced in Maycock 1988:188).

Maps from 1860-1880 show the continuing evolution of the area at the nexus of the railroad and Miller's River. West of the Red Bridge, the embankment was extended to Washington Street in 1862 when the Boston & Lowell eliminated its Washington Street grade crossing. No wall-building was recorded in the vicinity of this crossing, however. Upstream of the Boston &

Continuation sheet 3

Lowell's river crossing, the Miller's River had devolved into a polluted quagmire as residential sewage and industrial byproducts overwhelmed the waterway. After studies and lawsuits, in 1874 the cities of Cambridge and Somerville filled in the basin upstream of the railroad. Aerial lithographs show that with an open crossing of the river no longer needed, the Boston & Lowell's bridge over the waterway was converted to fill, although this fact was not recorded in the railroad's annual reports for the period (Maycock 1988:205; Samuels and Kimball 1897:119).

In 1883, the Fitchburg and Boston & Lowell railroads again collaborated on improving the intersection of their two railroads. The Boston & Lowell constructed a new, longer and wider pin-connected iron through truss bridge to replace the original wood structure. In the process, they widened their right-of way on the bridge and approach fills to three tracks and the Fitchburg widened its railway to four tracks. A circa 1889 photograph of the bridge shows the new structure with stone abutments and wingwalls, and the current granite ashlar abutment walls are likely products of this bridge reconstruction. However, these walls did not extend into Cambridge to meet the existing wall at Sciarappa Street. Photographs taken between 1886 and 1894 to document an experimental street railway system adjacent to the Boston & Lowell tracks west of Sciarappa Street show the neighboring embankment to be sloping fill. By 1900, however, insurance maps indicate that the wall had been continued westward from its previous terminus at or near Sciarappa Street to the Red Bridge crossing. Based on the identical materials and workmanship of this portion of wall west of the Red Bridge crossing, both of these portions of wall are of the same historical origins. The reason for this expansion of the wall cannot be determined, although the increased presence of industrial occupants along the railroad may have been a factor (Anon 1889; Directors of the Boston and Lowell Railroad 1883, 1884; Directors of the Fitchburg Railroad Company 1883:8; Maycock 1988:80-81; Sanborn Map Company 1900).

Additional modifications have been made to the walls in the early twentieth century. In 1887, the Boston & Maine Railroad (the B&M) had taken control of the Boston & Lowell Railroad, then designated the Southern Division, and later the New Hampshire Division. The B&M also leased the entire Fitchburg system in 1900. The B&M became the dominant northern New England railroad and controlled all of the railroad infrastructure in and out of Boston to either side of the Miller's River. Over the next 40 years, the railroad demolished the McLane Insane Asylum on the north side of the Miller's River and the industries in Cambridge along Bridge Street south of the river. In their stead, the B&M built a massive freight yard complex and engine servicing facility. The Boston & Lowell Railroad embankment was widened to five tracks across both the Red Bridge and the Washington Street Bridge. Both of these bridges were reconstructed between 1925 and 1928 to accommodate the two new tracks. The stone bridge abutments of the Red Bridge were expanded to the northeast with concrete to accommodate the additional two tracks (B&M Railroad 1955:15; Boston Daily Advertiser 1892; BPL 1930; Bromley 1895; G.W. Bromley & Co.1930; Harlow 1946: 332–335, 338; Karr 1995:227–228; Maycock 1988; Scott 1987).

The wall's original termination point west of the Red Bridge is unknown. Concrete walls have replaced any stone work that may have been present at the A&P Grocery Warehouse and Bakery (3-25 Fitchburg Street) in Somerville and along the remainder of the wall to its terminus near Poplar Street. This presumably occurred during the construction of the warehouse in 1919. Circa 1922, a section of the fill immediately east of the Red Bridge was expanded to the south and a reinforced concrete wall was constructed to accommodate an industrial siding. Between Sciarappa and Third Streets in Cambridge, the roadbed was expanded south circa 1930 to accommodate a siding at the John Morrell & Company Branch House and Whitehead Metal Products Company.

The short sections of concrete crib retaining wall west of the Whitehead building and East of the Morrell building were presumably constructed at this time (Adams, Jones, and Stuart 2010a, 2010b; G.W. Bromley & Co. 1930; Sanborn Map Company 1933).

The B&M carried heavy passenger and freight traffic in the Boston area until ca. 1950, when automobile and truck competition began to taking the railroad's market share. The Boston & Main declared insolvency in 1970. The MBTA purchased the former Boston & Lowell and Fitchburg lines, including the section of right-of-way at the location of the wall, in 1976 (Karr 1995:18, 201–204, 231–235).

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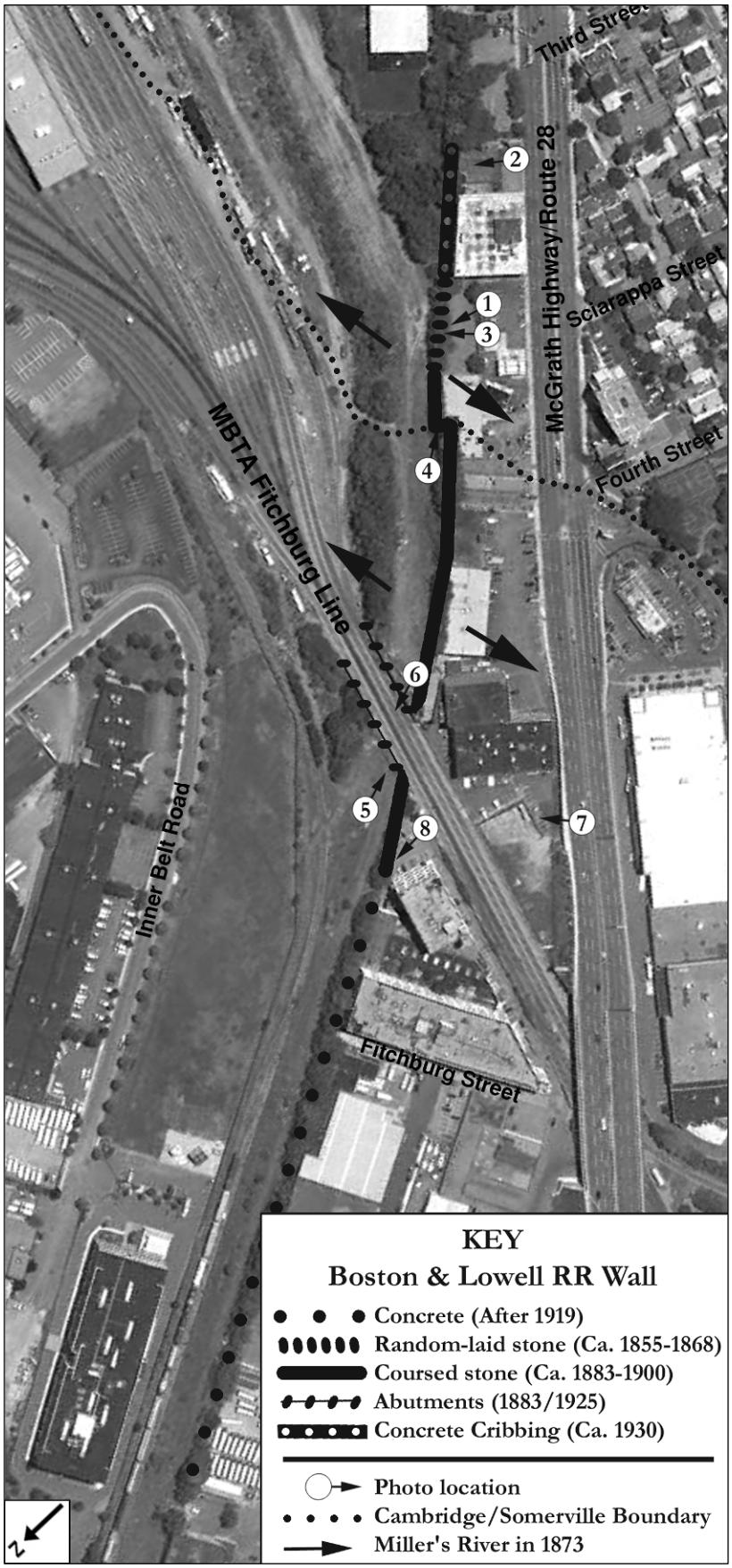
National Register Assessment

The Boston & Lowell Railroad Retaining Wall incorporates surviving substructures associated with the early history of the railroad and the Bay State Glass Works. The Boston & Lowell was a significant and pioneering early New England transportation company; while the Bay State Glass Works was one of several Cambridge and Somerville glass companies operating in the third quarter of the nineteenth century. The wall includes a variety of vernacular stone masonry construction techniques that are typical of such railroad-related structures for their respective periods. These variations in materials and workmanship indirectly demonstrate the evolution of the geography and industrial and transportation uses of the Miller's River basin area in East Cambridge and the Brickbottom neighborhood of Somerville. Although the wall's construction and history are noteworthy in these contexts, the structure does not rise to the level of National Register eligibility.

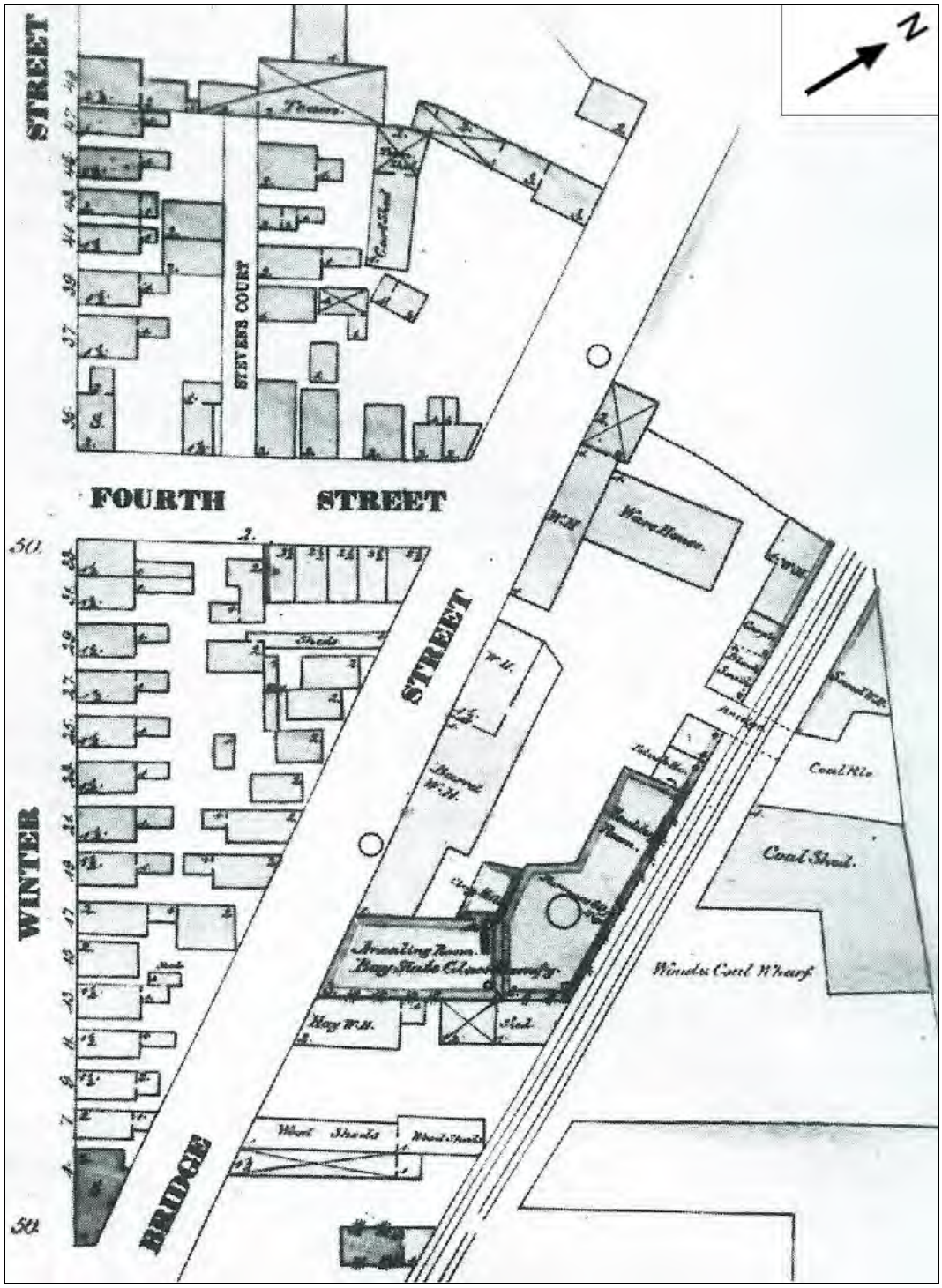
PROPERTY MAP



Continuation sheet 8

HISTORICAL MAPS AND PHOTOGRAPHS

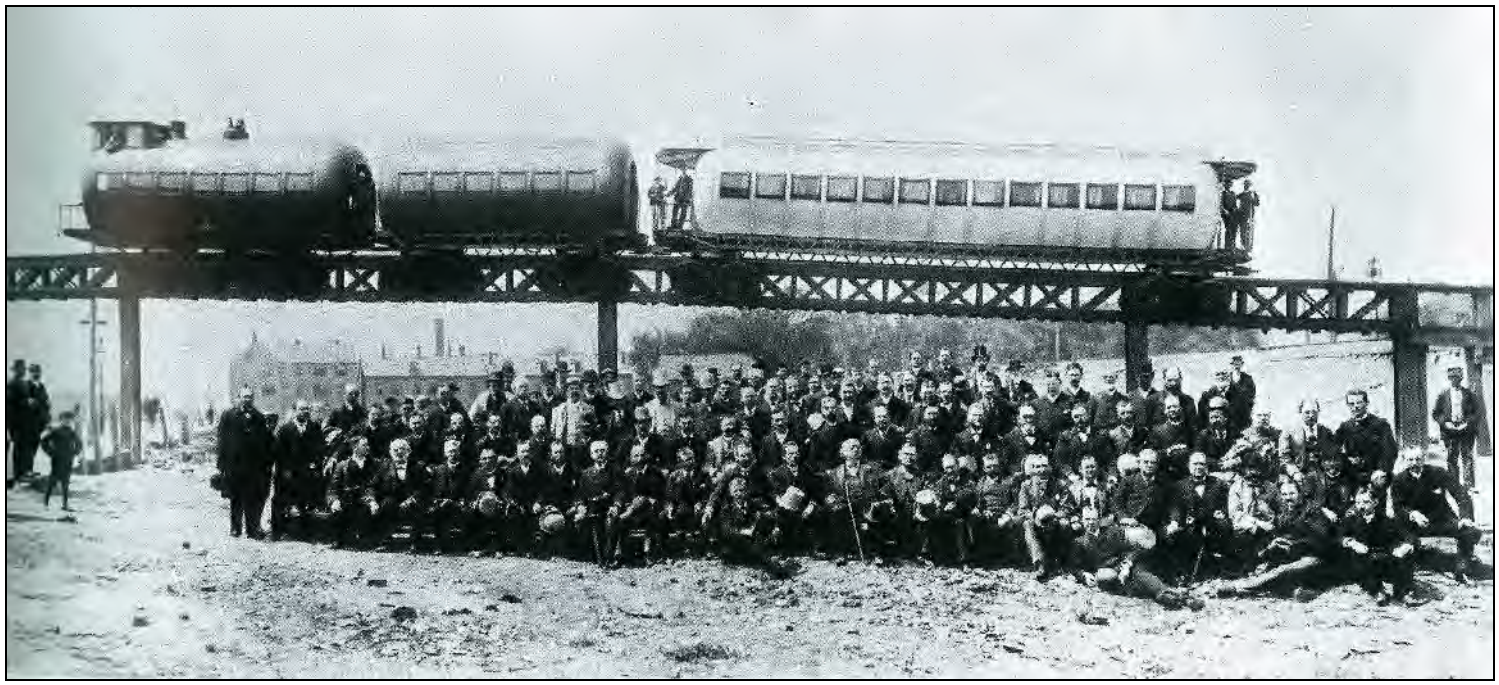
1854 Map of Cambridge and Somerville showing the Boston & Lowell crossing of Miller's River and the Fitchburg Railroad. At upper left a broken line indicates the former location of the Fitchburg's right-of-way, which was later straightened to the alignment shown. The Bay State Glass Works have taken possession of a lot at the end of Fourth Street (source: Walling 1854).



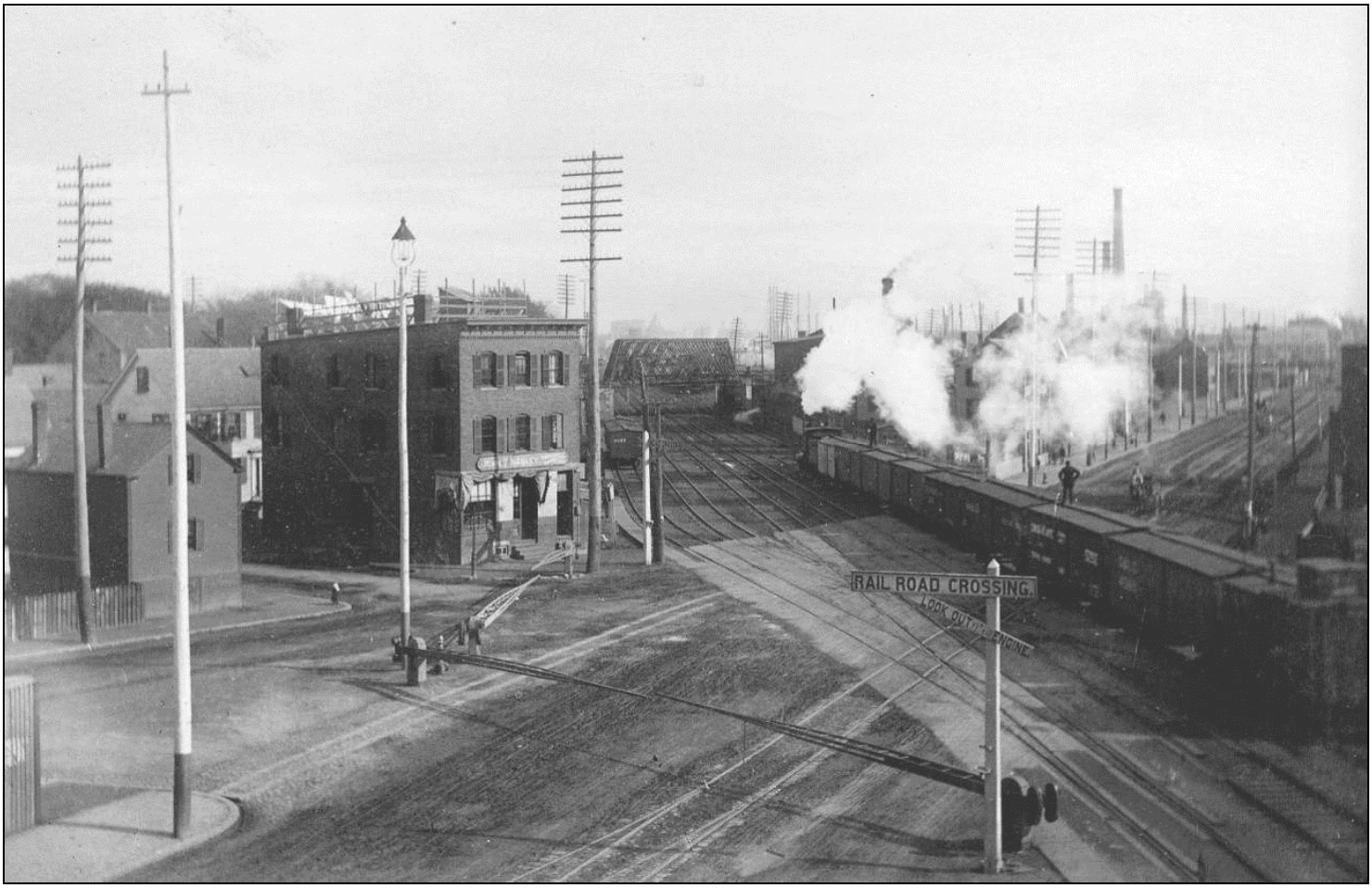
1868 insurance map of Cambridge showing the Boston & Lowell RR bridge over the Bay State Glass Works underpass/tunnel, which is still extant (source: Sanborn Map Company 1868, reproduced in Maycock 1988:188).

1879 "bird's eye" lithograph of Cambridge (at left) and Somerville (at right) showing the Boston and Lowell RR (moving left to right) and the Fitchburg RR at the location of the retaining walls. The Miller's River has been filled to the north of the Boston & Lowell line, which is now located on a continuous embankment. The Bay State Glass Works are just left of the river (source:Bailey 1879).

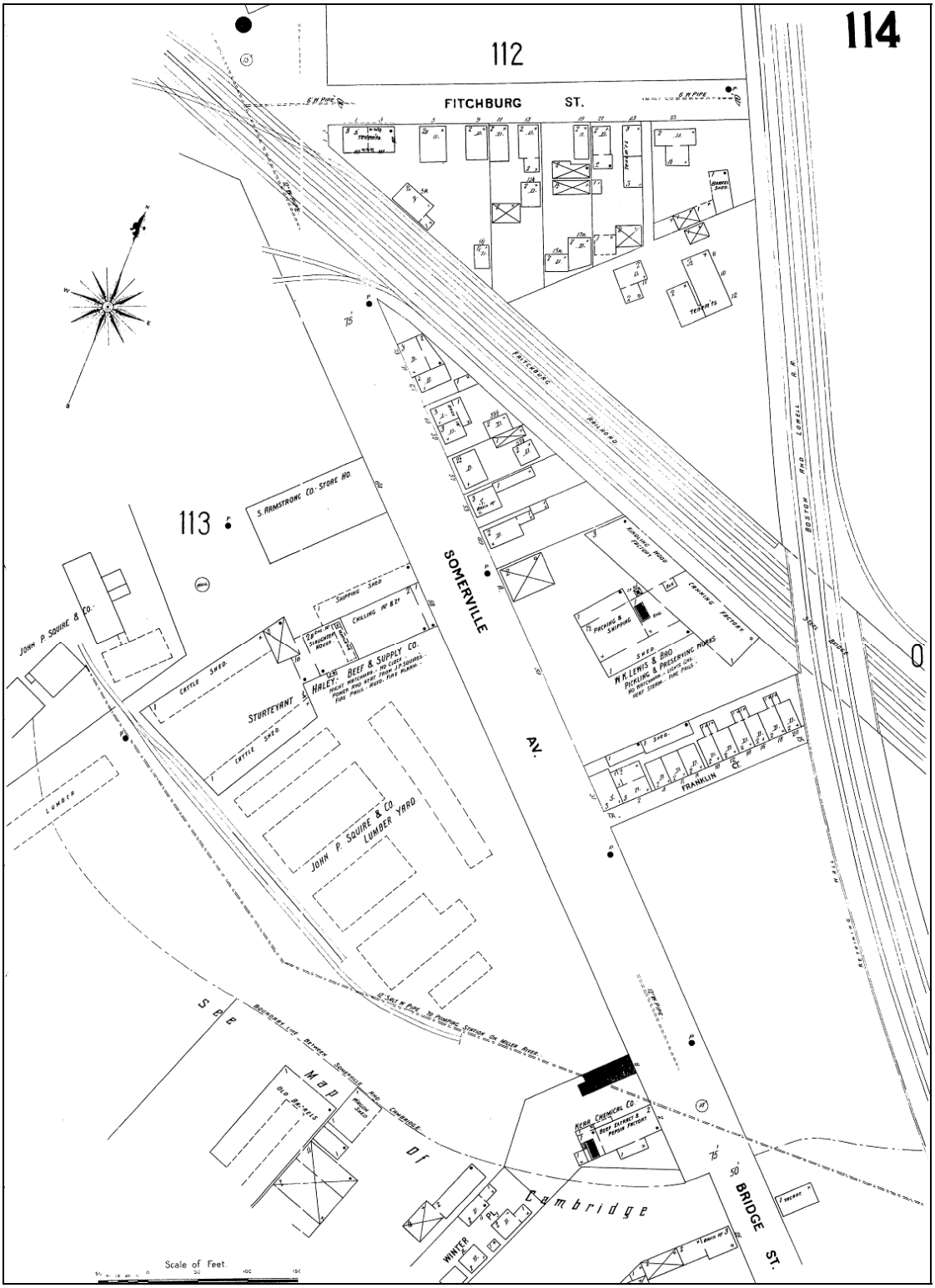
1886-1894 photo of the Meigs experimental railway in Cambridge, looking southeast from the south side of the Boston & Lowell railroad embankment. Bridge street is at far right and a remnant portion of the Bay State Glass Works is behind the fence at the left edge of the picture (source:Maycock 1988:81).



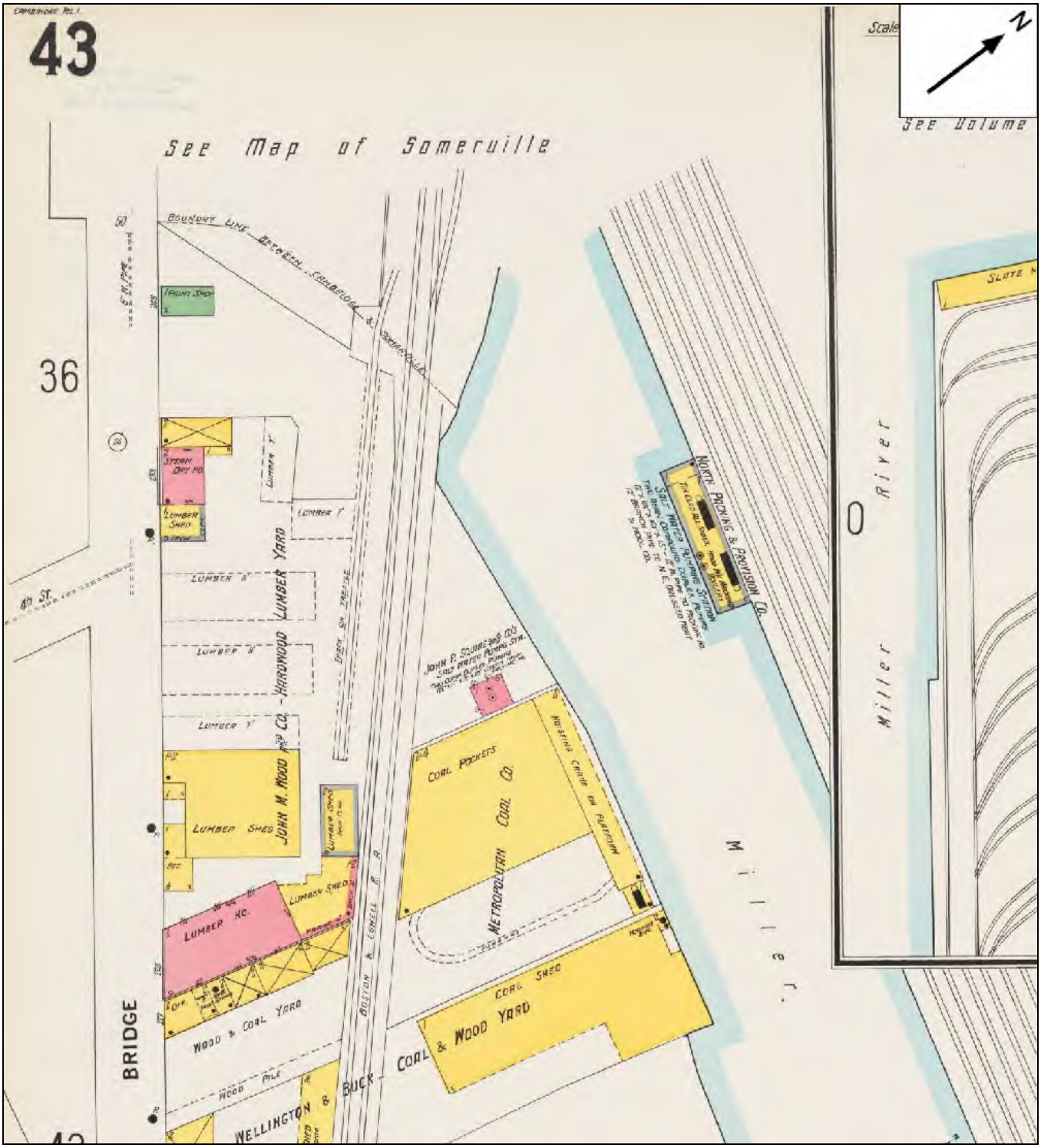
1887 photo of the Meigs experimental railway in Cambridge, looking northwest from the former Bay State Glass Works. The Boston & Lowell Railroad embankment is visible at the far right and Bridge Street is visible at the far left (source:Maycock 1988:81).



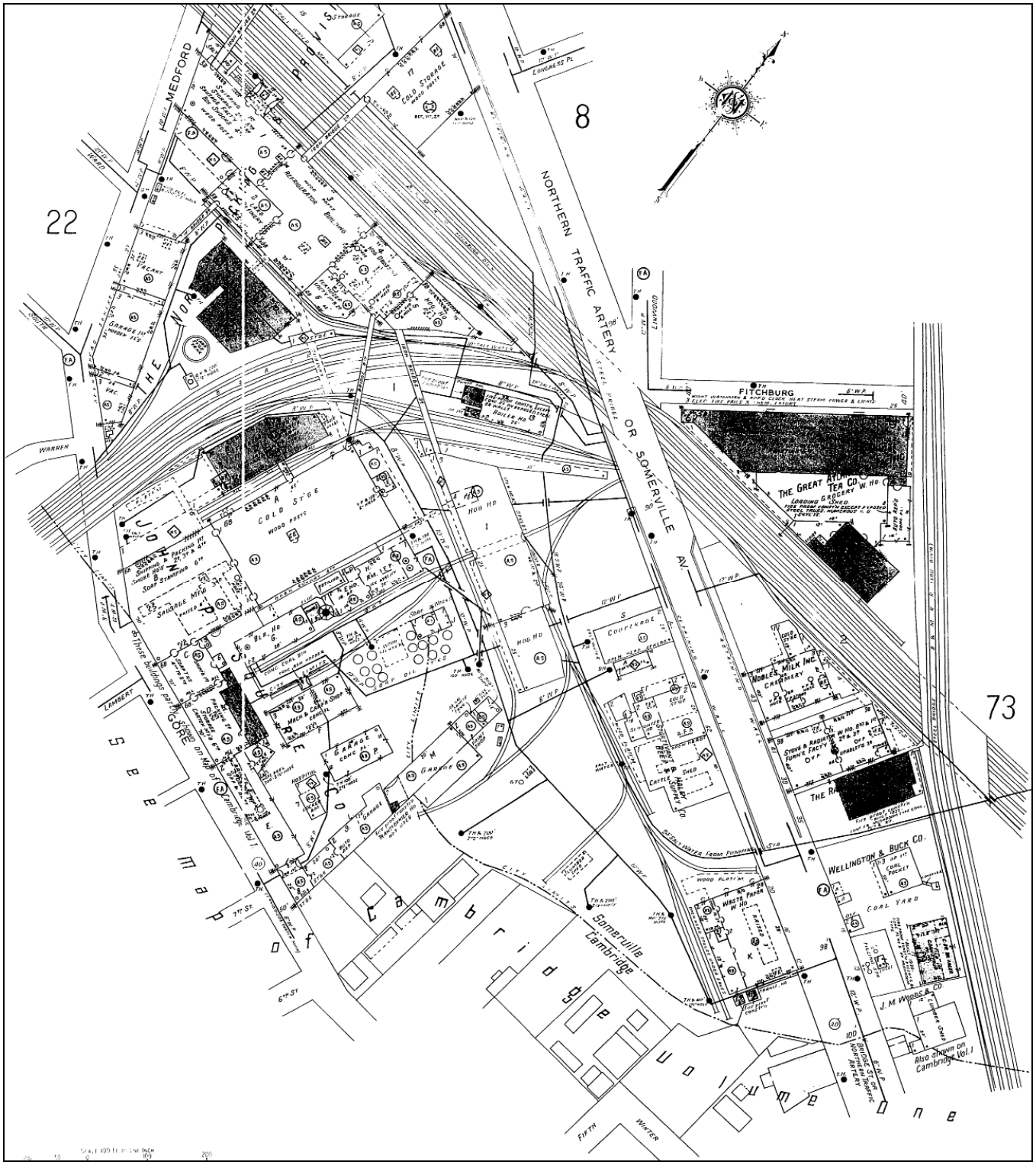
Circa 1889 photograph of the crossing of the Fitchburg Railroad and Somerville Avenue, looking east. The Red Bridge, built 1883, and walls of the Boston & Lowell are visible in the background (source:Anonymous 1889).



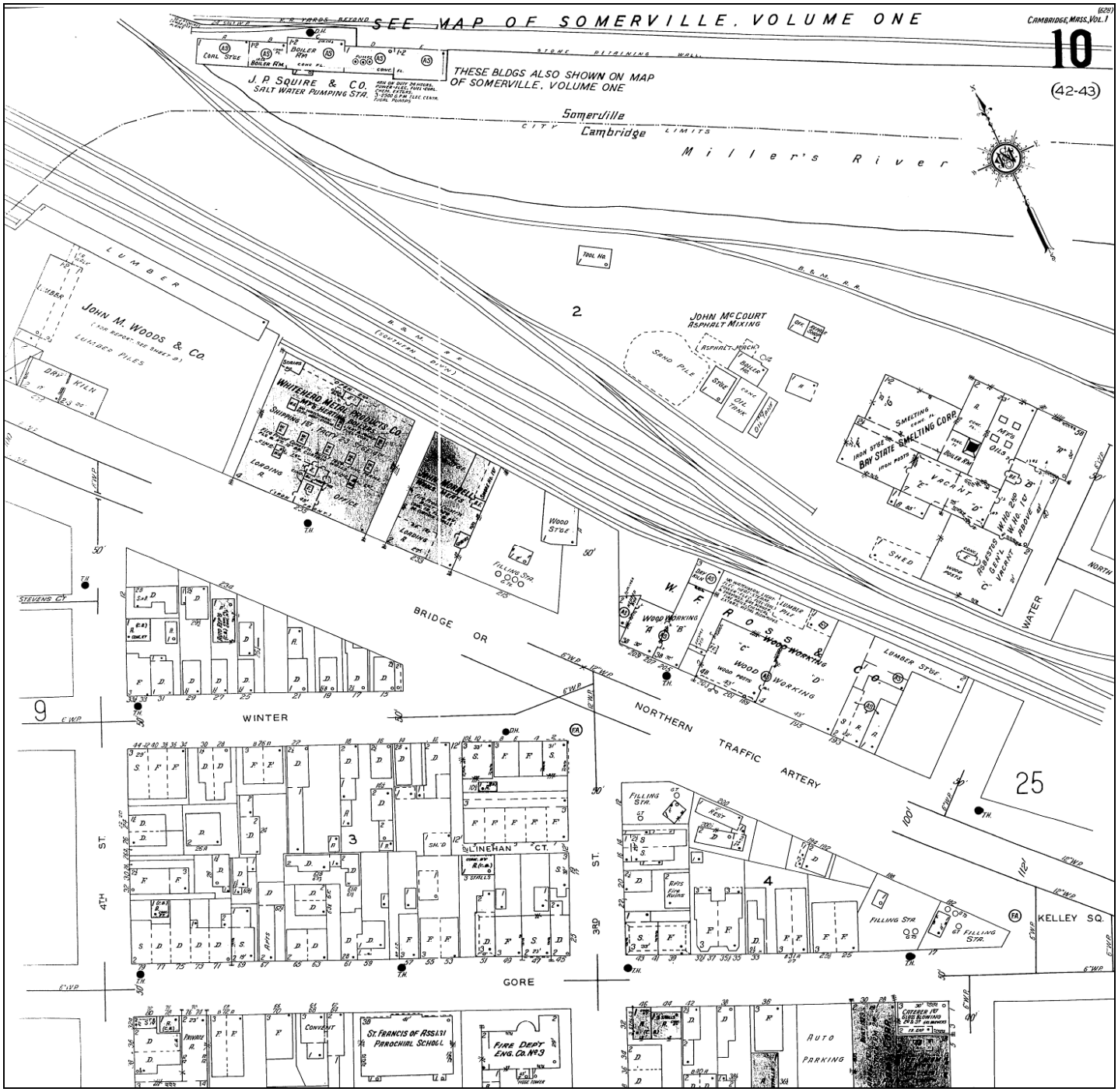
1900 Somerville insurance map showing the Boston & Lowell Railroad Retaining Wall at lower right, with the Red Bridge at center right (source: Sanborn Map Company 1900).



1900 insurance map of Cambridge showing the Boston and Lowell RR right-of-way at the former location of the Bay State Glass Works (source:Sanborn Map Company 1900).



1933 insurance map of Somerville showing the Red Bridge and the Boston & Lowell Railroad along the right edge of the image. The A&P Warehouse is at center right (source:Sanborn Map Company 1933).



1934 Insurance map of Cambridge showing eastern portion of Boston & Lowell Railroad fill. John M. Woods & Co. occupies the former glass works parcel (source:Sanborn Map Company 1934).

PHOTOGRAPHS

Photograph 1.
Circa 1855-1868 section of Boston & Lowell RR retaining wall and tunnel at former site of Bay State Glass Factory in Cambridge.

Photograph 2.
Circa 1930 section of concrete crib retaining wall on east side of 21 O'Brien Highway.

Photograph 3.
Circa 1855-1868 Bay State Glass Works tunnel in the Boston & Lowell RR Retaining Wall.

Photograph 4.
Circa 1883-1900 retaining wall behind 245 McGrath Highway in Somerville.

Photograph 5.
East abutment of the Red Bridge in Somerville, with the MBTA Fitchburg line in the foreground. Stone portions of the abutment at right are from 1883, concrete portions at the left are from 1925. The concrete portion at far right was added in 1922 for an industrial siding.

Photograph 6.
West abutment of the Red Bridge in Somerville, looking west, with the MBTA Fitchburg Line in foreground. Portion of wall at left is from 1883, portion of wall at right is from 1925.

Photograph 7.
View of west abutment of Red Bridge and adjacent retaining wall, looking northeast in Somerville. This retaining wall is circa 1883-1900.

Photograph 8.
Circa 1883-1900 Boston & Lowell RR Retaining Wall on east side of the A&P Grocery Warehouse and Bakery (3-25 Fitchburg St) in Somerville.

APPENDIX D
EFFLUENT LIMITATIONS CALCULATIONS

Enter number values in green boxes below

Enter values in the units specified

↓

15.9629	Q_R = Enter upstream flow in **MGD**
0.144	Q_P = Enter discharge flow in **MGD**
0	Downstream 7Q10

Enter a dilution factor, if other than zero

↓

0

Enter values in the units specified

↓

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

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

↓

7.03	pH in **Standard Units**
6.65	Temperature in **°C**
0.066	Ammonia in **mg/L**
73	Hardness in **mg/L** $CaCO_3$
0	Salinity in **ppt**
0	Antimony in **µg/L**
0	Arsenic in **µg/L**
1.7	Cadmium in **µg/L**
0.0017	Chromium III in **µg/L**
0	Chromium VI in **µg/L**
3.6	Copper in **µg/L**
470	Iron in **µg/L**
1.7	Lead in **µg/L**
0	Mercury in **µg/L**
1.2	Nickel in **µg/L**
0	Selenium in **µg/L**
0	Silver in **µg/L**
7.6	Zinc in **µg/L**

Notes:

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

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

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

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

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

Leave 0 if no entry

Freshwater only

pH, temperature, and ammonia required for all discharges

Hardness required for freshwater

Salinity required for saltwater (estuarine and marine)

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

Enter 0 if non-detect or testing not required

Enter **influent** concentrations in the units specified

if >1 sample, enter maximum

if >10 samples, may enter 95th percentile

Enter 0 if non-detect or testing not required

↓	
0	TRC in **µg/L**
0.974	Ammonia in **mg/L**
0	Antimony in **µg/L**
8.8	Arsenic in **µg/L**
0.055	Cadmium in **µg/L**
1.3	Chromium III in **µg/L**
0	Chromium VI in **µg/L**
4.7	Copper in **µg/L**
16000	Iron in **µg/L**
1.6	Lead in **µg/L**
0	Mercury in **µg/L**
5.5	Nickel in **µg/L**
0	Selenium in **µg/L**
0	Silver in **µg/L**
12	Zinc in **µg/L**
2	Cyanide in **µg/L**
66	Phenol in **µg/L**
0	Carbon Tetrachloride in **µg/L**
0	Tetrachloroethylene in **µg/L**
0	Total Phthalates in **µg/L**
0	Diethylhexylphthalate in **µg/L**
0	Benzo(a)anthracene in **µg/L**
0	Benzo(a)pyrene in **µg/L**
0	Benzo(b)fluoranthene in **µg/L**
0	Benzo(k)fluoranthene in **µg/L**
0	Chrysene in **µg/L**
0	Dibenzo(a,h)anthracene in **µg/L**
0	Indeno(1,2,3-cd)pyrene in **µg/L**
0	Methyl-tert butyl ether in **µg/L**

RGP Diluton Factor Calculations

EPA Dilution Factor (DF) formula: (Qs+Qd)/Qd = DF
Qs is 7Q10 in million gallons per day (MGD) and Qd is discharge flow rate in MGD

7Q10 =	24.7 cubic feet per second
1 cubic foot =	7.48 gallons
discharge flow rate =	100 gallons per minute

$$Qs = \frac{24.7\ ft^3}{1\ second} \times \frac{7.48\ gallons}{1\ ft^3} \times \frac{86{,}400\ seconds}{1\ day} \times \frac{1\ milligallon}{1{,}000{,}000\ gallons} = 15.9629184\ MGD$$

$$Qd = \frac{100\ gallons}{1\ minute} \times \frac{1{,}440\ minutes}{1\ day} \times \frac{1\ milligallon}{1{,}000{,}000\ gallons} = 0.144\ MGD$$

$$Df = \frac{Qs + Qd}{Qd} = \frac{18.87 + 0.144}{0.144} = 111.8536\ MGD$$

RGP Diluton Factor Calculations

WQBELs

EPA Downstream hardness (Cr) = (QdCd+QsCs)/Qr

Cr = Downstream hardness in mg/L	
Qd = Discharge flow in MGD	0.144
Cd = Discharge hardness is mg/L	520
Qs = Upstream flow (7Q10) in MGD	15.9629184
Cs = Upstream hardness in mg/L	73
Qr = Downstream receiving water flow in MGD = Qd+ Qs	16.1069184

$$Cr = \frac{QdCd + QsCs}{Qd+Qs} = \frac{0.144\ \text{MGD} \times 520\ \text{mg/L} + 18.87\ \text{MGD} \times 73\ \text{r}}{0.144\ \text{MGD} + 18.87\ \text{MGD}} = 77\ \text{mg/L}$$

Dilution Factor	132.0					
A. Inorganics	TBEL applies if bolded		WQBEL applies if bolded		Compliance Level applies if shown	
Ammonia	**Report**	mg/L	---			
Chloride	**Report**	µg/L	---			
Total Residual Chlorine	**0.2**	mg/L	1453	µg/L	---	µg/L
Total Suspended Solids	**30**	mg/L	---			
Antimony	**206**	µg/L	84512	µg/L		
Arsenic	**104**	µg/L	1320	µg/L		
Cadmium	**10.2**	µg/L	29.2700	µg/L		
Chromium III	**323**	µg/L	9126.7	µg/L		
Chromium VI	**323**	µg/L	1509.9	µg/L		
Copper	**242**	µg/L	506.8	µg/L		
Iron	**5000**	µg/L	70456	µg/L		
Lead	**160**	µg/L	75.38	µg/L		
Mercury	**0.739**	µg/L	119.62	µg/L		
Nickel	**1450**	µg/L	5327.1	µg/L		
Selenium	**235.8**	µg/L	660.2	µg/L		
Silver	**35.1**	µg/L	314.4	µg/L		
Zinc	**420**	µg/L	11596.9	µg/L		
Cyanide	**178**	mg/L	686.7	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	39615	µg/L		
C. Halogenated VOCs						
Carbon Tetrachloride	**4.4**	µg/L	211.3	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	435.8	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	290.5	µg/L		
Total Group I Polycyclic Aromatic Hydrocarbons	**1.0**	µg/L	---			
Benzo(a)anthracene	**1.0**	µg/L	0.5018	µg/L	---	µg/L
Benzo(a)pyrene	**1.0**	µg/L	0.5018	µg/L	---	µg/L
Benzo(b)fluoranthene	**1.0**	µg/L	0.5018	µg/L	---	µg/L
Benzo(k)fluoranthene	**1.0**	µg/L	0.5018	µg/L	---	µg/L
Chrysene	**1.0**	µg/L	0.5018	µg/L	---	µg/L
Dibenzo(a,h)anthracene	**1.0**	µg/L	0.5018	µg/L	---	µg/L
Indeno(1,2,3-cd)pyrene	**1.0**	µg/L	0.5018	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	2641	µg/L		
tert-Butyl Alcohol	**120**	µg/L	---			
tert-Amyl Methyl Ether	**90**	µg/L	---			

TABLE 1

NPDES RGP Laboratory Analysis
245-263 Monsignor Highway
Cambridge, MA

	Reportable Concentrations (RCs)		MCP - Method 1 Cleanup Standards				SAMPLING LOCATION		
	RCGW-1	RCGW-2	GW-1	GW-2	GW-3	UCL	CDW-2/MW	E180-MW	HW #1
							Influent	Influent	Effluent
Sampling Date							1/21/2020	1/21/2020	4/2/2020
Depth to Water							7.5	8.8	-
Depth to Bottom							15	15	-
Well Size							2"	2"	-
PCBs Method 608.3 (µg/L)									
PCB 1016	0.5	5	0.5	5	10	100	ND (0.205)	ND (0.200)	ND (0.200)
PCB 1221	0.5	5	0.5	5	10	100	ND (0.205)	ND (0.200)	ND (0.200)
PCB 1232	0.5	5	0.5	5	10	100	ND (0.205)	ND (0.200)	ND (0.200)
PCB 1242	0.5	5	0.5	5	10	100	ND (0.205)	ND (0.200)	ND (0.200)
PCB 1248	0.5	5	0.5	5	10	100	0.313	0.352	ND (0.200)
PCB 1254	0.5	5	0.5	5	10	100	0.363	0.252	ND (0.200)
PCB 1260	0.5	5	0.5	5	10	100	ND (0.205)	ND (0.200)	ND (0.200)
VOCs 624.1 (µg/L)									
ACETONE	6300	50000	6300	50000	50000	100000	ND (250)	ND (50.0)	ND (50.0)
TERT-AMYL METHYL ETHER	~	~	~	~	~	~	ND (2.50)	ND (0.500)	ND (0.500)
BENZENE	5	1000	5	1000	10000	100000	69.6	1.79	ND (1.00)
TERT-BUTYL ALCOHOL	1000	10000	~	~	~	~	ND (100)	ND (20.0)	ND (20.0)
CARBON TETRACHLORIDE	2	2	5	2	5000	50000	ND (10.0)	ND (2.00)	ND (2.00)
1,2-DICHLOROBENZENE	600	2000	600	8000	2000	80000	ND (10.0)	ND (2.00)	ND (2.00)
1,3-DICHLOROBENZENE	100	6000	100	6000	50000	100000	ND (10.0)	ND (2.00)	ND (2.00)
1,4-DICHLOROBENZENE	5	60	5	60	8000	80000	ND (10.0)	ND (2.00)	ND (2.00)
1,2-DICHLOROETHANE	5	5	5	5	20000	100000	ND (10.0)	ND (2.00)	ND (2.00)
CIS-1,2-DICHLOROETHYLENE	20	20	70	20	50000	100000	ND (5.00)	ND (1.00)	ND (1.00)
1,1-DICHLOROETHANE	70	2000	70	2000	20000	100000	ND (10.0)	ND (2.00)	ND (2.00)
1,1-DICHLOROETHYLENE	7	80	7	80	30000	100000	ND (10.0)	ND (2.00)	ND (2.00)
1,4-DIOXANE	0.3	6000	0.3	6000	50000	100000	ND (250)	ND (50.0)	ND (50.0)
ETHANOL	~	~	~	~	~	~	ND (250)	ND (50.0)	ND (50.0)
ETHYLBENZENE	700	5000	700	20000	5000	100000	86.8	6.98	ND (2.00)
METHYL TERT-BUTYL ETHER (MTBE)	70	5000	70	50000	50000	100000	1.5	ND (2.00)	ND (2.00)
METHYLENE CHLORIDE	5	2000	5	2000	50000	100000	ND (25.0)	ND (5.00)	ND (5.00)
TETRACHLOROETHYLENE	5	50	5	50	30000	100000	ND (10.0)	ND (2.00)	ND (2.00)
TOLUENE	1000	40000	1000	50000	40000	100000	501	22.8	ND (1.00)
1,1,1-TRICHLOROETHANE	200	4000	200	4000	20000	100000	ND (10.0)	ND (2.00)	ND (2.00)
1,1,2-TRICHLOROETHANE	5	900	5	900	50000	100000	ND (10.0)	ND (2.00)	ND (2.00)
TRICHLOROETHYLENE	5	5	5	5	5000	50000	ND (10.0)	ND (2.00)	ND (2.00)
VINYL CHLORIDE	2	2	2	2	50000	100000	ND (10.0)	ND (2.00)	ND (2.00)
M/P-XYLENE	3000	3000	10000	3000	5000	100000	520	45.2	ND (2.00)
O-XYLENE	3000	3000	10000	3000	5000	100000	261	19.1	ND (1.00)
Group 1 SVOCs 625.1(1) (µg/L)									
ACENAPHTHENE	20	6000	20	~	10000	100000	ND (5.00)	ND (5.00)	ND (5.00)
ACENAPHTHYLENE	30	40	30	10000	40	100000	ND (5.00)	ND (5.00)	ND (5.00)
ANTHRACENE	30	30	60	~	30	600	ND (5.00)	ND (5.00)	ND (5.00)
BENZO(G,H,I)PERYLENE	20	20	50	~	20	500	ND (5.00)	ND (5.00)	ND (5.00)
BUTYLBENZYLPHTHALATE	1000	10000	~	~	~	~	ND (10.0)	ND (10.0)	ND (10.0)
DI-N-BUTYLPHTHALATE	500	5000	~	~	~	~	ND (10.0)	ND (10.0)	ND (10.0)
DIETHYLPHTHALATE	2000	9000	2000	50000	9000	100000	ND (10.0)	ND (10.0)	ND (10.0)
DIMETHYLPHTHALATE	300	50000	300	50000	50000	100000	ND (10.0)	ND (10.0)	ND (10.0)
DI-N-OCTYLPHTHALATE	10000	100000	~	~	~	~	ND (10.0)	ND (10.0)	ND (10.0)
BIS(2-ETHYLHEXYL)PHTHALATE	6	50000	6	~	50000	100000	ND (10.0)	ND (10.0)	ND (10.0)
FLUORANTHENE	90	200	90	~	200	2000	ND (5.00)	ND (5.00)	ND (5.00)
FLUORENE	30	40	30	~	40	400	ND (5.00)	ND (5.00)	ND (5.00)
NAPHTHALENE	140	700	140	700	20000	100000	10.6	ND (5.00)	ND (5.00)
PHENANTHRENE	40	10000	40	~	10000	100000	ND (5.00)	ND (5.00)	ND (5.00)
PYRENE	20	20	60	~	20	600	ND (5.00)	ND (5.00)	ND (5.00)
Group 2 SVOCs 625.1(2) (µg/L)									
BENZO(A)ANTHRACENE	1	1000	1	~	1000	10000	ND (0.050)	ND (0.050)	ND (0.050)
BENZO(A)PYRENE	0.2	500	0.2	~	500	5000	ND (0.10)	ND (0.10)	ND (0.10)
BENZO(B)FLUORANTHENE	1	400	1	~	400	4000	ND (0.050)	ND (0.050)	0.016
BENZO(K)FLUORANTHENE	1	100	1	~	100	1000	ND (0.20)	ND (0.20)	ND (0.20)
CHRYSENE	2	70	2	~	70	700	ND (0.20)	ND (0.20)	ND (0.20)
DIBENZ(A,H)ANTHRACENE	0.5	40	0.5	~	40	400	ND (0.10)	ND (0.10)	ND (0.10)
INDENO(1,2,3-CD)PYRENE	0.5	100	0.5	~	100	1000	ND (0.10)	ND (0.10)	ND (0.10)
PENTACHLOROPHENOL	1	200	1	~	200	2000	ND (1.0)	ND (1.0)	ND (1.0)
EPA 1664B (mg/L)									
SILICA GEL TREATED HEM (SGT-HEM)	~	~	~	~	~	~	ND (1.6)	ND (2.8)	0.80
EPA 200.7 (mg/L) Metals Digestion									
HARDNESS	~	~	~	~	~	~	300	520	73
IRON	~	~	~	~	~	~	16	13	0.47
EPA 200.8 (µg/L) Metals Digestion									
ANTIMONY	6	8000	6	~	8000	80000	ND (1.0)	ND (1.0)	ND (1.0)
ARSENIC	10	900	10	~	900	9000	8.8	0.94	ND (0.80)
CADMIUM	4	4	5	~	4	50	0.055	ND (0.20)	ND (0.20)
CHROMIUM	100	300	100	~	300	3000	0.89	1.3	1.7
COPPER	10000	100000	~	~	~	~	2.4	4.7	3.6
LEAD	10	10	15	~	10	150	1.2	1.6	1.7
NICKEL	100	200	100	~	200	2000	3.6	5.5	1.2
SELENIUM	50	100	50	~	100	1000	ND (5.0)	1.8	ND (5.0)
SILVER	7	7	100	~	7	1000	ND (0.20)	ND (0.20)	ND (0.20)
ZINC	900	900	5000	~	900	50000	6.1	12	7.6
EPA 245.1 (mg/L) Metals Digestion									
MERCURY	0.002	0.02	0.002	~	0.02	0.2	ND (0.00010)	ND (0.00010)	ND (0.00010)
EPA 300.0 (mg/L)									
CHLORIDE	~	~	~	~	~	~	150	250	180
EPA 420.1 (mg/L)									
PHENOL	~	~	1	50	2	~	ND (0.050)	0.066	ND (0.050)
EPA 504.1 (µg/L)									
1,2-DIBROMOETHANE (EDB)	0.02	2	0.02	2	50000	100000	ND (0.019)	ND (0.020)	ND (0.021)
SM19-22 4500 NH3 C (mg/L)									
AMMONIA AS N	1	10	~	~	~	~	0.974	0.422	0.066
SM21-22 2540D (mg/L)									
TOTAL SUSPENDED SOLIDS	~	~	~	~	~	~	35	860	3.0

NPDES RGP Laboratory Analysis
245-263 Monsignor Highway
Cambridge, MA

SM21-22 3500 Cr B (mg/L)									
CHROMIUM +6	0.1	0.3	0.1	~	0.3	3	ND (0.0040)	ND (0.0040)	ND (0.0040)
SM21-22 4500 CL G (mg/L)									
CHLORINE, RESIDUAL	~	~	~	~	~	~	0.33	0.45	0.079
SM21-22 4500 CN E (mg/L)									
CYANIDE	0.03	0.03	0.2	~	0.03	2	0.002	0.002	ND (0.005)
Tri Chrome Calc. (mg/L) Metals Digestion									
CHROMIUM +3	0.1	0.6	0.1	~	0.6	6	0.00089	0.0013	0.0017

NOTES:
1. Bolded values exceed the Method 1 Cleanup Standards.
2. ND = Not detected above the lab reporting limits shown in parenthesis.
3. NT = Not tested.
4. ~ = No Method 1 Standard or UCL available
5. Shaded values exceed the MCP Reportable Concentrations (RCs).

CONTEST ANALYTICAL INFLUENT DATA REPORT
JANUARY 28, 2020

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

January 28, 2020

Alan Sundquist
CDW Consultants, Inc.
6 Huron Drive
Natick, MA 01760

Project Location: Cambridge/ Somerville
Client Job Number:
Project Number: 1476
Laboratory Work Order Number: 20A0917

Enclosed are results of analyses for samples received by the laboratory on January 21, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Michelle M. Koch
Project Manager

Table of Contents

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CDW Consultants, Inc.
6 Huron Drive
Natick, MA 01760
ATTN: Alan Sundquist

REPORT DATE: 1/28/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1476

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20A0917

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Cambridge/ Somerville

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
CDW-2/MW	20A0917-01	Ground Water		608.3	
				624.1	
				625.1	
				EPA 1664B	
				EPA 200.7	
				EPA 200.8	
				EPA 245.1	
				EPA 300.0	
				EPA 420.1	
				EPA 504.1	
				SM19-22 4500 NH3 C	MA M-MA-086/CT PH-0574/NY11148
				SM21-22 2540D	
				SM21-22 3500 Cr B	
				SM21-22 4500 CL G	
				SM21-22 4500 CN E	MA M-MA-086/CT PH-0574/NY11148
				Tri Chrome Calc.	
E180-MW	20A0917-02	Ground Water		608.3	
				624.1	
				625.1	
				EPA 1664B	
				EPA 200.7	
				EPA 200.8	
				EPA 245.1	
				EPA 300.0	
				EPA 420.1	
				EPA 504.1	
				SM19-22 4500 NH3 C	MA M-MA-086/CT PH-0574/NY11148
				SM21-22 2540D	
				SM21-22 3500 Cr B	
				SM21-22 4500 CL G	
				SM21-22 4500 CN E	MA M-MA-086/CT PH-0574/NY11148
				Tri Chrome Calc.	
Trip Blankw	20A0917-03	Trip Blank Water		624.1	

con-test® ANALYTICAL LABORATORY

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

624.1

Qualifications:

L-01

Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.

Analyte & Samples(s) Qualified:

Ethanol
B250552-BS1

Vinyl Chloride
B250552-BS1

RL-11

Elevated reporting limit due to high concentration of target compounds.

Analyte & Samples(s) Qualified:

20A0917-01[CDW-2/MW]

EPA 1664B

Qualifications:

MS-07

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

Silica Gel Treated HEM (SGT-HEM
20A0917-01[CDW-2/MW], B250873-MS1

SM21-22 3500 Cr B

Qualifications:

MS-07

Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.

Analyte & Samples(s) Qualified:

Hexavalent Chromium
20A0917-02[E180-MW], B250525-MS2, B250525-MSD2

SM21-22 4500 CL G

Qualifications:

MS-11

Matrix spike recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.

Analyte & Samples(s) Qualified:

Chlorine, Residual
20A0917-01[CDW-2/MW], B250526-MS1

Z-01

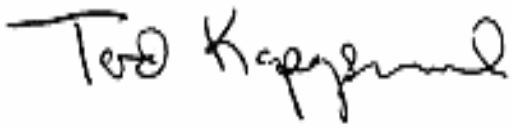
SM 4500 CL G test had a calibration point outside of acceptable back calculated recovery. Reanalysis yielded similar non-conformance.

Analyte & Samples(s) Qualified:

Chlorine, Residual
20A0917-01[CDW-2/MW], 20A0917-02[E180-MW], B250526-BLK1, B250526-BS1, B250526-BSD1, B250526-DUP1, B250526-DUP2, B250526-MS1

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.



Tod E. Kopyscinski
Laboratory Director

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Cambridge/ Somerville | Sample Description: | Work Order: 20A0917

Date Received: 1/21/2020

Field Sample #: CDW-2/MW | Sampled: 1/21/2020 10:00

Sample ID: 20A0917-01

Sample Matrix: Ground Water

Sample Flags: RL-11

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	<19.0	250	19.0	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
tert-Amyl Methyl Ether (TAME)	<0.700	2.50	0.700	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
Benzene	69.6	5.00	0.900	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
tert-Butyl Alcohol (TBA)	<20.8	100	20.8	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
Carbon Tetrachloride	<0.550	10.0	0.550	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
1,2-Dichlorobenzene	<0.800	10.0	0.800	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
1,3-Dichlorobenzene	<0.600	10.0	0.600	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
1,4-Dichlorobenzene	<0.650	10.0	0.650	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
1,2-Dichloroethane	<2.05	10.0	2.05	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
cis-1,2-Dichloroethylene	<0.650	5.00	0.650	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
1,1-Dichloroethane	<0.800	10.0	0.800	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
1,1-Dichloroethylene	<1.60	10.0	1.60	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
1,4-Dioxane	<112	250	112	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
Ethanol	<52.7	250	52.7	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
Ethylbenzene	86.8	10.0	0.650	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
Methyl tert-Butyl Ether (MTBE)	1.50	10.0	1.25	µg/L	5	J	624.1	1/22/20	1/22/20 22:46	EEH
Methylene Chloride	<1.70	25.0	1.70	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
Tetrachloroethylene	<0.900	10.0	0.900	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
Toluene	501	5.00	0.700	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
1,1,1-Trichloroethane	<1.00	10.0	1.00	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
1,1,2-Trichloroethane	<0.800	10.0	0.800	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
Trichloroethylene	<1.20	10.0	1.20	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
Vinyl Chloride	<2.25	10.0	2.25	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
m+p Xylene	520	10.0	1.50	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH
o-Xylene	261	5.00	0.850	µg/L	5		624.1	1/22/20	1/22/20 22:46	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	102	70-130		1/22/20 22:46
Toluene-d8	99.3	70-130		1/22/20 22:46
4-Bromofluorobenzene	95.9	70-130		1/22/20 22:46

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Cambridge/ Somerville | Sample Description: | Work Order: 20A0917

Date Received: 1/21/2020

Field Sample #: CDW-2/MW | Sampled: 1/21/2020 10:00

Sample ID: 20A0917-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene (SIM)	<0.016	0.050	0.016	µg/L	1		625.1	1/27/20	1/28/20 11:46	IMR
Benzo(a)pyrene (SIM)	<0.012	0.10	0.012	µg/L	1		625.1	1/27/20	1/28/20 11:46	IMR
Benzo(b)fluoranthene (SIM)	<0.015	0.050	0.015	µg/L	1		625.1	1/27/20	1/28/20 11:46	IMR
Benzo(k)fluoranthene (SIM)	<0.012	0.20	0.012	µg/L	1		625.1	1/27/20	1/28/20 11:46	IMR
Chrysene (SIM)	<0.015	0.20	0.015	µg/L	1		625.1	1/27/20	1/28/20 11:46	IMR
Dibenz(a,h)anthracene (SIM)	<0.017	0.10	0.017	µg/L	1		625.1	1/27/20	1/28/20 11:46	IMR
Indeno(1,2,3-cd)pyrene (SIM)	<0.018	0.10	0.018	µg/L	1		625.1	1/27/20	1/28/20 11:46	IMR
Pentachlorophenol (SIM)	<0.33	1.0	0.33	µg/L	1		625.1	1/27/20	1/28/20 11:46	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol (SIM)	38.4	15-110		1/28/20 11:46
Phenol-d6 (SIM)	31.2	15-110		1/28/20 11:46
Nitrobenzene-d5	61.4	30-130		1/28/20 11:46
2-Fluorobiphenyl	59.4	30-130		1/28/20 11:46
2,4,6-Tribromophenol (SIM)	74.8	15-110		1/28/20 11:46
p-Terphenyl-d14	57.2	30-130		1/28/20 11:46

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Cambridge/ Somerville | Sample Description: | Work Order: 20A0917

Date Received: 1/21/2020

Field Sample #: CDW-2/MW | Sampled: 1/21/2020 10:00

Sample ID: 20A0917-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	<0.231	5.00	0.231	µg/L	1		625.1	1/27/20	1/28/20 12:40	BGL
Acenaphthylene	<0.231	5.00	0.231	µg/L	1		625.1	1/27/20	1/28/20 12:40	BGL
Anthracene	<0.202	5.00	0.202	µg/L	1		625.1	1/27/20	1/28/20 12:40	BGL
Benzo(g,h,i)perylene	<0.396	5.00	0.396	µg/L	1		625.1	1/27/20	1/28/20 12:40	BGL
Butylbenzylphthalate	<0.295	10.0	0.295	µg/L	1		625.1	1/27/20	1/28/20 12:40	BGL
Di-n-butylphthalate	<0.458	10.0	0.458	µg/L	1		625.1	1/27/20	1/28/20 12:40	BGL
Diethylphthalate	<0.225	10.0	0.225	µg/L	1		625.1	1/27/20	1/28/20 12:40	BGL
Dimethylphthalate	<0.307	10.0	0.307	µg/L	1		625.1	1/27/20	1/28/20 12:40	BGL
Di-n-octylphthalate	<0.522	10.0	0.522	µg/L	1		625.1	1/27/20	1/28/20 12:40	BGL
Bis(2-Ethylhexyl)phthalate	<0.519	10.0	0.519	µg/L	1		625.1	1/27/20	1/28/20 12:40	BGL
Fluoranthene	<0.297	5.00	0.297	µg/L	1		625.1	1/27/20	1/28/20 12:40	BGL
Fluorene	<0.245	5.00	0.245	µg/L	1		625.1	1/27/20	1/28/20 12:40	BGL
Naphthalene	10.6	5.00	0.442	µg/L	1		625.1	1/27/20	1/28/20 12:40	BGL
Phenanthrene	<0.287	5.00	0.287	µg/L	1		625.1	1/27/20	1/28/20 12:40	BGL
Pyrene	<0.255	5.00	0.255	µg/L	1		625.1	1/27/20	1/28/20 12:40	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	45.3	15-110		1/28/20 12:40
Phenol-d6	31.6	15-110		1/28/20 12:40
Nitrobenzene-d5	75.0	30-130		1/28/20 12:40
2-Fluorobiphenyl	103	30-130		1/28/20 12:40
2,4,6-Tribromophenol	83.3	15-110		1/28/20 12:40
p-Terphenyl-d14	87.1	30-130		1/28/20 12:40

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Cambridge/ Somerville | Sample Description: | Work Order: 20A0917

Date Received: 1/21/2020

Field Sample #: CDW-2/MW | Sampled: 1/21/2020 10:00

Sample ID: 20A0917-01

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	<0.189	0.205	0.189	µg/L	1		608.3	1/27/20	1/28/20 13:32	AYH
Aroclor-1221 [1]	<0.165	0.205	0.165	µg/L	1		608.3	1/27/20	1/28/20 13:32	AYH
Aroclor-1232 [1]	<0.204	0.205	0.204	µg/L	1		608.3	1/27/20	1/28/20 13:32	AYH
Aroclor-1242 [1]	<0.177	0.205	0.177	µg/L	1		608.3	1/27/20	1/28/20 13:32	AYH
Aroclor-1248 [1]	0.313	0.205	0.195	µg/L	1		608.3	1/27/20	1/28/20 13:32	AYH
Aroclor-1254 [2]	0.363	0.205	0.108	µg/L	1		608.3	1/27/20	1/28/20 13:32	AYH
Aroclor-1260 [1]	<0.201	0.205	0.201	µg/L	1		608.3	1/27/20	1/28/20 13:32	AYH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	56.7	30-150		1/28/20 13:32
Decachlorobiphenyl [2]	63.6	30-150		1/28/20 13:32
Tetrachloro-m-xylene [1]	67.2	30-150		1/28/20 13:32
Tetrachloro-m-xylene [2]	77.9	30-150		1/28/20 13:32

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Cambridge/ Somerville | Sample Description: | Work Order: 20A0917

Date Received: 1/21/2020

Field Sample #: CDW-2/MW | Sampled: 1/21/2020 10:00

Sample ID: 20A0917-01

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	0.35	µg/L	1		EPA 200.8	1/23/20	1/24/20 11:52	QNW
Arsenic	8.8	0.80	0.64	µg/L	1		EPA 200.8	1/23/20	1/24/20 11:52	QNW
Cadmium	0.055	0.20	0.038	µg/L	1	J	EPA 200.8	1/23/20	1/24/20 11:52	QNW
Chromium	0.89	1.0	0.24	µg/L	1	J	EPA 200.8	1/23/20	1/24/20 11:52	QNW
Chromium, Trivalent	0.00089			mg/L	1		Tri Chrome Calc.	1/23/20	1/24/20 11:52	QNW
Copper	2.4	1.0	0.87	µg/L	1		EPA 200.8	1/23/20	1/24/20 11:52	QNW
Iron	16	0.050	0.038	mg/L	1		EPA 200.7	1/23/20	1/24/20 12:47	MJH
Lead	1.2	0.50	0.085	µg/L	1		EPA 200.8	1/23/20	1/24/20 11:52	QNW
Mercury	ND	0.00010	0.000034	mg/L	1		EPA 245.1	1/24/20	1/28/20 9:25	CJV
Nickel	3.6	5.0	0.62	µg/L	1	J	EPA 200.8	1/23/20	1/24/20 11:52	QNW
Selenium	ND	5.0	1.6	µg/L	1		EPA 200.8	1/23/20	1/24/20 11:52	QNW
Silver	ND	0.20	0.18	µg/L	1		EPA 200.8	1/23/20	1/24/20 13:27	QNW
Zinc	6.1	10	2.3	µg/L	1	J	EPA 200.8	1/23/20	1/24/20 11:52	QNW
Hardness	300			mg/L	5		EPA 200.7	1/23/20	1/24/20 13:42	MJH

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Cambridge/ Somerville | Sample Description: | Work Order: 20A0917

Date Received: 1/21/2020

Field Sample #: CDW-2/MW | Sampled: 1/21/2020 10:00

Sample ID: 20A0917-01

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Chloride	150	10	3.0	mg/L	10		EPA 300.0	1/24/20	1/24/20 12:07	IS
Chlorine, Residual	0.33	0.20	0.15	mg/L	10	MS-11, Z-01	SM21-22 4500 CL G	1/21/20	1/21/20 20:10	KMV
Hexavalent Chromium	ND	0.0040		mg/L	1		SM21-22 3500 Cr B	1/21/20	1/21/20 20:00	KMV
Phenol	ND	0.050	0.050	mg/L	1		EPA 420.1	1/27/20	1/28/20 11:30	LL
Total Suspended Solids	35	1.0	0.41	mg/L	1		SM21-22 2540D	1/22/20	1/22/20 13:15	LL
Silica Gel Treated HEM (SGT-HEM)	ND	1.6	0.37	mg/L	1	MS-07	EPA 1664B	1/27/20	1/27/20 11:30	LL

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Project Location: Cambridge/ Somerville | Sample Description: | Work Order: 20A0917

Date Received: 1/21/2020

Field Sample #: CDW-2/MW | Sampled: 1/21/2020 10:00

Sample ID: 20A0917-01

Sample Matrix: Ground Water

Drinking Water Organics EPA 504.1

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,2-Dibromoethane (EDB) (1)	ND	0.019	0.012	µg/L	1		EPA 504.1	1/23/20	1/23/20 23:22	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,3-Dibromopropane (1)	104	70-130		1/23/20 23:22
1,3-Dibromopropane (2)	95.7	70-130		1/23/20 23:22

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Project Location: Cambridge/ Somerville | Sample Description: | Work Order: 20A0917

Date Received: 1/21/2020

Field Sample #: CDW-2/MW | Sampled: 1/21/2020 10:00

Sample ID: 20A0917-01

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	0.974	0.075	0.024	mg/L	1		SM19-22 4500 NH3 C		1/27/20 21:25	AAL
Cyanide	0.002	0.005	0.001	mg/L	1		SM21-22 4500 CN E		1/24/20 11:56	AAL

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Cambridge/ Somerville | Sample Description: | Work Order: 20A0917

Date Received: 1/21/2020

Field Sample #: E180-MW | Sampled: 1/21/2020 11:00

Sample ID: 20A0917-02

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	<3.79	50.0	3.79	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
tert-Amyl Methyl Ether (TAME)	<0.140	0.500	0.140	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
Benzene	1.79	1.00	0.180	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
tert-Butyl Alcohol (TBA)	<4.17	20.0	4.17	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
Carbon Tetrachloride	<0.110	2.00	0.110	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
1,2-Dichlorobenzene	<0.160	2.00	0.160	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
1,3-Dichlorobenzene	<0.120	2.00	0.120	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
1,4-Dichlorobenzene	<0.130	2.00	0.130	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
1,2-Dichloroethane	<0.410	2.00	0.410	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
cis-1,2-Dichloroethylene	<0.130	1.00	0.130	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
1,1-Dichloroethane	<0.160	2.00	0.160	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
1,1-Dichloroethylene	<0.320	2.00	0.320	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
1,4-Dioxane	<22.5	50.0	22.5	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
Ethanol	<10.5	50.0	10.5	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
Ethylbenzene	6.98	2.00	0.130	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
Methyl tert-Butyl Ether (MTBE)	<0.250	2.00	0.250	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
Methylene Chloride	<0.340	5.00	0.340	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
Tetrachloroethylene	<0.180	2.00	0.180	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
Toluene	22.8	1.00	0.140	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
1,1,1-Trichloroethane	<0.200	2.00	0.200	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
1,1,2-Trichloroethane	<0.160	2.00	0.160	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
Trichloroethylene	<0.240	2.00	0.240	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
Vinyl Chloride	<0.450	2.00	0.450	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
m+p Xylene	45.2	2.00	0.300	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH
o-Xylene	19.1	1.00	0.170	µg/L	1		624.1	1/22/20	1/22/20 22:17	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	101	70-130		1/22/20 22:17
Toluene-d8	98.5	70-130		1/22/20 22:17
4-Bromofluorobenzene	97.4	70-130		1/22/20 22:17

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Project Location: Cambridge/ Somerville | Sample Description: | Work Order: 20A0917

Date Received: 1/21/2020

Field Sample #: E180-MW | Sampled: 1/21/2020 11:00

Sample ID: 20A0917-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene (SIM)	<0.016	0.050	0.016	µg/L	1		625.1	1/27/20	1/28/20 12:15	IMR
Benzo(a)pyrene (SIM)	<0.012	0.10	0.012	µg/L	1		625.1	1/27/20	1/28/20 12:15	IMR
Benzo(b)fluoranthene (SIM)	<0.015	0.050	0.015	µg/L	1		625.1	1/27/20	1/28/20 12:15	IMR
Benzo(k)fluoranthene (SIM)	<0.012	0.20	0.012	µg/L	1		625.1	1/27/20	1/28/20 12:15	IMR
Chrysene (SIM)	<0.015	0.20	0.015	µg/L	1		625.1	1/27/20	1/28/20 12:15	IMR
Dibenz(a,h)anthracene (SIM)	<0.017	0.10	0.017	µg/L	1		625.1	1/27/20	1/28/20 12:15	IMR
Indeno(1,2,3-cd)pyrene (SIM)	<0.018	0.10	0.018	µg/L	1		625.1	1/27/20	1/28/20 12:15	IMR
Pentachlorophenol (SIM)	<0.33	1.0	0.33	µg/L	1		625.1	1/27/20	1/28/20 12:15	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol (SIM)	35.7	15-110		1/28/20 12:15
Phenol-d6 (SIM)	30.0	15-110		1/28/20 12:15
Nitrobenzene-d5	56.2	30-130		1/28/20 12:15
2-Fluorobiphenyl	52.5	30-130		1/28/20 12:15
2,4,6-Tribromophenol (SIM)	68.6	15-110		1/28/20 12:15
p-Terphenyl-d14	53.0	30-130		1/28/20 12:15

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Cambridge/ Somerville | Sample Description: | Work Order: 20A0917

Date Received: 1/21/2020

Field Sample #: E180-MW | Sampled: 1/21/2020 11:00

Sample ID: 20A0917-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	<0.231	5.00	0.231	µg/L	1		625.1	1/27/20	1/28/20 13:04	BGL
Acenaphthylene	<0.231	5.00	0.231	µg/L	1		625.1	1/27/20	1/28/20 13:04	BGL
Anthracene	<0.202	5.00	0.202	µg/L	1		625.1	1/27/20	1/28/20 13:04	BGL
Benzo(g,h,i)perylene	<0.396	5.00	0.396	µg/L	1		625.1	1/27/20	1/28/20 13:04	BGL
Butylbenzylphthalate	<0.295	10.0	0.295	µg/L	1		625.1	1/27/20	1/28/20 13:04	BGL
Di-n-butylphthalate	<0.458	10.0	0.458	µg/L	1		625.1	1/27/20	1/28/20 13:04	BGL
Diethylphthalate	<0.225	10.0	0.225	µg/L	1		625.1	1/27/20	1/28/20 13:04	BGL
Dimethylphthalate	<0.307	10.0	0.307	µg/L	1		625.1	1/27/20	1/28/20 13:04	BGL
Di-n-octylphthalate	<0.522	10.0	0.522	µg/L	1		625.1	1/27/20	1/28/20 13:04	BGL
Bis(2-Ethylhexyl)phthalate	<0.519	10.0	0.519	µg/L	1		625.1	1/27/20	1/28/20 13:04	BGL
Fluoranthene	<0.297	5.00	0.297	µg/L	1		625.1	1/27/20	1/28/20 13:04	BGL
Fluorene	<0.245	5.00	0.245	µg/L	1		625.1	1/27/20	1/28/20 13:04	BGL
Naphthalene	<0.442	5.00	0.442	µg/L	1		625.1	1/27/20	1/28/20 13:04	BGL
Phenanthrene	<0.287	5.00	0.287	µg/L	1		625.1	1/27/20	1/28/20 13:04	BGL
Pyrene	<0.255	5.00	0.255	µg/L	1		625.1	1/27/20	1/28/20 13:04	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	42.8	15-110		1/28/20 13:04
Phenol-d6	33.0	15-110		1/28/20 13:04
Nitrobenzene-d5	70.8	30-130		1/28/20 13:04
2-Fluorobiphenyl	92.6	30-130		1/28/20 13:04
2,4,6-Tribromophenol	79.7	15-110		1/28/20 13:04
p-Terphenyl-d14	84.8	30-130		1/28/20 13:04

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Cambridge/ Somerville | Sample Description: | Work Order: 20A0917

Date Received: 1/21/2020

Field Sample #: E180-MW | Sampled: 1/21/2020 11:00

Sample ID: 20A0917-02

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	<0.184	0.200	0.184	µg/L	1		608.3	1/27/20	1/28/20 13:44	AYH
Aroclor-1221 [1]	<0.161	0.200	0.161	µg/L	1		608.3	1/27/20	1/28/20 13:44	AYH
Aroclor-1232 [1]	<0.199	0.200	0.199	µg/L	1		608.3	1/27/20	1/28/20 13:44	AYH
Aroclor-1242 [1]	<0.173	0.200	0.173	µg/L	1		608.3	1/27/20	1/28/20 13:44	AYH
Aroclor-1248 [1]	0.352	0.200	0.190	µg/L	1		608.3	1/27/20	1/28/20 13:44	AYH
Aroclor-1254 [1]	0.252	0.200	0.105	µg/L	1		608.3	1/27/20	1/28/20 13:44	AYH
Aroclor-1260 [1]	<0.196	0.200	0.196	µg/L	1		608.3	1/27/20	1/28/20 13:44	AYH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	48.4	30-150		1/28/20 13:44
Decachlorobiphenyl [2]	54.1	30-150		1/28/20 13:44
Tetrachloro-m-xylene [1]	62.9	30-150		1/28/20 13:44
Tetrachloro-m-xylene [2]	73.7	30-150		1/28/20 13:44

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Cambridge/ Somerville | Sample Description: | Work Order: 20A0917

Date Received: 1/21/2020

Field Sample #: E180-MW | Sampled: 1/21/2020 11:00

Sample ID: 20A0917-02

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	0.35	µg/L	1		EPA 200.8	1/23/20	1/24/20 11:55	QNW
Arsenic	0.94	0.80	0.64	µg/L	1		EPA 200.8	1/23/20	1/24/20 11:55	QNW
Cadmium	ND	0.20	0.038	µg/L	1		EPA 200.8	1/23/20	1/24/20 11:55	QNW
Chromium	1.3	1.0	0.24	µg/L	1		EPA 200.8	1/23/20	1/24/20 11:55	QNW
Chromium, Trivalent	0.0013			mg/L	1		Tri Chrome Calc.	1/23/20	1/24/20 11:55	QNW
Copper	4.7	1.0	0.87	µg/L	1		EPA 200.8	1/23/20	1/24/20 11:55	QNW
Iron	13	0.050	0.038	mg/L	1		EPA 200.7	1/23/20	1/24/20 12:52	MJH
Lead	1.6	0.50	0.085	µg/L	1		EPA 200.8	1/23/20	1/24/20 11:55	QNW
Mercury	ND	0.00010	0.000034	mg/L	1		EPA 245.1	1/24/20	1/28/20 9:28	CJV
Nickel	5.5	5.0	0.62	µg/L	1		EPA 200.8	1/23/20	1/24/20 11:55	QNW
Selenium	1.8	5.0	1.6	µg/L	1	J	EPA 200.8	1/23/20	1/24/20 11:55	QNW
Silver	ND	0.20	0.18	µg/L	1		EPA 200.8	1/23/20	1/24/20 13:29	QNW
Zinc	12	10	2.3	µg/L	1		EPA 200.8	1/23/20	1/24/20 11:55	QNW
Hardness	520			mg/L	5		EPA 200.7	1/23/20	1/24/20 13:47	MJH

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Project Location: Cambridge/ Somerville | Sample Description: | Work Order: 20A0917

Date Received: 1/21/2020

Field Sample #: E180-MW | Sampled: 1/21/2020 11:00

Sample ID: 20A0917-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Chloride	250	10	3.0	mg/L	10		EPA 300.0	1/24/20	1/24/20 12:23	IS
Chlorine, Residual	0.45	0.20	0.15	mg/L	10	Z-01	SM21-22 4500 CL G	1/21/20	1/21/20 20:10	KMV
Hexavalent Chromium	ND	0.0040		mg/L	1	MS-07	SM21-22 3500 Cr B	1/21/20	1/21/20 20:00	KMV
Phenol	0.066	0.050	0.050	mg/L	1		EPA 420.1	1/27/20	1/28/20 11:30	LL
Total Suspended Solids	860	6.7	2.7	mg/L	1		SM21-22 2540D	1/22/20	1/22/20 13:15	LL
Silica Gel Treated HEM (SGT-HEM)	ND	2.8	0.64	mg/L	1		EPA 1664B	1/27/20	1/27/20 11:30	LL

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Project Location: Cambridge/ Somerville | Sample Description: | Work Order: 20A0917

Date Received: 1/21/2020

Field Sample #: E180-MW | Sampled: 1/21/2020 11:00

Sample ID: 20A0917-02

Sample Matrix: Ground Water

Drinking Water Organics EPA 504.1

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,2-Dibromoethane (EDB) (1)	ND	0.020	0.012	µg/L	1		EPA 504.1	1/23/20	1/23/20 23:45	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,3-Dibromopropane (1)	110	70-130		1/23/20 23:45
1,3-Dibromopropane (2)	110	70-130		1/23/20 23:45

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Project Location: Cambridge/ Somerville | Sample Description: | Work Order: 20A0917

Date Received: 1/21/2020

Field Sample #: E180-MW | Sampled: 1/21/2020 11:00

Sample ID: 20A0917-02

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	0.422	0.075	0.024	mg/L	1		SM19-22 4500 NH3 C		1/27/20 21:26	AAL
Cyanide	0.002	0.005	0.001	mg/L	1		SM21-22 4500 CN E		1/24/20 11:59	AAL

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Project Location: Cambridge/ Somerville | Sample Description: | Work Order: 20A0917

Date Received: 1/21/2020

Field Sample #: Trip Blankw | Sampled: 1/21/2020 00:00

Sample ID: 20A0917-03

Sample Matrix: Trip Blank Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	<3.79	50.0	3.79	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
tert-Amyl Methyl Ether (TAME)	<0.140	0.500	0.140	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
Benzene	<0.180	1.00	0.180	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
tert-Butyl Alcohol (TBA)	<4.17	20.0	4.17	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
Carbon Tetrachloride	<0.110	2.00	0.110	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
1,2-Dichlorobenzene	<0.160	2.00	0.160	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
1,3-Dichlorobenzene	<0.120	2.00	0.120	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
1,4-Dichlorobenzene	<0.130	2.00	0.130	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
1,2-Dichloroethane	<0.410	2.00	0.410	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
cis-1,2-Dichloroethylene	<0.130	1.00	0.130	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
1,1-Dichloroethane	<0.160	2.00	0.160	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
1,1-Dichloroethylene	<0.320	2.00	0.320	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
1,4-Dioxane	<22.5	50.0	22.5	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
Ethanol	<10.5	50.0	10.5	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
Ethylbenzene	<0.130	2.00	0.130	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
Methyl tert-Butyl Ether (MTBE)	<0.250	2.00	0.250	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
Methylene Chloride	<0.340	5.00	0.340	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
Tetrachloroethylene	<0.180	2.00	0.180	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
Toluene	<0.140	1.00	0.140	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
1,1,1-Trichloroethane	<0.200	2.00	0.200	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
1,1,2-Trichloroethane	<0.160	2.00	0.160	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
Trichloroethylene	<0.240	2.00	0.240	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
Vinyl Chloride	<0.450	2.00	0.450	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
m+p Xylene	<0.300	2.00	0.300	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH
o-Xylene	<0.170	1.00	0.170	µg/L	1		624.1	1/22/20	1/22/20 17:26	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	101	70-130		1/22/20 17:26
Toluene-d8	98.8	70-130		1/22/20 17:26
4-Bromofluorobenzene	94.7	70-130		1/22/20 17:26

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Sample Extraction Data

Prep Method: SW-846 3510C-608.3

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0917-01 [CDW-2/MW]	B250894	975	10.0	01/27/20
20A0917-02 [E180-MW]	B250894	1000	10.0	01/27/20

Prep Method: SW-846 5030B-624.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0917-01 [CDW-2/MW]	B250552	1	5.00	01/22/20
20A0917-02 [E180-MW]	B250552	5	5.00	01/22/20
20A0917-03 [Trip Blankw]	B250552	5	5.00	01/22/20

Prep Method: SW-846 3510C-625.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0917-01 [CDW-2/MW]	B250896	1000	1.00	01/27/20
20A0917-02 [E180-MW]	B250896	1000	1.00	01/27/20

Prep Method: SW-846 3510C-625.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0917-01 [CDW-2/MW]	B250982	1000	1.00	01/27/20
20A0917-02 [E180-MW]	B250982	1000	1.00	01/27/20

EPA 1664B

Lab Number [Field ID]	Batch	Initial [mL]		Date
20A0917-01 [CDW-2/MW]	B250873	850		01/27/20
20A0917-02 [E180-MW]	B250873	500		01/27/20

Prep Method: EPA 200.7-EPA 200.7

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0917-01 [CDW-2/MW]	B250694	50.0	50.0	01/23/20
20A0917-01 [CDW-2/MW]	B250694	50.0		01/23/20
20A0917-02 [E180-MW]	B250694	50.0	50.0	01/23/20
20A0917-02 [E180-MW]	B250694	50.0		01/23/20

Prep Method: EPA 200.8-EPA 200.8

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0917-01 [CDW-2/MW]	B250693	50.0	50.0	01/23/20
20A0917-02 [E180-MW]	B250693	50.0	50.0	01/23/20

Prep Method: EPA 245.1-EPA 245.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0917-01 [CDW-2/MW]	B250779	6.00	6.00	01/24/20

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Sample Extraction Data

Prep Method: EPA 245.1-EPA 245.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0917-02 [E180-MW]	B250779	6.00	6.00	01/24/20

Prep Method: EPA 300.0-EPA 300.0

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0917-01 [CDW-2/MW]	B250758	10.0	10.0	01/24/20
20A0917-02 [E180-MW]	B250758	10.0	10.0	01/24/20

EPA 420.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0917-01 [CDW-2/MW]	B250875	50.0	50.0	01/27/20
20A0917-02 [E180-MW]	B250875	50.0	50.0	01/27/20

Prep Method: EPA 504 water-EPA 504.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0917-01 [CDW-2/MW]	B250685	36.4	35.0	01/23/20
20A0917-02 [E180-MW]	B250685	35.6	35.0	01/23/20

SM21-22 2540D

Lab Number [Field ID]	Batch	Initial [mL]	Date
20A0917-01 [CDW-2/MW]	B250534	500	01/22/20
20A0917-02 [E180-MW]	B250534	75.0	01/22/20

SM21-22 3500 Cr B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0917-01 [CDW-2/MW]	B250525	50.0	50.0	01/21/20
20A0917-02 [E180-MW]	B250525	50.0	50.0	01/21/20

SM21-22 4500 CL G

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20A0917-01 [CDW-2/MW]	B250526	100	100	01/21/20
20A0917-02 [E180-MW]	B250526	100	100	01/21/20

Prep Method: EPA 200.8-Tri Chrome Calc.

Lab Number [Field ID]	Batch	Initial [mL]	Date
20A0917-01 [CDW-2/MW]	B250693	50.0	01/23/20
20A0917-02 [E180-MW]	B250693	50.0	01/23/20

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes	
Batch B250552 - SW-846 5030B												
Blank (B250552-BLK1)				Prepared & Analyzed: 01/22/20								
Acetone	ND	50.0	µg/L									
tert-Amyl Methyl Ether (TAME)	ND	0.500	µg/L									
Benzene	ND	1.00	µg/L									
tert-Butyl Alcohol (TBA)	ND	20.0	µg/L									
Carbon Tetrachloride	ND	2.00	µg/L									
1,2-Dichlorobenzene	ND	2.00	µg/L									
1,3-Dichlorobenzene	ND	2.00	µg/L									
1,4-Dichlorobenzene	ND	2.00	µg/L									
1,2-Dichloroethane	ND	2.00	µg/L									
cis-1,2-Dichloroethylene	ND	1.00	µg/L									
1,1-Dichloroethane	ND	2.00	µg/L									
1,1-Dichloroethylene	ND	2.00	µg/L									
1,4-Dioxane	ND	50.0	µg/L									
Ethanol	ND	50.0	µg/L									
Ethylbenzene	ND	2.00	µg/L									
Methyl tert-Butyl Ether (MTBE)	ND	2.00	µg/L									
Methylene Chloride	ND	5.00	µg/L									
Tetrachloroethylene	ND	2.00	µg/L									
Toluene	ND	1.00	µg/L									
1,1,1-Trichloroethane	ND	2.00	µg/L									
1,1,2-Trichloroethane	ND	2.00	µg/L									
Trichloroethylene	ND	2.00	µg/L									
Vinyl Chloride	ND	2.00	µg/L									
m+p Xylene	ND	2.00	µg/L									
o-Xylene	ND	1.00	µg/L									
Surrogate: 1,2-Dichloroethane-d4	*25.1*		µg/L	25.0		100		70-130				
Surrogate: Toluene-d8	*24.6*		µg/L	25.0		98.6		70-130				
Surrogate: 4-Bromofluorobenzene	*23.3*		µg/L	25.0		93.4		70-130				
LCS (B250552-BS1)				Prepared & Analyzed: 01/22/20								
Acetone	250	50.0	µg/L	200		126		70-160				†
tert-Amyl Methyl Ether (TAME)	16	0.500	µg/L	20.0		80.0		70-130				
Benzene	18	1.00	µg/L	20.0		87.7		65-135				
tert-Butyl Alcohol (TBA)	160	20.0	µg/L	200		82.4		40-160				†
Carbon Tetrachloride	21	2.00	µg/L	20.0		103		70-130				
1,2-Dichlorobenzene	19	2.00	µg/L	20.0		97.0		65-135				
1,3-Dichlorobenzene	20	2.00	µg/L	20.0		101		70-130				
1,4-Dichlorobenzene	19	2.00	µg/L	20.0		97.2		65-135				
1,2-Dichloroethane	20	2.00	µg/L	20.0		101		70-130				
cis-1,2-Dichloroethylene	20	1.00	µg/L	20.0		100		70-130				
1,1-Dichloroethane	20	2.00	µg/L	20.0		99.5		70-130				
1,1-Dichloroethylene	22	2.00	µg/L	20.0		108		50-150				
1,4-Dioxane	210	50.0	µg/L	200		103		40-130				†
Ethanol	370	50.0	µg/L	200		**183**	*	40-160			L-01	
Ethylbenzene	20	2.00	µg/L	20.0		101		60-140				
Methyl tert-Butyl Ether (MTBE)	20	2.00	µg/L	20.0		102		70-130				
Methylene Chloride	21	5.00	µg/L	20.0		104		60-140				
Tetrachloroethylene	20	2.00	µg/L	20.0		98.7		70-130				
Toluene	19	1.00	µg/L	20.0		97.2		70-130				
1,1,1-Trichloroethane	20	2.00	µg/L	20.0		99.8		70-130				
1,1,2-Trichloroethane	19	2.00	µg/L	20.0		96.6		70-130				
Trichloroethylene	19	2.00	µg/L	20.0		95.8		65-135				

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B250552 - SW-846 5030B											
LCS (B250552-BS1)				Prepared & Analyzed: 01/22/20							
Vinyl Chloride	61	2.00	µg/L	20.0		**304**	*	5-195			L-01
m+p Xylene	40	2.00	µg/L	40.0		101		70-130			
o-Xylene	20	1.00	µg/L	20.0		101		70-130			
Surrogate: 1,2-Dichloroethane-d4	*26.1*		µg/L	25.0		104		70-130			
Surrogate: Toluene-d8	*24.8*		µg/L	25.0		99.4		70-130			
Surrogate: 4-Bromofluorobenzene	*24.4*		µg/L	25.0		97.6		70-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250982 - SW-846 3510C										
Blank (B250982-BLK1)				Prepared: 01/27/20 Analyzed: 01/28/20						
Benzo(a)anthracene (SIM)	ND	0.050	µg/L							
Benzo(a)pyrene (SIM)	ND	0.10	µg/L							
Benzo(b)fluoranthene (SIM)	ND	0.050	µg/L							
Benzo(k)fluoranthene (SIM)	ND	0.20	µg/L							
Chrysene (SIM)	ND	0.20	µg/L							
Dibenz(a,h)anthracene (SIM)	ND	0.10	µg/L							
Indeno(1,2,3-cd)pyrene (SIM)	ND	0.10	µg/L							
Pentachlorophenol (SIM)	ND	1.0	µg/L							
Surrogate: 2-Fluorophenol (SIM)	*92.8*		µg/L	200		46.4	15-110			
Surrogate: Phenol-d6 (SIM)	*71.9*		µg/L	200		36.0	15-110			
Surrogate: Nitrobenzene-d5	*72.0*		µg/L	100		72.0	30-130			
Surrogate: 2-Fluorobiphenyl	*66.0*		µg/L	100		66.0	30-130			
Surrogate: 2,4,6-Tribromophenol (SIM)	*162*		µg/L	200		81.2	15-110			
Surrogate: p-Terphenyl-d14	*66.5*		µg/L	100		66.5	30-130			
LCS (B250982-BS1)				Prepared: 01/27/20 Analyzed: 01/28/20						
Benzo(a)anthracene (SIM)	42.4	1.0	µg/L	50.0		84.8	33-143			
Benzo(a)pyrene (SIM)	43.1	2.0	µg/L	50.0		86.1	17-163			
Benzo(b)fluoranthene (SIM)	47.0	1.0	µg/L	50.0		94.1	24-159			
Benzo(k)fluoranthene (SIM)	46.0	4.0	µg/L	50.0		92.0	11-162			
Chrysene (SIM)	42.6	4.0	µg/L	50.0		85.2	17-168			
Dibenz(a,h)anthracene (SIM)	44.2	2.0	µg/L	50.0		88.4	10-227			
Indeno(1,2,3-cd)pyrene (SIM)	42.3	2.0	µg/L	50.0		84.6	10-171			
Pentachlorophenol (SIM)	37.1	20	µg/L	50.0		74.1	14-176			
Surrogate: 2-Fluorophenol (SIM)	*103*		µg/L	200		51.6	15-110			
Surrogate: Phenol-d6 (SIM)	*79.6*		µg/L	200		39.8	15-110			
Surrogate: Nitrobenzene-d5	*77.2*		µg/L	100		77.2	30-130			
Surrogate: 2-Fluorobiphenyl	*80.3*		µg/L	100		80.3	30-130			
Surrogate: 2,4,6-Tribromophenol (SIM)	*193*		µg/L	200		96.4	15-110			
Surrogate: p-Terphenyl-d14	*67.6*		µg/L	100		67.6	30-130			
LCS Dup (B250982-BSD1)				Prepared: 01/27/20 Analyzed: 01/28/20						
Benzo(a)anthracene (SIM)	37.6	1.0	µg/L	50.0		75.2	33-143	11.9	53	
Benzo(a)pyrene (SIM)	38.2	2.0	µg/L	50.0		76.4	17-163	12.0	72	
Benzo(b)fluoranthene (SIM)	41.7	1.0	µg/L	50.0		83.3	24-159	12.1	71	
Benzo(k)fluoranthene (SIM)	41.0	4.0	µg/L	50.0		82.0	11-162	11.5	63	
Chrysene (SIM)	38.1	4.0	µg/L	50.0		76.2	17-168	11.3	87	
Dibenz(a,h)anthracene (SIM)	39.1	2.0	µg/L	50.0		78.3	10-227	12.1	126	
Indeno(1,2,3-cd)pyrene (SIM)	37.2	2.0	µg/L	50.0		74.4	10-171	12.8	99	‡
Pentachlorophenol (SIM)	31.7	20	µg/L	50.0		63.4	14-176	15.7	86	
Surrogate: 2-Fluorophenol (SIM)	*96.2*		µg/L	200		48.1	15-110			
Surrogate: Phenol-d6 (SIM)	*72.7*		µg/L	200		36.3	15-110			
Surrogate: Nitrobenzene-d5	*65.9*		µg/L	100		65.9	30-130			
Surrogate: 2-Fluorobiphenyl	*69.6*		µg/L	100		69.6	30-130			
Surrogate: 2,4,6-Tribromophenol (SIM)	*170*		µg/L	200		85.0	15-110			
Surrogate: p-Terphenyl-d14	*60.3*		µg/L	100		60.3	30-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250896 - SW-846 3510C										
Blank (B250896-BLK1)				Prepared: 01/27/20 Analyzed: 01/28/20						
Acenaphthene	ND	5.00	µg/L							
Acenaphthylene	ND	5.00	µg/L							
Anthracene	ND	5.00	µg/L							
Benzo(g,h,i)perylene	ND	5.00	µg/L							
Butylbenzylphthalate	ND	10.0	µg/L							
Di-n-butylphthalate	ND	10.0	µg/L							
Diethylphthalate	ND	10.0	µg/L							
Dimethylphthalate	ND	10.0	µg/L							
Di-n-octylphthalate	ND	10.0	µg/L							
Bis(2-Ethylhexyl)phthalate	ND	10.0	µg/L							
Fluoranthene	ND	5.00	µg/L							
Fluorene	ND	5.00	µg/L							
Naphthalene	ND	5.00	µg/L							
Phenanthrene	ND	5.00	µg/L							
Pyrene	ND	5.00	µg/L							
Surrogate: 2-Fluorophenol	*106*		µg/L	200		53.0	15-110			
Surrogate: Phenol-d6	*77.0*		µg/L	200		38.5	15-110			
Surrogate: Nitrobenzene-d5	*76.4*		µg/L	100		76.4	30-130			
Surrogate: 2-Fluorobiphenyl	*96.6*		µg/L	100		96.6	30-130			
Surrogate: 2,4,6-Tribromophenol	*166*		µg/L	200		83.1	15-110			
Surrogate: p-Terphenyl-d14	*82.0*		µg/L	100		82.0	30-130			
LCS (B250896-BS1)				Prepared: 01/27/20 Analyzed: 01/28/20						
Acenaphthene	42.0	5.00	µg/L	50.0		84.0	47-145			
Acenaphthylene	41.4	5.00	µg/L	50.0		82.8	33-145			
Anthracene	43.5	5.00	µg/L	50.0		87.0	27-133			
Benzo(g,h,i)perylene	42.5	5.00	µg/L	50.0		85.0	10-219			
Butylbenzylphthalate	38.8	10.0	µg/L	50.0		77.6	10-152			
Di-n-butylphthalate	41.1	10.0	µg/L	50.0		82.2	10-120			
Diethylphthalate	43.4	10.0	µg/L	50.0		86.8	10-120			
Dimethylphthalate	43.2	10.0	µg/L	50.0		86.3	10-120			
Di-n-octylphthalate	40.5	10.0	µg/L	50.0		81.1	4-146			
Bis(2-Ethylhexyl)phthalate	41.1	10.0	µg/L	50.0		82.3	8-158			
Fluoranthene	44.4	5.00	µg/L	50.0		88.8	26-137			
Fluorene	45.2	5.00	µg/L	50.0		90.3	59-121			
Naphthalene	36.7	5.00	µg/L	50.0		73.5	21-133			
Phenanthrene	43.5	5.00	µg/L	50.0		86.9	54-120			
Pyrene	37.8	5.00	µg/L	50.0		75.6	52-120			
Surrogate: 2-Fluorophenol	*111*		µg/L	200		55.3	15-110			
Surrogate: Phenol-d6	*86.4*		µg/L	200		43.2	15-110			
Surrogate: Nitrobenzene-d5	*81.0*		µg/L	100		81.0	30-130			
Surrogate: 2-Fluorobiphenyl	*103*		µg/L	100		103	30-130			
Surrogate: 2,4,6-Tribromophenol	*212*		µg/L	200		106	15-110			
Surrogate: p-Terphenyl-d14	*81.1*		µg/L	100		81.1	30-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250896 - SW-846 3510C										
LCS Dup (B250896-BSD1)				Prepared: 01/27/20 Analyzed: 01/28/20						
Acenaphthene	37.3	5.00	µg/L	50.0		74.7	47-145	11.8	48	
Acenaphthylene	36.5	5.00	µg/L	50.0		73.0	33-145	12.6	74	
Anthracene	40.4	5.00	µg/L	50.0		80.7	27-133	7.42	66	
Benzo(g,h,i)perylene	38.5	5.00	µg/L	50.0		76.9	10-219	10.0	97	
Butylbenzylphthalate	37.0	10.0	µg/L	50.0		73.9	10-152	4.83	60	
Di-n-butylphthalate	39.4	10.0	µg/L	50.0		78.7	10-120	4.30	47	
Diethylphthalate	40.0	10.0	µg/L	50.0		80.0	10-120	8.18	100	
Dimethylphthalate	39.2	10.0	µg/L	50.0		78.3	10-120	9.72	183	
Di-n-octylphthalate	37.6	10.0	µg/L	50.0		75.3	4-146	7.39	69	
Bis(2-Ethylhexyl)phthalate	38.4	10.0	µg/L	50.0		76.8	8-158	6.81	82	
Fluoranthene	41.8	5.00	µg/L	50.0		83.6	26-137	6.13	66	
Fluorene	40.7	5.00	µg/L	50.0		81.3	59-121	10.5	38	
Naphthalene	33.5	5.00	µg/L	50.0		67.0	21-133	9.23	65	
Phenanthrene	40.2	5.00	µg/L	50.0		80.3	54-120	7.89	39	
Pyrene	35.3	5.00	µg/L	50.0		70.6	52-120	6.87	49	
Surrogate: 2-Fluorophenol	*109*		µg/L	200		54.7	15-110			
Surrogate: Phenol-d6	*80.6*		µg/L	200		40.3	15-110			
Surrogate: Nitrobenzene-d5	*74.8*		µg/L	100		74.8	30-130			
Surrogate: 2-Fluorobiphenyl	*93.0*		µg/L	100		93.0	30-130			
Surrogate: 2,4,6-Tribromophenol	*191*		µg/L	200		95.4	15-110			
Surrogate: p-Terphenyl-d14	*75.1*		µg/L	100		75.1	30-130			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250894 - SW-846 3510C										
Blank (B250894-BLK1)				Prepared: 01/27/20 Analyzed: 01/28/20						
Aroclor-1016	ND	0.200	µg/L							
Aroclor-1016 [2C]	ND	0.200	µg/L							
Aroclor-1221	ND	0.200	µg/L							
Aroclor-1221 [2C]	ND	0.200	µg/L							
Aroclor-1232	ND	0.200	µg/L							
Aroclor-1232 [2C]	ND	0.200	µg/L							
Aroclor-1242	ND	0.200	µg/L							
Aroclor-1242 [2C]	ND	0.200	µg/L							
Aroclor-1248	ND	0.200	µg/L							
Aroclor-1248 [2C]	ND	0.200	µg/L							
Aroclor-1254	ND	0.200	µg/L							
Aroclor-1254 [2C]	ND	0.200	µg/L							
Aroclor-1260	ND	0.200	µg/L							
Aroclor-1260 [2C]	ND	0.200	µg/L							
Surrogate: Decachlorobiphenyl	*1.24*		µg/L	2.00		62.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.41*		µg/L	2.00		70.4	30-150			
Surrogate: Tetrachloro-m-xylene	*1.24*		µg/L	2.00		61.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.47*		µg/L	2.00		73.3	30-150			
LCS (B250894-BS1)				Prepared: 01/27/20 Analyzed: 01/28/20						
Aroclor-1016	0.357	0.200	µg/L	0.500		71.5	50-140			
Aroclor-1016 [2C]	0.362	0.200	µg/L	0.500		72.4	50-140			
Aroclor-1260	0.350	0.200	µg/L	0.500		70.0	8-140			
Aroclor-1260 [2C]	0.370	0.200	µg/L	0.500		73.9	8-140			
Surrogate: Decachlorobiphenyl	*1.29*		µg/L	2.00		64.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.46*		µg/L	2.00		72.9	30-150			
Surrogate: Tetrachloro-m-xylene	*1.17*		µg/L	2.00		58.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.38*		µg/L	2.00		69.2	30-150			
LCS Dup (B250894-BSD1)				Prepared: 01/27/20 Analyzed: 01/28/20						
Aroclor-1016	0.350	0.200	µg/L	0.500		70.0	50-140	2.15		
Aroclor-1016 [2C]	0.362	0.200	µg/L	0.500		72.5	50-140	0.196		
Aroclor-1260	0.364	0.200	µg/L	0.500		72.9	8-140	4.04		
Aroclor-1260 [2C]	0.375	0.200	µg/L	0.500		75.1	8-140	1.60		
Surrogate: Decachlorobiphenyl	*1.44*		µg/L	2.00		72.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.64*		µg/L	2.00		82.2	30-150			
Surrogate: Tetrachloro-m-xylene	*1.22*		µg/L	2.00		60.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.43*		µg/L	2.00		71.5	30-150			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250693 - EPA 200.8										
Blank (B250693-BLK1)				Prepared: 01/23/20 Analyzed: 01/24/20						
Antimony	ND	1.0	µg/L							
Arsenic	ND	0.80	µg/L							
Cadmium	ND	0.20	µg/L							
Chromium	ND	1.0	µg/L							
Copper	ND	1.0	µg/L							
Lead	0.10	0.50	µg/L							J
Nickel	ND	5.0	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.20	µg/L							
Zinc	ND	10	µg/L							
LCS (B250693-BS1)				Prepared: 01/23/20 Analyzed: 01/24/20						
Antimony	546	10	µg/L	500		109	85-115			
Arsenic	551	8.0	µg/L	500		110	85-115			
Cadmium	555	2.0	µg/L	500		111	85-115			
Chromium	537	10	µg/L	500		107	85-115			
Copper	1070	10	µg/L	1000		107	85-115			
Lead	545	5.0	µg/L	500		109	85-115			
Nickel	557	50	µg/L	500		111	85-115			
Selenium	545	50	µg/L	500		109	85-115			
Silver	464	2.0	µg/L	500		92.8	85-115			
Zinc	1070	100	µg/L	1000		107	85-115			
LCS Dup (B250693-BSD1)				Prepared: 01/23/20 Analyzed: 01/24/20						
Antimony	506	10	µg/L	500		101	85-115	7.54	20	
Arsenic	499	8.0	µg/L	500		99.8	85-115	9.88	20	
Cadmium	515	2.0	µg/L	500		103	85-115	7.54	20	
Chromium	498	10	µg/L	500		99.6	85-115	7.53	20	
Copper	984	10	µg/L	1000		98.4	85-115	8.59	20	
Lead	505	5.0	µg/L	500		101	85-115	7.78	20	
Nickel	514	50	µg/L	500		103	85-115	8.14	20	
Selenium	502	50	µg/L	500		100	85-115	8.25	20	
Silver	477	2.0	µg/L	500		95.5	85-115	2.86	20	
Zinc	982	100	µg/L	1000		98.2	85-115	8.49	20	
Duplicate (B250693-DUP1)	**Source: 20A0917-01**			Prepared: 01/23/20 Analyzed: 01/24/20						
Antimony	ND	1.0	µg/L		ND			NC	20	
Arsenic	8.55	0.80	µg/L		8.84			3.43	20	
Cadmium	0.0612	0.20	µg/L		0.0546			11.5	20	J
Chromium	0.814	1.0	µg/L		0.891			9.12	20	J
Copper	2.45	1.0	µg/L		2.39			2.64	20	
Lead	1.24	0.50	µg/L		1.24			0.125	20	
Nickel	3.40	5.0	µg/L		3.57			4.84	20	J
Selenium	ND	5.0	µg/L		ND			NC	20	
Silver	ND	0.20	µg/L		ND			NC	20	
Zinc	6.24	10	µg/L		6.09			2.46	20	J

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250693 - EPA 200.8										
Matrix Spike (B250693-MS1)	**Source: 20A0917-01**			Prepared: 01/23/20	Analyzed: 01/24/20					
Antimony	507	10	µg/L	500	ND	101	70-130			
Arsenic	523	8.0	µg/L	500	8.84	103	70-130			
Cadmium	516	2.0	µg/L	500	ND	103	70-130			
Chromium	506	10	µg/L	500	ND	101	70-130			
Copper	982	10	µg/L	1000	ND	98.2	70-130			
Lead	511	5.0	µg/L	500	1.24	102	70-130			
Nickel	519	50	µg/L	500	ND	104	70-130			
Selenium	515	50	µg/L	500	ND	103	70-130			
Silver	465	2.0	µg/L	500	ND	93.1	70-130			
Zinc	993	100	µg/L	1000	ND	99.3	70-130			
Batch B250694 - EPA 200.7										
Blank (B250694-BLK1)				Prepared: 01/23/20	Analyzed: 01/24/20					
Iron	ND	0.050	mg/L							
LCS (B250694-BS1)				Prepared: 01/23/20	Analyzed: 01/24/20					
Iron	3.95	0.050	mg/L	4.00		98.6	85-115			
LCS Dup (B250694-BSD1)				Prepared: 01/23/20	Analyzed: 01/24/20					
Iron	3.98	0.050	mg/L	4.00		99.4	85-115	0.772	20	
Duplicate (B250694-DUP1)	**Source: 20A0917-01**			Prepared: 01/23/20	Analyzed: 01/24/20					
Iron	15.7	0.050	mg/L		15.7			0.0465	20	
Matrix Spike (B250694-MS1)	**Source: 20A0917-01**			Prepared: 01/23/20	Analyzed: 01/24/20					
Iron	19.7	0.050	mg/L	4.00	15.7	102	70-130			
Batch B250779 - EPA 245.1										
Blank (B250779-BLK1)				Prepared: 01/24/20	Analyzed: 01/28/20					
Mercury	ND	0.00010	mg/L							
LCS (B250779-BS1)				Prepared: 01/24/20	Analyzed: 01/28/20					
Mercury	0.00396	0.00010	mg/L	0.00400		99.1	85-115			
LCS Dup (B250779-BSD1)				Prepared: 01/24/20	Analyzed: 01/28/20					
Mercury	0.00399	0.00010	mg/L	0.00400		99.7	85-115	0.542	20	
Duplicate (B250779-DUP1)	**Source: 20A0917-01**			Prepared: 01/24/20	Analyzed: 01/28/20					
Mercury	ND	0.00010	mg/L		ND			NC	30	

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250779 - EPA 245.1										
Matrix Spike (B250779-MS1)		**Source: 20A0917-01**		Prepared: 01/24/20 Analyzed: 01/28/20						
Mercury	0.00385	0.00010	mg/L	0.00400	ND	96.3	75-125			

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B250525 - SM21-22 3500 Cr B											
Blank (B250525-BLK1)				Prepared & Analyzed: 01/21/20							
Hexavalent Chromium	ND	0.0040	mg/L								
LCS (B250525-BS1)				Prepared & Analyzed: 01/21/20							
Hexavalent Chromium	0.099	0.0040	mg/L	0.100		99.2		83.9-121			
LCS Dup (B250525-BSD1)				Prepared & Analyzed: 01/21/20							
Hexavalent Chromium	0.10	0.0040	mg/L	0.100		102		83.9-121	2.64	10	
Matrix Spike (B250525-MS2)	**Source: 20A0917-02**			Prepared & Analyzed: 01/21/20							
Hexavalent Chromium	ND	0.0040	mg/L	0.100	ND		*	25.5-193			MS-07
Matrix Spike Dup (B250525-MSD2)	**Source: 20A0917-02**			Prepared & Analyzed: 01/21/20							
Hexavalent Chromium	0.0062	0.0040	mg/L	0.100	ND	**6.24**	*	25.5-193		20	MS-07
Batch B250526 - SM21-22 4500 CL G											
Blank (B250526-BLK1)				Prepared & Analyzed: 01/21/20							
Chlorine, Residual	ND	0.020	mg/L								Z-01
LCS (B250526-BS1)				Prepared & Analyzed: 01/21/20							
Chlorine, Residual	1.4	0.020	mg/L	1.28		107		66.3-134			Z-01
LCS Dup (B250526-BSD1)				Prepared & Analyzed: 01/21/20							
Chlorine, Residual	1.4	0.020	mg/L	1.28		108		66.3-134	1.22	9.96	Z-01
Duplicate (B250526-DUP1)	**Source: 20A0917-01**			Prepared & Analyzed: 01/21/20							
Chlorine, Residual	0.37	0.20	mg/L		0.33				12.1	32.5	Z-01
Duplicate (B250526-DUP2)	**Source: 20A0917-02**			Prepared & Analyzed: 01/21/20							
Chlorine, Residual	0.58	0.20	mg/L		0.45				24.4	32.5	Z-01
Matrix Spike (B250526-MS1)	**Source: 20A0917-01**			Prepared & Analyzed: 01/21/20							
Chlorine, Residual	6.8	0.20	mg/L	1.00	0.33	**651**	*	10-167			MS-11, Z-01
Batch B250534 - SM21-22 2540D											
Blank (B250534-BLK1)				Prepared & Analyzed: 01/22/20							
Total Suspended Solids	ND	2.5	mg/L								
LCS (B250534-BS1)				Prepared & Analyzed: 01/22/20							
Total Suspended Solids	206	10	mg/L	200		103		57.6-118			

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B250758 - EPA 300.0											
Blank (B250758-BLK1)				Prepared & Analyzed: 01/24/20							
Chloride	ND	1.0	mg/L								
LCS (B250758-BS1)				Prepared & Analyzed: 01/24/20							
Chloride	4.7	1.0	mg/L	5.00		93.3		90-110			
LCS Dup (B250758-BSD1)				Prepared & Analyzed: 01/24/20							
Chloride	4.7	1.0	mg/L	5.00		93.5		90-110	0.212	20	
Batch B250873 - EPA 1664B											
Blank (B250873-BLK1)				Prepared & Analyzed: 01/27/20							
Silica Gel Treated HEM (SGT-HEM)	ND	1.4	mg/L								
LCS (B250873-BS1)				Prepared & Analyzed: 01/27/20							
Silica Gel Treated HEM (SGT-HEM)	9.6		mg/L	10.0		96.0		64-132			
Duplicate (B250873-DUP1)	**Source: 20A0917-02**			Prepared & Analyzed: 01/27/20							
Silica Gel Treated HEM (SGT-HEM)	ND	2.8	mg/L		ND				NC	18	
MRL Check (B250873-MRL1)				Prepared & Analyzed: 01/27/20							
Silica Gel Treated HEM (SGT-HEM)	1.10	1.4	mg/L	1.40		78.6		0-200			J
MRL Check (B250873-MRL2)				Prepared & Analyzed: 01/27/20							
Silica Gel Treated HEM (SGT-HEM)	1.20	1.4	mg/L	1.40		85.7		0-200			J
Matrix Spike (B250873-MS1)	**Source: 20A0917-01**			Prepared & Analyzed: 01/27/20							
Silica Gel Treated HEM (SGT-HEM)	53	14	mg/L	100	ND	**53.0**	*	64-132			MS-07
Batch B250875 - EPA 420.1											
Blank (B250875-BLK1)				Prepared: 01/27/20 Analyzed: 01/28/20							
Phenol	ND	0.050	mg/L								
LCS (B250875-BS1)				Prepared: 01/27/20 Analyzed: 01/28/20							
Phenol	0.62	0.050	mg/L	0.500		124		72.4-125			
LCS Dup (B250875-BSD1)				Prepared: 01/27/20 Analyzed: 01/28/20							
Phenol	0.61	0.050	mg/L	0.500		123		72.4-125	1.34	11.1	
MRL Check (B250875-MRL1)				Prepared: 01/27/20 Analyzed: 01/28/20							
Phenol	ND	0.050	mg/L	0.0500				0-200			

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250875 - EPA 420.1										
MRL Check (B250875-MRL2)				Prepared: 01/27/20 Analyzed: 01/28/20						
Phenol	ND	0.050	mg/L	0.0500			0-200			
Matrix Spike (B250875-MS1)	**Source: 20A0917-02**			Prepared: 01/27/20 Analyzed: 01/28/20						
Phenol	0.48	0.050	mg/L	0.500	0.066	82.9	10-156			

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

QUALITY CONTROL

Drinking Water Organics EPA 504.1 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B250685 - EPA 504 water										
Blank (B250685-BLK1)				Prepared & Analyzed: 01/23/20						
1,2-Dibromoethane (EDB)	ND	0.021	µg/L							
1,2-Dibromoethane (EDB) [2C]	ND	0.021	µg/L							
Surrogate: 1,3-Dibromopropane	*1.05*		µg/L	1.05		101	70-130			
Surrogate: 1,3-Dibromopropane [2C]	*1.06*		µg/L	1.05		101	70-130			
LCS (B250685-BS1)				Prepared & Analyzed: 01/23/20						
1,2-Dibromoethane (EDB)	0.171	0.021	µg/L	0.182		93.7	70-130			
1,2-Dibromoethane (EDB) [2C]	0.177	0.021	µg/L	0.182		97.1	70-130			
Surrogate: 1,3-Dibromopropane	*1.00*		µg/L	1.04		96.2	70-130			
Surrogate: 1,3-Dibromopropane [2C]	*1.01*		µg/L	1.04		97.3	70-130			
LCS Dup (B250685-BSD1)				Prepared & Analyzed: 01/23/20						
1,2-Dibromoethane (EDB)	0.170	0.021	µg/L	0.181		93.7	70-130	0.415		
1,2-Dibromoethane (EDB) [2C]	0.187	0.021	µg/L	0.181		103	70-130	5.85		
Surrogate: 1,3-Dibromopropane	*0.988*		µg/L	1.04		95.4	70-130			
Surrogate: 1,3-Dibromopropane [2C]	*1.04*		µg/L	1.04		100	70-130			
MRL Check (B250685-MRL1)				Prepared & Analyzed: 01/23/20						
1,2-Dibromoethane (EDB)	0.0218	0.021	µg/L	0.0208		105	0-200			
1,2-Dibromoethane (EDB) [2C]	0.0187	0.021	µg/L	0.0208		90.0	0-200			J
Surrogate: 1,3-Dibromopropane	*1.08*		µg/L	1.04		104	70-130			
Surrogate: 1,3-Dibromopropane [2C]	*1.12*		µg/L	1.04		108	70-130			
MRL Check (B250685-MRL2)				Prepared & Analyzed: 01/23/20						
1,2-Dibromoethane (EDB)	0.0271	0.021	µg/L	0.0208		130	0-200			
1,2-Dibromoethane (EDB) [2C]	0.0260	0.021	µg/L	0.0208		125	0-200			
Surrogate: 1,3-Dibromopropane	*1.06*		µg/L	1.04		102	70-130			
Surrogate: 1,3-Dibromopropane [2C]	*1.09*		µg/L	1.04		104	70-130			

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

608.3

CDW-2/MW

Lab Sample ID: 20A0917-01 Date(s) Analyzed: 01/28/2020 01/28/2020

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	0.000	0.000	0.313	
	2	0.000	0.000	0.000	0.380	20.3
Aroclor-1254	1	0.000	0.000	0.000	0.387	
	2	0.000	0.000	0.000	0.363	7.2

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

608.3

E180-MW

Lab Sample ID: 20A0917-02 Date(s) Analyzed: 01/28/2020 01/28/2020

Instrument ID (1): Instrument ID (2):

GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1248	1	0.000	0.000	0.000	0.352	
	2	0.000	0.000	0.000	0.451	25.2
Aroclor-1254	1	0.000	0.000	0.000	0.252	
	2	0.000	0.000	0.000	0.269	7.3

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-01	Laboratory fortified blank /laboratory control sample recovery outside of control limits. Data validation is not affected since all results are "not detected" for all samples in this batch for this compound and bias is on the high side.
MS-07	Matrix spike recovery is outside of control limits. Analysis is in control based on laboratory fortified blank recovery.Possibility of sample matrix effects that lead to low bias for reported result or non-homogeneous sample aliquot cannot be eliminated.
MS-11	Matrix spike recovery outside of control limits. Possibility of sample matrix effects that lead to a high bias for reported result or non-homogeneous sample aliquots cannot be eliminated.
RL-11	Elevated reporting limit due to high concentration of target compounds.
Z-01	SM 4500 CL G test had a calibration point outside of acceptable back calculated recovery. Reanalysis yielded similar non-conformance.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
608.3 in Water	
Aroclor-1016	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1016 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1221	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1221 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1232	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1232 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1242	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1242 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1248	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1248 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1254	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1254 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1260	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1260 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
624.1 in Water	
Acetone	CT,NY,MA,NH
tert-Amyl Methyl Ether (TAME)	MA
Benzene	CT,NY,MA,NH,RI,NC,ME,VA
tert-Butyl Alcohol (TBA)	NY,MA
Carbon Tetrachloride	CT,NY,MA,NH,RI,NC,ME,VA
1,2-Dichlorobenzene	CT,NY,MA,NH,RI,NC,ME,VA
1,3-Dichlorobenzene	CT,NY,MA,NH,RI,NC,ME,VA
1,4-Dichlorobenzene	CT,NY,MA,NH,RI,NC,ME,VA
1,2-Dichloroethane	CT,NY,MA,NH,RI,NC,ME,VA
cis-1,2-Dichloroethylene	NY,MA
1,1-Dichloroethane	CT,NY,MA,NH,RI,NC,ME,VA
1,1-Dichloroethylene	CT,NY,MA,NH,RI,NC,ME,VA
1,4-Dioxane	MA
Ethanol	NY,MA,NH
Ethylbenzene	CT,NY,MA,NH,RI,NC,ME,VA
Methyl tert-Butyl Ether (MTBE)	NY,MA,NH,NC
Methylene Chloride	CT,NY,MA,NH,RI,NC,ME,VA
Naphthalene	NY,MA,NC
Tetrachloroethylene	CT,NY,MA,NH,RI,NC,ME,VA
Toluene	CT,NY,MA,NH,RI,NC,ME,VA
1,1,1-Trichloroethane	CT,NY,MA,NH,RI,NC,ME,VA
1,1,2-Trichloroethane	CT,NY,MA,NH,RI,NC,ME,VA
Trichloroethylene	CT,NY,MA,NH,RI,NC,ME,VA
Vinyl Chloride	CT,NY,MA,NH,RI,NC,ME,VA
m+p Xylene	CT,NY,MA,NH,RI,NC
o-Xylene	CT,NY,MA,NH,RI,NC
625.1 in Water	
Acenaphthene	CT,MA,NH,NY,NC,RI,ME,VA
Acenaphthylene	CT,MA,NH,NY,NC,RI,ME,VA
Anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(g,h,i)perylene	CT,MA,NH,NY,NC,RI,ME,VA

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
625.1 in Water	
Butylbenzylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
Di-n-butylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
1,3-Dichlorobenzene	MA,NC
1,4-Dichlorobenzene	MA,NC
1,2-Dichlorobenzene	MA,NC
Diethylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
Dimethylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
Di-n-octylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
Bis(2-Ethylhexyl)phthalate	CT,MA,NH,NY,NC,RI,ME,VA
Fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
Fluorene	CT,MA,NH,NY,NC,RI,ME,VA
Naphthalene	CT,MA,NH,NY,NC,RI,ME,VA
Phenanthrene	CT,MA,NH,NY,NC,RI,ME,VA
Phenol	CT,MA,NH,NY,NC,RI,ME,VA
Pyrene	CT,MA,NH,NY,NC,RI,ME,VA
2-Fluorophenol	NC
2-Fluorophenol	NC,VA
Phenol-d6	VA
Nitrobenzene-d5	VA
EPA 200.7 in Water	
Iron	CT,MA,NH,NY,RI,NC,ME,VA
Hardness	CT,MA,NH,NY,RI,VA
EPA 200.8 in Water	
Antimony	CT,MA,NH,NY,RI,NC,ME,VA
Arsenic	CT,MA,NH,NY,RI,NC,ME,VA
Cadmium	CT,MA,NH,NY,RI,NC,ME,VA
Chromium	CT,MA,NH,NY,RI,NC,ME,VA
Copper	CT,MA,NH,NY,RI,NC,ME,VA
Lead	CT,MA,NH,NY,RI,NC,ME,VA
Nickel	CT,MA,NH,NY,RI,NC,ME,VA
Selenium	CT,MA,NH,NY,RI,NC,ME,VA
Silver	CT,MA,NH,NY,RI,NC,ME,VA
Zinc	CT,MA,NH,NY,RI,NC,ME,VA
EPA 245.1 in Water	
Mercury	CT,MA,NH,RI,NY,NC,ME,VA
EPA 300.0 in Water	
Chloride	NC,NY,MA,VA,ME,NH,CT,RI
EPA 420.1 in Water	
Phenol	CT,MA,NH,NY,RI,NC,ME,VA
SM19-22 4500 NH3 C in Water	
Ammonia as N	NY,MA,CT,RI,VA,NC,ME
SM21-22 2540D in Water	
Total Suspended Solids	CT,MA,NH,NY,RI,NC,ME,VA
SM21-22 3500 Cr B in Water	

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SM21-22 3500 Cr B in Water	
Hexavalent Chromium	NY,CT,NH,RI,ME,VA,NC
SM21-22 4500 CL G in Water	
Chlorine, Residual	CT,MA,RI,ME
SM21-22 4500 CN E in Water	
Cyanide	CT,MA,NH,NY,RI,NC,ME,VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2020
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2020
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

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con-test ANALYTICAL LABORATORY

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

http://www.contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Page 1 of 2

mmk 20AG917

Company Name: CONCONSULTANTS INC
Address: 6 HURON DRIVE NATICK MA
Phone: 508 875 2657
Project Name: SOMERBRIDGE RGP
Project Location: CAMBRIDGE/SOMERVILLE
Project Number: 1476
Project Manager: ALAN SUNDQUIST
Con-Test Quote Name/Number:
Invoice Recipient:
Sampled By: M OBRIEN / S. AMSEL

Requested Turnaround Time			
~~7-Day~~ 5 DAY	X	10-Day	
PFAS 10-Day (std)		Due Date:	

Rush-Approval Required			
1-Day		3-Day	
2-Day		4-Day	

Receive/Field Filtered Samples	
Field Filtered	
Lab to Filter	

Orthophosphate Samples	
Field Filtered	
Lab to Filter	

Data Delivery
Format: PDF X EXCEL X
Other:
CLP Like Data Pkg Required:
Email To: ASUNDQUIST@CONCONSULTANTS.COM
~~Fax~~ #: MOBRIEN@CONCONSULTANTS.COM

ANALYSIS REQUESTED

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	RGP METALS (TOTAL/DISSOLVED)	HARDNESS (CALCULATION)	ETHANOL ASTM D3695	CHLORIDE 300.0	TOTAL CYANIDE KELADL	TPH 1664	TSS 2540 D	TRC 4500-CL E	AMMONIA 350.1	TRC CA (CALC MUST RUN T.CR)	HEXCR 7196A
1	CON-2/MW	1/21/20	1000	G	GW	U	6	9	5			X	X	X	X	X	X	X	X	X	X	X
2	E180-MW		1100	"	"	"						X	X	X	X	X	X	X	X	X	X	X

² Preservation Code

Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N
*Contest is not responsible for missing samples from prepacked coolers

¹ Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

² Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)		Date/Time: 1/21/2020
Received by: (signature)		Date/Time: 1-21-20 16:17
Relinquished by: (signature)		Date/Time: 1-21-20 16:45
Received by: (signature)		Date/Time: 1/21/20 1649
Relinquished by: (signature)		Date/Time: 1/21/20 1820
Received by: (signature)		Date/Time: 1/21/20 1820
Relinquished by: (signature)		Date/Time:
Received by: (signature)		Date/Time:

Client Comments: LOWEST POSSIBLE DETECTION LIMITS
* PLEASE HONOR QUOTED PRICE FOR JOB
RGP Sample, NL

Detection Limit Requirements
PA
PWSID #

Special Requirements
- [X] MA MCP Required
- [ ] MCP Certification Form Required
- [ ] CT RCP Required
- [ ] RCP Certification Form Required
- [ ] MA State DW Required

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government [ ] Municipality [ ] MWRA [ ] WRTA [ ]
Federal [ ] 21 J [ ] School [ ]
City [ ] Brownfield [ ] MBTA [ ]

Other
[ ] Chromatogram
[ ] AIHA-LAP,LLC

PCB ONLY
[ ] Soxhlet
[ ] Non Soxhlet

Per client - run TB 1/22/20 mmk; per client call - just run RGP Metals TOTAL only 1/22/2020 mmk- per client - run hardness 1/23/2020 mmk

Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine wha analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Cor Test values your partnership on each project and will try to assist with missing information, but will not l held accountable.

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(2) = 2 COOLERS

con-test ANALYTICAL LABORATORY

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Fax: 413-525-6405
Email: info@contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

MMK 20Ac917

Company Name: CONCONSULTANTS INC
Address: 6 HURON DRIVE NATICK MA
Phone: 508 875 2605 7
Project Name: SOMERRIDGE - RPG
Project Location: CAMBRIDGE/SOMERVILLE
Project Number: 1476
Project Manager: ALAN SUNDQUIST
Con-Test Quote Name/Number:
Invoice Recipient:
Sampled By:

Requested Turnaround Time
~~5-Day~~ 5DAY X | 10-Day ☐
PFAS 10-Day (std) ☐ | Due Date:

Rush Approval Required
1-Day ☐ | 3-Day ☐
2-Day ☐ | 4-Day ☐

Data Delivery
Format: PDF X EXCEL X
Other:
CLP Like Data Pkg Required: ☐
Email To: ASUNDQUIST@CONCONSULTANTS.COM
~~Cc/Bill~~: MOBRIEN@CONCONSULTANTS.COM

Dissolved Metals Samples
○ Field Filtered
○ Lab to Filter

Other Requested Samples
○ Field Filtered
○ Lab to Filter

ANALYSIS REQUESTED

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	RGP VOC LongList 624	1,4 Dioxane 522	EDB 504.1	RGP SVOC Long 625SIM	PCB 608
1	CBW-2/MW	1/21/20	1000	GRAB	GW	U						X	X	X	X	X
2	E180-MW		1100	"	"	"						X	X	X	X	X

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N
*Contest is not responsible for missing samples from prepacked coolers

[1] Matrix Codes:
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] Preservation Codes:
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

Relinquished by: (signature)	Date/Time:
	1/21/2020
Received by: (signature)	Date/Time:
Paul Charbonneau	1-21-20 16[17]
Relinquished by: (signature)	Date/Time:
Paul Charbonneau	1-21-2016[45]
Received by: (signature)	Date/Time:
[illegible]	1/21/20 16[45]
Relinquished by: (signature)	Date/Time:
[illegible]	1/21/20 18[illegible]
Received by: (signature)	Date/Time:
[illegible] 26,34	1/21/20 1850
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments: LOWEST POSSIBLE DETECTION LIMITS
* PLEASE HONOR QUOTED PRICE FOR JOB

Detection Limits Requirements
RCP
Other

Special Requirements
☑ MA MCP Required
MCP Certification Form Required
☐ CT RCP Required
RCP Certification Form Required
☐ MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government ☐ Municipality ☐ MWRA ☐ WRTA ☐
Federal ☐ 21 J ☐ School ☐
City ☐ Brownfield ☐ MBTA ☐

Other
☐ Chromatogram
☐ AIHA-LAP,LLC

PCB ONLY
☐ Soxhlet
☐ Non Soxhlet

Comments:

Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine wha analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Co Test values your partnership on each project and will try to assist with missing information, but will not held accountable.

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I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples_____

con-test® ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client CDW consultants

Received By [illegible] Date 11/21/20 Time 1730

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____

Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 2 Actual Temp - 2.6, 3.4

By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? n/a Were Samples Tampered with? n/a

Was COC Relinquished ? T Does Chain Agree With Samples? ~~F~~ T F

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T

Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? F Who was notified? _____

Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? F MS/MSD? F

Proper Media/Containers Used? T Is splitting samples required? F

Were trip blanks received? T On COC? F

Do all samples have the proper pH? Acid pH<2 Base pH>11

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.	16	1 Liter Plastic	~~2~~ 4	16 oz Amb.	
HCL-	14	500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.	2	250 mL Plastic	6	4oz Amb/Clear	
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

Two trip blanks received, were not on chain.

CONTEST ANALYTICAL EFFLUENT DATA REPORT
APRIL 27, 2020

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

April 27, 2020

Alan Sundquist
CDW Consultants, Inc.
6 Huron Drive
Natick, MA 01760

Project Location: Sommerbridge
Client Job Number:
Project Number: 1476
Laboratory Work Order Number: 20D0783

Enclosed are results of analyses for samples received by the laboratory on April 20, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Michelle M. Koch
Project Manager

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con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

CDW Consultants, Inc.
6 Huron Drive
Natick, MA 01760
ATTN: Alan Sundquist

REPORT DATE: 4/27/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 1476

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20D0783

The results of analyses performed on the following samples submitted to the CON-TEST Analytical Laboratory are found in this report.

PROJECT LOCATION: Sommerbridge

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
HW #1	20D0783-01	Ground Water		608.3	
				624.1	
				625.1	
				EPA 1664B	
				EPA 200.7	
				EPA 200.8	
				EPA 245.1	
				EPA 300.0	
				EPA 420.1	
				EPA 504.1	
				SM19-22 4500 NH3 C	MA M-MA-086/CT PH-0574/NY11148
				SM21-22 2540D	
				SM21-22 3500 Cr B	
				SM21-22 4500 CL G	
				SM21-22 4500 CN E	MA M-MA-086/CT PH-0574/NY11148
				Tri Chrome Calc.	
Trip Blank	20D0783-02	Trip Blank Water		624.1	

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CASE NARRATIVE SUMMARY

All reported results are within defined laboratory quality control objectives unless listed below or otherwise qualified in this report.

EPA 200.8

Qualifications:

R-04

Duplicate relative percent difference (RPD) is a less useful indicator of sample precision for sample results that are <5 times the reporting limit (RL).

Analyte & Samples(s) Qualified:

Chromium
20D0783-01[HW #1], B256720-DUP1

SM21-22 4500 CL G

Qualifications:

B

Analyte is found in the associated laboratory blank as well as in the sample.

Analyte & Samples(s) Qualified:

Chlorine, Residual
20D0783-01[HW #1], B256615-BS1, B256615-BSD1, B256615-DUP1, B256615-MS1

Z-01

Test SM 4500 CL G had a calibrate point outside of acceptable back calculated recovery. Reanalysis yielded similar non-conformance.

Analyte & Samples(s) Qualified:

Chlorine, Residual
20D0783-01[HW #1], B256615-BLK1, B256615-BS1, B256615-BSD1, B256615-DUP1, B256615-MS1

The results of analyses reported only relate to samples submitted to the Con-Test Analytical Laboratory for testing.
I certify that the analyses listed above, unless specifically listed as subcontracted, if any, were performed under my direction according to the approved methodologies listed in this document, and that based upon my inquiry of those individuals immediately responsible for obtaining the information, the material contained in this report is, to the best of my knowledge and belief, accurate and complete.

Lisa A. Worthington
Technical Representative

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Sommerbridge | Sample Description: | Work Order: 20D0783

Date Received: 4/20/2020

Field Sample #: HW #1 | Sampled: 4/20/2020 09:00

Sample ID: 20D0783-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	<3.79	50.0	3.79	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
tert-Amyl Methyl Ether (TAME)	<0.140	0.500	0.140	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
Benzene	<0.180	1.00	0.180	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
tert-Butyl Alcohol (TBA)	<4.17	20.0	4.17	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
Carbon Tetrachloride	<0.110	2.00	0.110	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
1,2-Dichlorobenzene	<0.160	2.00	0.160	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
1,3-Dichlorobenzene	<0.120	2.00	0.120	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
1,4-Dichlorobenzene	<0.130	2.00	0.130	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
1,2-Dichloroethane	<0.410	2.00	0.410	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
cis-1,2-Dichloroethylene	<0.130	1.00	0.130	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
1,1-Dichloroethane	<0.160	2.00	0.160	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
1,1-Dichloroethylene	<0.320	2.00	0.320	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
1,4-Dioxane	<22.5	50.0	22.5	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
Ethanol	<10.5	50.0	10.5	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
Ethylbenzene	<0.130	2.00	0.130	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
Methyl tert-Butyl Ether (MTBE)	<0.250	2.00	0.250	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
Methylene Chloride	<0.340	5.00	0.340	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
Tetrachloroethylene	<0.180	2.00	0.180	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
Toluene	<0.140	1.00	0.140	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
1,1,1-Trichloroethane	<0.200	2.00	0.200	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
1,1,2-Trichloroethane	<0.160	2.00	0.160	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
Trichloroethylene	<0.240	2.00	0.240	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
Vinyl Chloride	<0.450	2.00	0.450	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
m+p Xylene	<0.300	2.00	0.300	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF
o-Xylene	<0.170	1.00	0.170	µg/L	1		624.1	4/21/20	4/21/20 11:17	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	107	70-130		4/21/20 11:17
Toluene-d8	93.6	70-130		4/21/20 11:17
4-Bromofluorobenzene	90.0	70-130		4/21/20 11:17

con-test® ANALYTICAL LABORATORY
39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Sommerbridge | Sample Description: | Work Order: 20D0783

Date Received: 4/20/2020

Field Sample #: HW #1 | Sampled: 4/20/2020 09:00

Sample ID: 20D0783-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene (SIM)	<0.016	0.050	0.016	µg/L	1		625.1	4/22/20	4/26/20 13:43	IMR
Benzo(a)pyrene (SIM)	<0.012	0.10	0.012	µg/L	1		625.1	4/22/20	4/26/20 13:43	IMR
Benzo(b)fluoranthene (SIM)	0.016	0.050	0.015	µg/L	1	J	625.1	4/22/20	4/26/20 13:43	IMR
Benzo(k)fluoranthene (SIM)	<0.012	0.20	0.012	µg/L	1		625.1	4/22/20	4/26/20 13:43	IMR
Chrysene (SIM)	<0.015	0.20	0.015	µg/L	1		625.1	4/22/20	4/26/20 13:43	IMR
Dibenz(a,h)anthracene (SIM)	<0.017	0.10	0.017	µg/L	1		625.1	4/22/20	4/26/20 13:43	IMR
Indeno(1,2,3-cd)pyrene (SIM)	<0.018	0.10	0.018	µg/L	1		625.1	4/22/20	4/26/20 13:43	IMR
Pentachlorophenol (SIM)	<0.33	1.0	0.33	µg/L	1		625.1	4/22/20	4/26/20 13:43	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol (SIM)	38.3	15-110		4/26/20 13:43
Phenol-d6 (SIM)	31.0	15-110		4/26/20 13:43
Nitrobenzene-d5	64.1	30-130		4/26/20 13:43
2-Fluorobiphenyl	56.3	30-130		4/26/20 13:43
2,4,6-Tribromophenol (SIM)	75.5	15-110		4/26/20 13:43
p-Terphenyl-d14	61.8	30-130		4/26/20 13:43

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Project Location: Sommerbridge | Sample Description: | Work Order: 20D0783

Date Received: 4/20/2020

Field Sample #: HW #1 | Sampled: 4/20/2020 09:00

Sample ID: 20D0783-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	<0.231	5.00	0.231	µg/L	1		625.1	4/22/20	4/24/20 23:18	KLB
Acenaphthylene	<0.231	5.00	0.231	µg/L	1		625.1	4/22/20	4/24/20 23:18	KLB
Anthracene	<0.202	5.00	0.202	µg/L	1		625.1	4/22/20	4/24/20 23:18	KLB
Benzo(g,h,i)perylene	<0.396	5.00	0.396	µg/L	1		625.1	4/22/20	4/24/20 23:18	KLB
Butylbenzylphthalate	<0.295	10.0	0.295	µg/L	1		625.1	4/22/20	4/24/20 23:18	KLB
Di-n-butylphthalate	<0.458	10.0	0.458	µg/L	1		625.1	4/22/20	4/24/20 23:18	KLB
Diethylphthalate	<0.225	10.0	0.225	µg/L	1		625.1	4/22/20	4/24/20 23:18	KLB
Dimethylphthalate	<0.307	10.0	0.307	µg/L	1		625.1	4/22/20	4/24/20 23:18	KLB
Di-n-octylphthalate	<0.522	10.0	0.522	µg/L	1		625.1	4/22/20	4/24/20 23:18	KLB
Bis(2-Ethylhexyl)phthalate	<0.519	10.0	0.519	µg/L	1		625.1	4/22/20	4/24/20 23:18	KLB
Fluoranthene	<0.297	5.00	0.297	µg/L	1		625.1	4/22/20	4/24/20 23:18	KLB
Fluorene	<0.245	5.00	0.245	µg/L	1		625.1	4/22/20	4/24/20 23:18	KLB
Naphthalene	<0.442	5.00	0.442	µg/L	1		625.1	4/22/20	4/24/20 23:18	KLB
Phenanthrene	<0.287	5.00	0.287	µg/L	1		625.1	4/22/20	4/24/20 23:18	KLB
Pyrene	<0.255	5.00	0.255	µg/L	1		625.1	4/22/20	4/24/20 23:18	KLB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	41.0	15-110		4/24/20 23:18
Phenol-d6	32.2	15-110		4/24/20 23:18
Nitrobenzene-d5	63.8	30-130		4/24/20 23:18
2-Fluorobiphenyl	79.0	30-130		4/24/20 23:18
2,4,6-Tribromophenol	76.8	15-110		4/24/20 23:18
p-Terphenyl-d14	85.0	30-130		4/24/20 23:18

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Sommerbridge | Sample Description: | Work Order: 20D0783

Date Received: 4/20/2020

Field Sample #: HW #1 | Sampled: 4/20/2020 09:00

Sample ID: 20D0783-01

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	<0.184	0.200	0.184	µg/L	1		608.3	4/24/20	4/24/20 15:51	AYH
Aroclor-1221 [1]	<0.161	0.200	0.161	µg/L	1		608.3	4/24/20	4/24/20 15:51	AYH
Aroclor-1232 [1]	<0.199	0.200	0.199	µg/L	1		608.3	4/24/20	4/24/20 15:51	AYH
Aroclor-1242 [1]	<0.173	0.200	0.173	µg/L	1		608.3	4/24/20	4/24/20 15:51	AYH
Aroclor-1248 [1]	<0.190	0.200	0.190	µg/L	1		608.3	4/24/20	4/24/20 15:51	AYH
Aroclor-1254 [1]	<0.105	0.200	0.105	µg/L	1		608.3	4/24/20	4/24/20 15:51	AYH
Aroclor-1260 [1]	<0.196	0.200	0.196	µg/L	1		608.3	4/24/20	4/24/20 15:51	AYH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	92.9	30-150		4/24/20 15:51
Decachlorobiphenyl [2]	94.4	30-150		4/24/20 15:51
Tetrachloro-m-xylene [1]	77.1	30-150		4/24/20 15:51
Tetrachloro-m-xylene [2]	79.3	30-150		4/24/20 15:51

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Project Location: Sommerbridge | Sample Description: | Work Order: 20D0783

Date Received: 4/20/2020

Field Sample #: HW #1 | Sampled: 4/20/2020 09:00

Sample ID: 20D0783-01

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0	0.35	µg/L	1		EPA 200.8	4/22/20	4/22/20 16:35	MJH
Arsenic	ND	0.80	0.64	µg/L	1		EPA 200.8	4/22/20	4/22/20 16:35	MJH
Cadmium	ND	0.20	0.038	µg/L	1		EPA 200.8	4/22/20	4/22/20 16:35	MJH
Chromium	1.7	1.0	0.92	µg/L	1	R-04	EPA 200.8	4/22/20	4/22/20 16:35	MJH
Chromium, Trivalent	0.0017			mg/L	1		Tri Chrome Calc.	4/22/20	4/22/20 17:39	MJH
Copper	3.6	1.0	0.87	µg/L	1		EPA 200.8	4/22/20	4/22/20 16:35	MJH
Iron	0.47	0.050	0.042	mg/L	1		EPA 200.7	4/22/20	4/22/20 16:35	MJH
Lead	1.7	0.50	0.085	µg/L	1		EPA 200.8	4/22/20	4/22/20 16:35	MJH
Mercury	ND	0.00010	0.000034	mg/L	1		EPA 245.1	4/22/20	4/23/20 11:24	CJV
Nickel	1.2	5.0	0.62	µg/L	1	J	EPA 200.8	4/22/20	4/22/20 16:35	MJH
Selenium	ND	5.0	1.6	µg/L	1		EPA 200.8	4/22/20	4/22/20 16:35	MJH
Silver	ND	0.20	0.18	µg/L	1		EPA 200.8	4/22/20	4/22/20 16:35	MJH
Zinc	7.6	10	2.3	µg/L	1	J	EPA 200.8	4/22/20	4/22/20 16:35	MJH
Hardness	73	1.4		mg/L	1		EPA 200.7	4/22/20	4/22/20 16:35	MJH

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Project Location: Sommerbridge | Sample Description: | Work Order: 20D0783

Date Received: 4/20/2020

Field Sample #: HW #1 | Sampled: 4/20/2020 09:00

Sample ID: 20D0783-01

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Chloride	180	5.0	0.68	mg/L	5		EPA 300.0	4/22/20	4/22/20 19:28	KMV
Chlorine, Residual	0.079	0.020	0.015	mg/L	1	Z-01, B	SM21-22 4500 CL G	4/20/20	4/20/20 18:45	AWA/KMV
Hexavalent Chromium	ND	0.0040		mg/L	1		SM21-22 3500 Cr B	4/20/20	4/20/20 19:15	AWA
Phenol	ND	0.050	0.050	mg/L	1		EPA 420.1	4/23/20	4/24/20 11:55	LL
Total Suspended Solids	3.0	0.83	0.34	mg/L	1		SM21-22 2540D	4/22/20	4/22/20 10:20	LL
Silica Gel Treated HEM (SGT-HEM)	0.80	1.4	0.68	mg/L	1	J	EPA 1664B	4/21/20	4/21/20 10:20	LL

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Project Location: Sommerbridge | Sample Description: | Work Order: 20D0783

Date Received: 4/20/2020

Field Sample #: HW #1 | Sampled: 4/20/2020 09:00

Sample ID: 20D0783-01

Sample Matrix: Ground Water

Drinking Water Organics EPA 504.1

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,2-Dibromoethane (EDB) (1)	ND	0.021	0.013	µg/L	1		EPA 504.1	4/22/20	4/23/20 0:42	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual		
1,3-Dibromopropane (1)	95.4	70-130		4/23/20 0:42	

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Project Location: Sommerbridge | Sample Description: | Work Order: 20D0783

Date Received: 4/20/2020

Field Sample #: HW #1 | Sampled: 4/20/2020 09:00

Sample ID: 20D0783-01

Sample Matrix: Ground Water

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	0.066	0.075	0.024	mg/L	1		SM19-22 4500 NH3 C		4/22/20 0:00	AAL
Cyanide	ND	0.005	0.001	mg/L	1		SM21-22 4500 CN E		4/22/20 0:00	AAL

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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332

Project Location: Sommerbridge | Sample Description: | Work Order: 20D0783

Date Received: 4/20/2020

Field Sample #: Trip Blank | Sampled: 4/20/2020 00:00

Sample ID: 20D0783-02

Sample Matrix: Trip Blank Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	<3.79	50.0	3.79	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
tert-Amyl Methyl Ether (TAME)	<0.140	0.500	0.140	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
Benzene	<0.180	1.00	0.180	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
tert-Butyl Alcohol (TBA)	<4.17	20.0	4.17	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
Carbon Tetrachloride	<0.110	2.00	0.110	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
1,2-Dichlorobenzene	<0.160	2.00	0.160	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
1,3-Dichlorobenzene	<0.120	2.00	0.120	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
1,4-Dichlorobenzene	<0.130	2.00	0.130	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
1,2-Dichloroethane	<0.410	2.00	0.410	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
cis-1,2-Dichloroethylene	<0.130	1.00	0.130	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
1,1-Dichloroethane	<0.160	2.00	0.160	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
1,1-Dichloroethylene	<0.320	2.00	0.320	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
1,4-Dioxane	<22.5	50.0	22.5	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
Ethanol	<10.5	50.0	10.5	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
Ethylbenzene	<0.130	2.00	0.130	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
Methyl tert-Butyl Ether (MTBE)	<0.250	2.00	0.250	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
Methylene Chloride	<0.340	5.00	0.340	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
Tetrachloroethylene	<0.180	2.00	0.180	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
Toluene	<0.140	1.00	0.140	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
1,1,1-Trichloroethane	<0.200	2.00	0.200	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
1,1,2-Trichloroethane	<0.160	2.00	0.160	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
Trichloroethylene	<0.240	2.00	0.240	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
Vinyl Chloride	<0.450	2.00	0.450	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
m+p Xylene	<0.300	2.00	0.300	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF
o-Xylene	<0.170	1.00	0.170	µg/L	1		624.1	4/21/20	4/21/20 10:53	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	110	70-130		4/21/20 10:53
Toluene-d8	96.2	70-130		4/21/20 10:53
4-Bromofluorobenzene	87.5	70-130		4/21/20 10:53

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Sample Extraction Data

Prep Method: SW-846 3510C **Analytical Method: 608.3**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20D0783-01RE1 [HW #1]	B256883	1000	10.0	04/24/20

Prep Method: SW-846 5030B **Analytical Method: 624.1**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20D0783-01 [HW #1]	B256625	5	5.00	04/21/20
20D0783-02 [Trip Blank]	B256625	5	5.00	04/21/20

Prep Method: SW-846 3510C **Analytical Method: 625.1**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20D0783-01 [HW #1]	B256708	1000	1.00	04/22/20

Prep Method: SW-846 3510C **Analytical Method: 625.1**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20D0783-01 [HW #1]	B256787	1000	1.00	04/22/20

EPA 1664B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20D0783-01 [HW #1]	B256619	1000		04/21/20

Prep Method: EPA 200.7 **Analytical Method: EPA 200.7**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20D0783-01 [HW #1]	B256719	50.0	50.0	04/22/20
20D0783-01 [HW #1]	B256719	50.0		04/22/20

Prep Method: EPA 200.8 **Analytical Method: EPA 200.8**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20D0783-01 [HW #1]	B256720	50.0	50.0	04/22/20

Prep Method: EPA 245.1 **Analytical Method: EPA 245.1**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20D0783-01 [HW #1]	B256713	6.00	6.00	04/22/20

Prep Method: EPA 300.0 **Analytical Method: EPA 300.0**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20D0783-01 [HW #1]	B256743	10.0	10.0	04/22/20

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Sample Extraction Data

EPA 420.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20D0783-01 [HW #1]	B256778	50.0	50.0	04/23/20

Prep Method: EPA 504 water **Analytical Method: EPA 504.1**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20D0783-01 [HW #1]	B256739	32.8	35.0	04/22/20

SM21-22 2540D

Lab Number [Field ID]	Batch	Initial [mL]	Date
20D0783-01 [HW #1]	B256688	600	04/22/20

SM21-22 3500 Cr B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20D0783-01 [HW #1]	B256614	50.0	50.0	04/20/20

SM21-22 4500 CL G

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20D0783-01 [HW #1]	B256615	100	100	04/20/20

Prep Method: EPA 200.8 **Analytical Method: Tri Chrome Calc.**

Lab Number [Field ID]	Batch	Initial [mL]	Date
20D0783-01 [HW #1]	B256720	50.0	04/22/20

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B256625 - SW-846 5030B										
Blank (B256625-BLK1)				Prepared & Analyzed: 04/21/20						
Acetone	ND	50.0	µg/L							
tert-Amyl Methyl Ether (TAME)	ND	0.500	µg/L							
Benzene	ND	1.00	µg/L							
tert-Butyl Alcohol (TBA)	ND	20.0	µg/L							
Carbon Tetrachloride	ND	2.00	µg/L							
1,2-Dichlorobenzene	ND	2.00	µg/L							
1,3-Dichlorobenzene	ND	2.00	µg/L							
1,4-Dichlorobenzene	ND	2.00	µg/L							
1,2-Dichloroethane	ND	2.00	µg/L							
cis-1,2-Dichloroethylene	ND	1.00	µg/L							
1,1-Dichloroethane	ND	2.00	µg/L							
1,1-Dichloroethylene	ND	2.00	µg/L							
1,4-Dioxane	ND	50.0	µg/L							
Ethanol	ND	50.0	µg/L							
Ethylbenzene	ND	2.00	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	2.00	µg/L							
Methylene Chloride	ND	5.00	µg/L							
Tetrachloroethylene	ND	2.00	µg/L							
Toluene	ND	1.00	µg/L							
1,1,1-Trichloroethane	ND	2.00	µg/L							
1,1,2-Trichloroethane	ND	2.00	µg/L							
Trichloroethylene	ND	2.00	µg/L							
Vinyl Chloride	ND	2.00	µg/L							
m+p Xylene	ND	2.00	µg/L							
o-Xylene	ND	1.00	µg/L							
Surrogate: 1,2-Dichloroethane-d4	*27.7*		µg/L	25.0		111	70-130			
Surrogate: Toluene-d8	*23.8*		µg/L	25.0		95.4	70-130			
Surrogate: 4-Bromofluorobenzene	*22.2*		µg/L	25.0		88.8	70-130			
LCS (B256625-BS1)				Prepared & Analyzed: 04/21/20						
Acetone	190	50.0	µg/L	200		93.7	70-160			†
tert-Amyl Methyl Ether (TAME)	18	0.500	µg/L	20.0		90.4	70-130			
Benzene	20	1.00	µg/L	20.0		101	65-135			
tert-Butyl Alcohol (TBA)	180	20.0	µg/L	200		88.4	40-160			†
Carbon Tetrachloride	19	2.00	µg/L	20.0		92.6	70-130			
1,2-Dichlorobenzene	21	2.00	µg/L	20.0		106	65-135			
1,3-Dichlorobenzene	22	2.00	µg/L	20.0		109	70-130			
1,4-Dichlorobenzene	21	2.00	µg/L	20.0		103	65-135			
1,2-Dichloroethane	17	2.00	µg/L	20.0		83.6	70-130			
cis-1,2-Dichloroethylene	19	1.00	µg/L	20.0		97.2	70-130			
1,1-Dichloroethane	21	2.00	µg/L	20.0		105	70-130			
1,1-Dichloroethylene	18	2.00	µg/L	20.0		89.2	50-150			
1,4-Dioxane	210	50.0	µg/L	200		105	40-130			†
Ethanol	140	50.0	µg/L	200		68.5	40-160			
Ethylbenzene	21	2.00	µg/L	20.0		106	60-140			
Methyl tert-Butyl Ether (MTBE)	19	2.00	µg/L	20.0		96.8	70-130			
Methylene Chloride	20	5.00	µg/L	20.0		99.4	60-140			
Tetrachloroethylene	22	2.00	µg/L	20.0		110	70-130			
Toluene	21	1.00	µg/L	20.0		104	70-130			
1,1,1-Trichloroethane	19	2.00	µg/L	20.0		95.9	70-130			
1,1,2-Trichloroethane	22	2.00	µg/L	20.0		109	70-130			
Trichloroethylene	18	2.00	µg/L	20.0		90.4	65-135			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B256625 - SW-846 5030B										
LCS (B256625-BS1)				Prepared & Analyzed: 04/21/20						
Vinyl Chloride	14	2.00	µg/L	20.0		69.2	5-195			
m+p Xylene	46	2.00	µg/L	40.0		116	70-130			
o-Xylene	21	1.00	µg/L	20.0		106	70-130			
Surrogate: 1,2-Dichloroethane-d4	*21.5*		µg/L	25.0		86.1	70-130			
Surrogate: Toluene-d8	*26.1*		µg/L	25.0		104	70-130			
Surrogate: 4-Bromofluorobenzene	*27.4*		µg/L	25.0		110	70-130			
Matrix Spike (B256625-MS1)	**Source: 20D0783-01**			Prepared & Analyzed: 04/21/20						
Acetone	88	50.0	µg/L	100	ND	88.0	70-130			
tert-Amyl Methyl Ether (TAME)	9.0	0.500	µg/L	10.0	ND	89.8	70-130			
Benzene	12	1.00	µg/L	10.0	ND	119	37-151			
tert-Butyl Alcohol (TBA)	90	20.0	µg/L	100	ND	89.6	70-130			
Carbon Tetrachloride	11	2.00	µg/L	10.0	ND	112	70-140			
1,2-Dichlorobenzene	11	2.00	µg/L	10.0	ND	105	18-190			
1,3-Dichlorobenzene	11	2.00	µg/L	10.0	ND	113	59-156			
1,4-Dichlorobenzene	10	2.00	µg/L	10.0	ND	104	18-190			
1,2-Dichloroethane	9.5	2.00	µg/L	10.0	ND	95.0	49-155			
cis-1,2-Dichloroethylene	11	1.00	µg/L	10.0	ND	109	70-130			
1,1-Dichloroethane	12	2.00	µg/L	10.0	ND	125	59-155			
1,1-Dichloroethylene	12	2.00	µg/L	10.0	ND	118	20-234			
1,4-Dioxane	110	50.0	µg/L	100	ND	112	70-130			
Ethanol	97	50.0	µg/L	100	ND	97.2	70-130			
Ethylbenzene	11	2.00	µg/L	10.0	ND	114	37-162			
Methyl tert-Butyl Ether (MTBE)	10	2.00	µg/L	10.0	ND	104	70-130			
Methylene Chloride	11	5.00	µg/L	10.0	ND	106	20-221			
Tetrachloroethylene	13	2.00	µg/L	10.0	ND	129	64-148			
Toluene	12	1.00	µg/L	10.0	ND	118	47-150			
1,1,1-Trichloroethane	11	2.00	µg/L	10.0	ND	114	52-162			
1,1,2-Trichloroethane	11	2.00	µg/L	10.0	ND	113	52-150			
Trichloroethylene	11	2.00	µg/L	10.0	ND	108	70-157			
Vinyl Chloride	9.5	2.00	µg/L	10.0	ND	95.2	20-251			
m+p Xylene	24	2.00	µg/L	20.0	ND	119	70-130			
o-Xylene	11	1.00	µg/L	10.0	ND	107	70-130			
Surrogate: 1,2-Dichloroethane-d4	*23.1*		µg/L	25.0		92.3	70-130			
Surrogate: Toluene-d8	*26.3*		µg/L	25.0		105	70-130			
Surrogate: 4-Bromofluorobenzene	*26.6*		µg/L	25.0		107	70-130			
Matrix Spike Dup (B256625-MSD1)	**Source: 20D0783-01**			Prepared & Analyzed: 04/21/20						
Acetone	92	50.0	µg/L	100	ND	92.3	70-130	4.78	30	
tert-Amyl Methyl Ether (TAME)	9.0	0.500	µg/L	10.0	ND	89.5	70-130	0.335	30	
Benzene	12	1.00	µg/L	10.0	ND	115	37-151	3.16	61	
tert-Butyl Alcohol (TBA)	100	20.0	µg/L	100	ND	100	70-130	11.3	30	
Carbon Tetrachloride	11	2.00	µg/L	10.0	ND	110	70-140	2.44	41	
1,2-Dichlorobenzene	11	2.00	µg/L	10.0	ND	107	18-190	1.32	57	
1,3-Dichlorobenzene	11	2.00	µg/L	10.0	ND	113	59-156	0.443	43	
1,4-Dichlorobenzene	11	2.00	µg/L	10.0	ND	107	18-190	2.76	57	
1,2-Dichloroethane	9.2	2.00	µg/L	10.0	ND	92.3	49-155	2.88	49	
cis-1,2-Dichloroethylene	11	1.00	µg/L	10.0	ND	106	70-130	2.51	30	
1,1-Dichloroethane	12	2.00	µg/L	10.0	ND	120	59-155	3.51	40	
1,1-Dichloroethylene	11	2.00	µg/L	10.0	ND	112	20-234	5.11	32	
1,4-Dioxane	120	50.0	µg/L	100	ND	120	70-130	6.47	30	
Ethanol	94	50.0	µg/L	100	ND	94.1	70-130	3.22	30	

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B256625 - SW-846 5030B										
Matrix Spike Dup (B256625-MSD1)	**Source: 20D0783-01**			Prepared & Analyzed: 04/21/20						
Ethylbenzene	11	2.00	µg/L	10.0	ND	110	37-162	2.77	63	
Methyl tert-Butyl Ether (MTBE)	10	2.00	µg/L	10.0	ND	104	70-130	0.192	20	
Methylene Chloride	12	5.00	µg/L	10.0	ND	117	20-221	9.65	28	
Tetrachloroethylene	13	2.00	µg/L	10.0	ND	126	64-148	2.35	39	
Toluene	12	1.00	µg/L	10.0	ND	117	47-150	0.850	41	
1,1,1-Trichloroethane	11	2.00	µg/L	10.0	ND	108	52-162	4.97	36	
1,1,2-Trichloroethane	11	2.00	µg/L	10.0	ND	113	52-150	0.177	45	
Trichloroethylene	11	2.00	µg/L	10.0	ND	106	70-157	2.06	48	
Vinyl Chloride	9.4	2.00	µg/L	10.0	ND	94.1	20-251	1.16	66	
m+p Xylene	23	2.00	µg/L	20.0	ND	115	70-130	3.33	20	
o-Xylene	10	1.00	µg/L	10.0	ND	104	70-130	2.94	20	
Surrogate: 1,2-Dichloroethane-d4	*23.0*		µg/L	25.0		91.9	70-130			
Surrogate: Toluene-d8	*26.6*		µg/L	25.0		106	70-130			
Surrogate: 4-Bromofluorobenzene	*26.2*		µg/L	25.0		105	70-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B256787 - SW-846 3510C										
Blank (B256787-BLK1)				Prepared & Analyzed: 04/23/20						
Benzo(a)anthracene (SIM)	ND	0.050	µg/L							
Benzo(a)pyrene (SIM)	ND	0.10	µg/L							
Benzo(b)fluoranthene (SIM)	ND	0.050	µg/L							
Benzo(k)fluoranthene (SIM)	ND	0.20	µg/L							
Chrysene (SIM)	ND	0.20	µg/L							
Dibenz(a,h)anthracene (SIM)	ND	0.10	µg/L							
Indeno(1,2,3-cd)pyrene (SIM)	ND	0.10	µg/L							
Pentachlorophenol (SIM)	ND	1.0	µg/L							
Surrogate: 2-Fluorophenol (SIM)	*66.7*		µg/L	200		33.4	15-110			
Surrogate: Phenol-d6 (SIM)	*52.6*		µg/L	200		26.3	15-110			
Surrogate: Nitrobenzene-d5	*52.9*		µg/L	100		52.9	30-130			
Surrogate: 2-Fluorobiphenyl	*49.1*		µg/L	100		49.1	30-130			
Surrogate: 2,4,6-Tribromophenol (SIM)	*128*		µg/L	200		64.0	15-110			
Surrogate: p-Terphenyl-d14	*55.6*		µg/L	100		55.6	30-130			
LCS (B256787-BS1)				Prepared & Analyzed: 04/23/20						
Benzo(a)anthracene (SIM)	38.4	1.0	µg/L	50.0		76.8	33-143			
Benzo(a)pyrene (SIM)	40.3	2.0	µg/L	50.0		80.6	17-163			
Benzo(b)fluoranthene (SIM)	43.6	1.0	µg/L	50.0		87.2	24-159			
Benzo(k)fluoranthene (SIM)	38.9	4.0	µg/L	50.0		77.9	11-162			
Chrysene (SIM)	37.8	4.0	µg/L	50.0		75.6	17-168			
Dibenz(a,h)anthracene (SIM)	43.7	2.0	µg/L	50.0		87.4	10-227			
Indeno(1,2,3-cd)pyrene (SIM)	45.2	2.0	µg/L	50.0		90.4	10-171			
Pentachlorophenol (SIM)	31.1	20	µg/L	50.0		62.3	14-176			
Surrogate: 2-Fluorophenol (SIM)	*77.0*		µg/L	200		38.5	15-110			
Surrogate: Phenol-d6 (SIM)	*63.7*		µg/L	200		31.8	15-110			
Surrogate: Nitrobenzene-d5	*63.3*		µg/L	100		63.3	30-130			
Surrogate: 2-Fluorobiphenyl	*67.5*		µg/L	100		67.5	30-130			
Surrogate: 2,4,6-Tribromophenol (SIM)	*175*		µg/L	200		87.3	15-110			
Surrogate: p-Terphenyl-d14	*61.7*		µg/L	100		61.7	30-130			
LCS Dup (B256787-BSD1)				Prepared & Analyzed: 04/23/20						
Benzo(a)anthracene (SIM)	36.9	1.0	µg/L	50.0		73.9	33-143	3.93	53	
Benzo(a)pyrene (SIM)	38.6	2.0	µg/L	50.0		77.3	17-163	4.26	72	
Benzo(b)fluoranthene (SIM)	41.9	1.0	µg/L	50.0		83.8	24-159	3.97	71	
Benzo(k)fluoranthene (SIM)	37.6	4.0	µg/L	50.0		75.3	11-162	3.40	63	
Chrysene (SIM)	36.3	4.0	µg/L	50.0		72.6	17-168	4.05	87	
Dibenz(a,h)anthracene (SIM)	41.8	2.0	µg/L	50.0		83.7	10-227	4.30	126	
Indeno(1,2,3-cd)pyrene (SIM)	43.3	2.0	µg/L	50.0		86.6	10-171	4.25	99	
Pentachlorophenol (SIM)	30.6	20	µg/L	50.0		61.3	14-176	1.62	86	
Surrogate: 2-Fluorophenol (SIM)	*76.4*		µg/L	200		38.2	15-110			
Surrogate: Phenol-d6 (SIM)	*62.2*		µg/L	200		31.1	15-110			
Surrogate: Nitrobenzene-d5	*63.6*		µg/L	100		63.6	30-130			
Surrogate: 2-Fluorobiphenyl	*62.2*		µg/L	100		62.2	30-130			
Surrogate: 2,4,6-Tribromophenol (SIM)	*164*		µg/L	200		81.9	15-110			
Surrogate: p-Terphenyl-d14	*58.5*		µg/L	100		58.5	30-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B256708 - SW-846 3510C										
Blank (B256708-BLK1)				Prepared: 04/22/20 Analyzed: 04/23/20						
Acenaphthene	ND	5.00	µg/L							
Acenaphthylene	ND	5.00	µg/L							
Anthracene	ND	5.00	µg/L							
Benzo(g,h,i)perylene	ND	5.00	µg/L							
Butylbenzylphthalate	ND	10.0	µg/L							
Di-n-butylphthalate	ND	10.0	µg/L							
Diethylphthalate	ND	10.0	µg/L							
Dimethylphthalate	ND	10.0	µg/L							
Di-n-octylphthalate	ND	10.0	µg/L							
Bis(2-Ethylhexyl)phthalate	ND	10.0	µg/L							
Fluoranthene	ND	5.00	µg/L							
Fluorene	ND	5.00	µg/L							
Naphthalene	ND	5.00	µg/L							
Phenanthrene	ND	5.00	µg/L							
Pyrene	ND	5.00	µg/L							
Surrogate: 2-Fluorophenol	*82.6*		µg/L	200		41.3	15-110			
Surrogate: Phenol-d6	*63.4*		µg/L	200		31.7	15-110			
Surrogate: Nitrobenzene-d5	*62.0*		µg/L	100		62.0	30-130			
Surrogate: 2-Fluorobiphenyl	*79.7*		µg/L	100		79.7	30-130			
Surrogate: 2,4,6-Tribromophenol	*155*		µg/L	200		77.7	15-110			
Surrogate: p-Terphenyl-d14	*78.2*		µg/L	100		78.2	30-130			
LCS (B256708-BS1)				Prepared: 04/22/20 Analyzed: 04/23/20						
Acenaphthene	31.9	5.00	µg/L	50.0		63.8	47-145			
Acenaphthylene	32.6	5.00	µg/L	50.0		65.2	33-145			
Anthracene	37.7	5.00	µg/L	50.0		75.5	27-133			
Benzo(g,h,i)perylene	35.7	5.00	µg/L	50.0		71.4	10-219			
Butylbenzylphthalate	33.3	10.0	µg/L	50.0		66.5	10-152			
Di-n-butylphthalate	37.8	10.0	µg/L	50.0		75.6	10-120			
Diethylphthalate	35.8	10.0	µg/L	50.0		71.6	10-120			
Dimethylphthalate	36.5	10.0	µg/L	50.0		73.0	10-120			
Di-n-octylphthalate	41.1	10.0	µg/L	50.0		82.2	4-146			
Bis(2-Ethylhexyl)phthalate	35.8	10.0	µg/L	50.0		71.6	8-158			
Fluoranthene	39.7	5.00	µg/L	50.0		79.4	26-137			
Fluorene	36.5	5.00	µg/L	50.0		73.0	59-121			
Naphthalene	29.1	5.00	µg/L	50.0		58.2	21-133			
Phenanthrene	37.3	5.00	µg/L	50.0		74.7	54-120			
Pyrene	32.8	5.00	µg/L	50.0		65.5	52-120			
Surrogate: 2-Fluorophenol	*84.7*		µg/L	200		42.4	15-110			
Surrogate: Phenol-d6	*67.5*		µg/L	200		33.8	15-110			
Surrogate: Nitrobenzene-d5	*65.1*		µg/L	100		65.1	30-130			
Surrogate: 2-Fluorobiphenyl	*85.9*		µg/L	100		85.9	30-130			
Surrogate: 2,4,6-Tribromophenol	*160*		µg/L	200		80.0	15-110			
Surrogate: p-Terphenyl-d14	*73.4*		µg/L	100		73.4	30-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B256708 - SW-846 3510C										
LCS Dup (B256708-BSD1)				Prepared: 04/22/20 Analyzed: 04/23/20						
Acenaphthene	31.8	5.00	µg/L	50.0		63.6	47-145	0.283	48	
Acenaphthylene	32.3	5.00	µg/L	50.0		64.7	33-145	0.862	74	
Anthracene	37.0	5.00	µg/L	50.0		73.9	27-133	2.09	66	
Benzo(g,h,i)perylene	34.4	5.00	µg/L	50.0		68.8	10-219	3.68	97	
Butylbenzylphthalate	34.3	10.0	µg/L	50.0		68.6	10-152	3.11	60	
Di-n-butylphthalate	37.5	10.0	µg/L	50.0		75.0	10-120	0.770	47	
Diethylphthalate	35.2	10.0	µg/L	50.0		70.5	10-120	1.55	100	
Dimethylphthalate	35.9	10.0	µg/L	50.0		71.8	10-120	1.63	183	
Di-n-octylphthalate	38.4	10.0	µg/L	50.0		76.7	4-146	6.87	69	
Bis(2-Ethylhexyl)phthalate	36.0	10.0	µg/L	50.0		72.0	8-158	0.473	82	
Fluoranthene	39.0	5.00	µg/L	50.0		78.0	26-137	1.78	66	
Fluorene	36.3	5.00	µg/L	50.0		72.7	59-121	0.467	38	
Naphthalene	30.2	5.00	µg/L	50.0		60.4	21-133	3.68	65	
Phenanthrene	37.2	5.00	µg/L	50.0		74.4	54-120	0.429	39	
Pyrene	33.6	5.00	µg/L	50.0		67.1	52-120	2.44	49	
Surrogate: 2-Fluorophenol	*87.2*		µg/L	200		43.6	15-110			
Surrogate: Phenol-d6	*68.9*		µg/L	200		34.4	15-110			
Surrogate: Nitrobenzene-d5	*66.8*		µg/L	100		66.8	30-130			
Surrogate: 2-Fluorobiphenyl	*84.0*		µg/L	100		84.0	30-130			
Surrogate: 2,4,6-Tribromophenol	*152*		µg/L	200		76.2	15-110			
Surrogate: p-Terphenyl-d14	*72.0*		µg/L	100		72.0	30-130			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B256883 - SW-846 3510C										
Blank (B256883-BLK1)				Prepared & Analyzed: 04/24/20						
Aroclor-1016	ND	0.200	µg/L							
Aroclor-1016 [2C]	ND	0.200	µg/L							
Aroclor-1221	ND	0.200	µg/L							
Aroclor-1221 [2C]	ND	0.200	µg/L							
Aroclor-1232	ND	0.200	µg/L							
Aroclor-1232 [2C]	ND	0.200	µg/L							
Aroclor-1242	ND	0.200	µg/L							
Aroclor-1242 [2C]	ND	0.200	µg/L							
Aroclor-1248	ND	0.200	µg/L							
Aroclor-1248 [2C]	ND	0.200	µg/L							
Aroclor-1254	ND	0.200	µg/L							
Aroclor-1254 [2C]	ND	0.200	µg/L							
Aroclor-1260	ND	0.200	µg/L							
Aroclor-1260 [2C]	ND	0.200	µg/L							
Surrogate: Decachlorobiphenyl	*1.82*		µg/L	2.00		90.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.77*		µg/L	2.00		88.3	30-150			
Surrogate: Tetrachloro-m-xylene	*1.69*		µg/L	2.00		84.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.67*		µg/L	2.00		83.5	30-150			
LCS (B256883-BS1)				Prepared & Analyzed: 04/24/20						
Aroclor-1016	0.473	0.200	µg/L	0.500		94.6	50-140			
Aroclor-1016 [2C]	0.491	0.200	µg/L	0.500		98.2	50-140			
Aroclor-1260	0.466	0.200	µg/L	0.500		93.1	8-140			
Aroclor-1260 [2C]	0.474	0.200	µg/L	0.500		94.8	8-140			
Surrogate: Decachlorobiphenyl	*1.80*		µg/L	2.00		90.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.78*		µg/L	2.00		88.9	30-150			
Surrogate: Tetrachloro-m-xylene	*1.65*		µg/L	2.00		82.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.64*		µg/L	2.00		82.1	30-150			
LCS Dup (B256883-BSD1)				Prepared & Analyzed: 04/24/20						
Aroclor-1016	0.476	0.200	µg/L	0.500		95.2	50-140	0.689		
Aroclor-1016 [2C]	0.496	0.200	µg/L	0.500		99.1	50-140	0.963		
Aroclor-1260	0.466	0.200	µg/L	0.500		93.1	8-140	0.0451		
Aroclor-1260 [2C]	0.472	0.200	µg/L	0.500		94.4	8-140	0.387		
Surrogate: Decachlorobiphenyl	*1.84*		µg/L	2.00		92.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.83*		µg/L	2.00		91.6	30-150			
Surrogate: Tetrachloro-m-xylene	*1.67*		µg/L	2.00		83.3	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.68*		µg/L	2.00		84.0	30-150			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B256713 - EPA 245.1										
Blank (B256713-BLK1)				Prepared: 04/22/20 Analyzed: 04/23/20						
Mercury	ND	0.00010	mg/L							
LCS (B256713-BS1)				Prepared: 04/22/20 Analyzed: 04/23/20						
Mercury	0.00376	0.00010	mg/L	0.00400		94.0	85-115			
LCS Dup (B256713-BSD1)				Prepared: 04/22/20 Analyzed: 04/23/20						
Mercury	0.00393	0.00010	mg/L	0.00400		98.3	85-115	4.44	20	
Duplicate (B256713-DUP1)		**Source: 20D0783-01**		Prepared: 04/22/20 Analyzed: 04/23/20						
Mercury	ND	0.00010	mg/L		ND			NC	30	
Matrix Spike (B256713-MS1)		**Source: 20D0783-01**		Prepared: 04/22/20 Analyzed: 04/23/20						
Mercury	0.00359	0.00010	mg/L	0.00400	ND	89.7	75-125			
Batch B256719 - EPA 200.7										
Blank (B256719-BLK1)				Prepared & Analyzed: 04/22/20						
Iron	ND	0.050	mg/L							
Hardness	ND	1.4	mg/L							
LCS (B256719-BS1)				Prepared & Analyzed: 04/22/20						
Iron	4.08	0.050	mg/L	4.00		102	85-115			
Hardness	27	1.4	mg/L	26.4		102	85-115			
LCS Dup (B256719-BSD1)				Prepared & Analyzed: 04/22/20						
Iron	4.16	0.050	mg/L	4.00		104	85-115	1.90	20	
Hardness	27	1.4	mg/L	26.4		103	85-115	1.07	20	
Duplicate (B256719-DUP1)		**Source: 20D0783-01**		Prepared & Analyzed: 04/22/20						
Iron	0.465	0.050	mg/L		0.468			0.670	20	
Hardness	73	1.4	mg/L		73			0.991		
Matrix Spike (B256719-MS1)		**Source: 20D0783-01**		Prepared & Analyzed: 04/22/20						
Iron	4.68	0.050	mg/L	4.00	0.468	105	70-130			
Hardness	100	1.4	mg/L	26.4	73	104	70-130			
Batch B256720 - EPA 200.8										
Blank (B256720-BLK1)				Prepared & Analyzed: 04/22/20						
Antimony	ND	1.0	µg/L							
Arsenic	ND	0.80	µg/L							
Cadmium	ND	0.20	µg/L							
Chromium	ND	1.0	µg/L							
Copper	ND	1.0	µg/L							
Lead	ND	0.50	µg/L							
Nickel	ND	5.0	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.20	µg/L							
Zinc	ND	10	µg/L							

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD		RPD Limit	Notes
Batch B256720 - EPA 200.8											
LCS (B256720-BS1)				Prepared & Analyzed: 04/22/20							
Antimony	486	10	µg/L	500		97.3	85-115				
Arsenic	489	8.0	µg/L	500		97.8	85-115				
Cadmium	505	2.0	µg/L	500		101	85-115				
Chromium	511	10	µg/L	500		102	85-115				
Copper	983	10	µg/L	1000		98.3	85-115				
Lead	493	5.0	µg/L	500		98.6	85-115				
Nickel	502	50	µg/L	500		100	85-115				
Selenium	476	50	µg/L	500		95.1	85-115				
Silver	513	2.0	µg/L	500		103	85-115				
Zinc	969	100	µg/L	1000		96.9	85-115				
LCS Dup (B256720-BSD1)				Prepared & Analyzed: 04/22/20							
Antimony	494	10	µg/L	500		98.8	85-115	1.50		20	
Arsenic	497	8.0	µg/L	500		99.5	85-115	1.74		20	
Cadmium	509	2.0	µg/L	500		102	85-115	0.767		20	
Chromium	519	10	µg/L	500		104	85-115	1.56		20	
Copper	1010	10	µg/L	1000		101	85-115	2.86		20	
Lead	507	5.0	µg/L	500		101	85-115	2.74		20	
Nickel	508	50	µg/L	500		102	85-115	1.17		20	
Selenium	487	50	µg/L	500		97.4	85-115	2.33		20	
Silver	514	2.0	µg/L	500		103	85-115	0.153		20	
Zinc	981	100	µg/L	1000		98.1	85-115	1.16		20	
Duplicate (B256720-DUP1)	**Source: 20D0783-01**			Prepared & Analyzed: 04/22/20							
Antimony	ND	1.0	µg/L		ND			NC		20	
Arsenic	ND	0.80	µg/L		ND			NC		20	
Cadmium	ND	0.20	µg/L		ND			NC		20	
Chromium	1.41	1.0	µg/L		1.74			**20.9**	*	20	R-04
Copper	3.55	1.0	µg/L		3.56			0.142		20	
Lead	1.75	0.50	µg/L		1.75			0.447		20	
Nickel	1.18	5.0	µg/L		1.21			2.41		20	J
Selenium	ND	5.0	µg/L		ND			NC		20	
Silver	ND	0.20	µg/L		ND			NC		20	
Zinc	7.50	10	µg/L		7.59			1.24		20	J
Matrix Spike (B256720-MS1)	**Source: 20D0783-01**			Prepared & Analyzed: 04/22/20							
Antimony	505	10	µg/L	500	ND	101	70-130				
Arsenic	505	8.0	µg/L	500	ND	101	70-130				
Cadmium	517	2.0	µg/L	500	ND	103	70-130				
Chromium	515	10	µg/L	500	ND	103	70-130				
Copper	1010	10	µg/L	1000	ND	101	70-130				
Lead	512	5.0	µg/L	500	1.75	102	70-130				
Nickel	505	50	µg/L	500	ND	101	70-130				
Selenium	487	50	µg/L	500	ND	97.5	70-130				
Silver	514	2.0	µg/L	500	ND	103	70-130				
Zinc	998	100	µg/L	1000	ND	99.8	70-130				

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B256614 - SM21-22 3500 Cr B										
Blank (B256614-BLK1)				Prepared & Analyzed: 04/20/20						
Hexavalent Chromium	ND	0.0040	mg/L							
LCS (B256614-BS1)				Prepared & Analyzed: 04/20/20						
Hexavalent Chromium	0.10	0.0040	mg/L	0.100		104	83.9-121			
LCS Dup (B256614-BSD1)				Prepared & Analyzed: 04/20/20						
Hexavalent Chromium	0.10	0.0040	mg/L	0.100		104	83.9-121	0.00	10	
Matrix Spike (B256614-MS1)		**Source: 20D0783-01**		Prepared & Analyzed: 04/20/20						
Hexavalent Chromium	0.090	0.0040	mg/L	0.100	ND	89.7	25.5-193			
Matrix Spike Dup (B256614-MSD1)		**Source: 20D0783-01**		Prepared & Analyzed: 04/20/20						
Hexavalent Chromium	0.091	0.0040	mg/L	0.100	ND	91.0	25.5-193	1.41	20	
Batch B256615 - SM21-22 4500 CL G										
Blank (B256615-BLK1)				Prepared & Analyzed: 04/20/20						
Chlorine, Residual	0.036	0.020	mg/L							Z-01
LCS (B256615-BS1)				Prepared & Analyzed: 04/20/20						
Chlorine, Residual	1.4	0.020	mg/L	1.28		112	66.3-134			Z-01, B
LCS Dup (B256615-BSD1)				Prepared & Analyzed: 04/20/20						
Chlorine, Residual	1.3	0.020	mg/L	1.28		104	66.3-134	7.74	9.96	Z-01, B
Duplicate (B256615-DUP1)		**Source: 20D0783-01**		Prepared & Analyzed: 04/20/20						
Chlorine, Residual	0.075	0.020	mg/L		0.079			5.54	32.5	Z-01, B
Matrix Spike (B256615-MS1)		**Source: 20D0783-01**		Prepared & Analyzed: 04/20/20						
Chlorine, Residual	0.93	0.020	mg/L	1.00	0.079	85.1	10-167			Z-01, B
Batch B256619 - EPA 1664B										
Blank (B256619-BLK1)				Prepared & Analyzed: 04/21/20						
Silica Gel Treated HEM (SGT-HEM)	ND	1.4	mg/L							
LCS (B256619-BS1)				Prepared & Analyzed: 04/21/20						
Silica Gel Treated HEM (SGT-HEM)	11		mg/L	10.0		107	64-132			
Batch B256688 - SM21-22 2540D										
Blank (B256688-BLK1)				Prepared & Analyzed: 04/22/20						
Total Suspended Solids	ND	2.5	mg/L							

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QUALITY CONTROL

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B256688 - SM21-22 2540D										
LCS (B256688-BS1)				Prepared & Analyzed: 04/22/20						
Total Suspended Solids	184	10	mg/L	200		92.0	57.6-118			
Batch B256743 - EPA 300.0										
Blank (B256743-BLK1)				Prepared & Analyzed: 04/22/20						
Chloride	ND	1.0	mg/L							
LCS (B256743-BS1)				Prepared & Analyzed: 04/22/20						
Chloride	4.7	1.0	mg/L	5.00		94.7	90-110			
LCS Dup (B256743-BSD1)				Prepared & Analyzed: 04/22/20						
Chloride	4.8	1.0	mg/L	5.00		95.7	90-110	1.06	20	
Batch B256778 - EPA 420.1										
Blank (B256778-BLK1)				Prepared: 04/23/20 Analyzed: 04/24/20						
Phenol	ND	0.050	mg/L							
LCS (B256778-BS1)				Prepared: 04/23/20 Analyzed: 04/24/20						
Phenol	0.51	0.050	mg/L	0.500		103	72.4-125			
LCS Dup (B256778-BSD1)				Prepared: 04/23/20 Analyzed: 04/24/20						
Phenol	0.54	0.050	mg/L	0.500		107	72.4-125	4.27	11.1	
Duplicate (B256778-DUP1)	**Source: 20D0783-01**			Prepared: 04/23/20 Analyzed: 04/24/20						
Phenol	ND	0.050	mg/L		ND			NC	48.3	

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QUALITY CONTROL

Drinking Water Organics EPA 504.1 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B256739 - EPA 504 water										
Blank (B256739-BLK1)				Prepared & Analyzed: 04/22/20						
1,2-Dibromoethane (EDB)	ND	0.021	µg/L							
Surrogate: 1,3-Dibromopropane	*0.989*		µg/L	1.04		95.1	70-130			
LCS (B256739-BS1)				Prepared & Analyzed: 04/22/20						
1,2-Dibromoethane (EDB)	0.245	0.020	µg/L	0.252		97.2	70-130			
Surrogate: 1,3-Dibromopropane	*1.02*		µg/L	1.01		101	70-130			
LCS (B256739-BS2)				Prepared & Analyzed: 04/22/20						
1,2-Dibromoethane (EDB)	0.235	0.020	µg/L	0.248		94.8	70-130			
Surrogate: 1,3-Dibromopropane	*0.950*		µg/L	0.993		95.7	70-130			
LCS Dup (B256739-BSD1)				Prepared & Analyzed: 04/22/20						
1,2-Dibromoethane (EDB)	0.258	0.021	µg/L	0.257		100	70-130	4.87		
Surrogate: 1,3-Dibromopropane	*0.998*		µg/L	1.03		97.2	70-130			
LCS Dup (B256739-BSD2)				Prepared & Analyzed: 04/22/20						
1,2-Dibromoethane (EDB)	0.241	0.020	µg/L	0.254		94.8	70-130	2.27		
Surrogate: 1,3-Dibromopropane	*1.00*		µg/L	1.02		98.7	70-130			
MRL Check (B256739-MRL1)				Prepared & Analyzed: 04/22/20						
1,2-Dibromoethane (EDB)	0.0248	0.021	µg/L	0.0206		120	0-200			
Surrogate: 1,3-Dibromopropane	*0.992*		µg/L	1.03		96.1	70-130			
MRL Check (B256739-MRL2)				Prepared: 04/22/20 Analyzed: 04/23/20						
1,2-Dibromoethane (EDB)	0.0219	0.021	µg/L	0.0209		105	0-200			
Surrogate: 1,3-Dibromopropane	*1.02*		µg/L	1.04		97.4	70-130			
Matrix Spike (B256739-MS1)	**Source: 20D0783-01**			Prepared: 04/22/20 Analyzed: 04/23/20						
1,2-Dibromoethane (EDB)	0.234	0.019	µg/L	0.242	ND	96.8	65-135			
Surrogate: 1,3-Dibromopropane	*0.936*		µg/L	0.968		96.6	70-130			

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.
B	Analyte is found in the associated laboratory blank as well as in the sample.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
R-04	Duplicate relative percent difference (RPD) is a less useful indicator of sample precision for sample results that are <5 times the reporting limit (RL).
Z-01	Test SM 4500 CL G had a calibrate point outside of acceptable back calculated recovery. Reanalysis yielded similar non-conformance.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
608.3 in Water	
Aroclor-1016	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1016 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1221	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1221 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1232	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1232 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1242	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1242 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1248	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1248 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1254	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1254 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1260	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1260 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
624.1 in Water	
Acetone	CT,NY,MA,NH
tert-Amyl Methyl Ether (TAME)	MA
Benzene	CT,NY,MA,NH,RI,NC,ME,VA
tert-Butyl Alcohol (TBA)	NY,MA
Carbon Tetrachloride	CT,NY,MA,NH,RI,NC,ME,VA
1,2-Dichlorobenzene	CT,NY,MA,NH,RI,NC,ME,VA
1,3-Dichlorobenzene	CT,NY,MA,NH,RI,NC,ME,VA
1,4-Dichlorobenzene	CT,NY,MA,NH,RI,NC,ME,VA
1,2-Dichloroethane	CT,NY,MA,NH,RI,NC,ME,VA
cis-1,2-Dichloroethylene	NY,MA
1,1-Dichloroethane	CT,NY,MA,NH,RI,NC,ME,VA
1,1-Dichloroethylene	CT,NY,MA,NH,RI,NC,ME,VA
1,4-Dioxane	MA
Ethanol	NY,MA,NH
Ethylbenzene	CT,NY,MA,NH,RI,NC,ME,VA
Methyl tert-Butyl Ether (MTBE)	NY,MA,NH,NC
Methylene Chloride	CT,NY,MA,NH,RI,NC,ME,VA
Naphthalene	NY,MA,NC
Tetrachloroethylene	CT,NY,MA,NH,RI,NC,ME,VA
Toluene	CT,NY,MA,NH,RI,NC,ME,VA
1,1,1-Trichloroethane	CT,NY,MA,NH,RI,NC,ME,VA
1,1,2-Trichloroethane	CT,NY,MA,NH,RI,NC,ME,VA
Trichloroethylene	CT,NY,MA,NH,RI,NC,ME,VA
Vinyl Chloride	CT,NY,MA,NH,RI,NC,ME,VA
m+p Xylene	CT,NY,MA,NH,RI,NC
o-Xylene	CT,NY,MA,NH,RI,NC
625.1 in Water	
Acenaphthene	CT,MA,NH,NY,NC,RI,ME,VA
Acenaphthylene	CT,MA,NH,NY,NC,RI,ME,VA
Anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(g,h,i)perylene	CT,MA,NH,NY,NC,RI,ME,VA

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
625.1 in Water	
Butylbenzylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
Di-n-butylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
1,3-Dichlorobenzene	MA,NC
1,4-Dichlorobenzene	MA,NC
1,2-Dichlorobenzene	MA,NC
Diethylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
Dimethylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
Di-n-octylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
Bis(2-Ethylhexyl)phthalate	CT,MA,NH,NY,NC,RI,ME,VA
Fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
Fluorene	CT,MA,NH,NY,NC,RI,ME,VA
Naphthalene	CT,MA,NH,NY,NC,RI,ME,VA
Phenanthrene	CT,MA,NH,NY,NC,RI,ME,VA
Phenol	CT,MA,NH,NY,NC,RI,ME,VA
Pyrene	CT,MA,NH,NY,NC,RI,ME,VA
2-Fluorophenol	NC
2-Fluorophenol	NC,VA
Phenol-d6	VA
Nitrobenzene-d5	VA
EPA 200.7 in Water	
Iron	CT,MA,NH,NY,RI,NC,ME,VA
Hardness	CT,MA,NH,NY,RI,VA
EPA 200.8 in Water	
Antimony	CT,MA,NH,NY,RI,NC,ME,VA
Arsenic	CT,MA,NH,NY,RI,NC,ME,VA
Cadmium	CT,MA,NH,NY,RI,NC,ME,VA
Chromium	CT,MA,NH,NY,RI,NC,ME,VA
Copper	CT,MA,NH,NY,RI,NC,ME,VA
Lead	CT,MA,NH,NY,RI,NC,ME,VA
Nickel	CT,MA,NH,NY,RI,NC,ME,VA
Selenium	CT,MA,NH,NY,RI,NC,ME,VA
Silver	CT,MA,NH,NY,RI,NC,ME,VA
Zinc	CT,MA,NH,NY,RI,NC,ME,VA
EPA 245.1 in Water	
Mercury	CT,MA,NH,RI,NY,NC,ME,VA
EPA 300.0 in Water	
Chloride	NC,NY,MA,VA,ME,NH,CT,RI
EPA 420.1 in Water	
Phenol	CT,MA,NH,NY,RI,NC,ME,VA
SM19-22 4500 NH3 C in Water	
Ammonia as N	NY,MA,CT,RI,VA,NC,ME
SM21-22 2540D in Water	
Total Suspended Solids	CT,MA,NH,NY,RI,NC,ME,VA
SM21-22 3500 Cr B in Water	

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SM21-22 3500 Cr B in Water	
Hexavalent Chromium	NY,CT,NH,RI,ME,VA,NC
SM21-22 4500 CL G in Water	
Chlorine, Residual	CT,MA,RI,ME
SM21-22 4500 CN E in Water	
Cyanide	CT,MA,NH,NY,RI,NC,ME,VA

The CON-TEST Environmental Laboratory operates under the following certifications and accreditations:

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2017	100033	03/1/2022
MA	Massachusetts DEP	M-MA100	06/30/2020
CT	Connecticut Department of Publilc Health	PH-0567	09/30/2021
NY	New York State Department of Health	10899 NELAP	04/1/2021
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2021
RI	Rhode Island Department of Health	LAO00112	12/30/2020
NC	North Carolina Div. of Water Quality	652	12/31/2020
NJ	New Jersey DEP	MA007 NELAP	06/30/2020
FL	Florida Department of Health	E871027 NELAP	06/30/2020
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2020
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2020
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2020
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2020

MMU

20007783

con-test ANALYTICAL LABORATORY

Phone: 413-525-2332
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Email: info@contestlabs.com

http://www.contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Doc # 381 Rev 2_06262019

Page 1 of 2

Company Name:	CDM Consultants
Address:	6 Huron Dr Natick
Phone:	508-875-7657
Project Name:	Somerset Docks
Project Location:	245 Montgomery Highway
Project Number:	1476.1
Project Manager:	Alan Sundquist
Con-Test Quote Name/Number:	
Invoice Recipient:	
Sampled By:	A Sundquist

Requested Turnaround Time

7-Day 5 [X] 10-Day [ ]
PFAS 10-Day (std) [ ] Due Date:

Rush Approval Required

1-Day [ ] 3-Day [ ]
2-Day [ ] 4-Day [ ]

Data Delivery

Format: PDF [X] EXCEL [X]
Other:
CLP Like Data Pkg Required: [ ]
Email To: GSundquist@CDMSmith.com
Fax To #:

Dissolved Metals Samples

Field Filtered [ ]
Lab to Filter [ ]

Orthophosphate Samples

Field Filtered [ ]
Lab to Filter [ ]

ANALYSIS REQUESTED

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	DC3 608	TSS	HARDNESS	Total Cyanide	624.1	Phenol 420.1	Ammonia - Nitrogen	625 STANDARD list	0&G 1664 SGT	504 EDB only	8260 VOC
1	HW #1	4/20/20	9:00	G	W	U						X	X	X	X	X	X	X	X	X	X	X

Relinquished by: (signature) — Date/Time: 4/20/20 1430
Received by: (signature) — Date/Time: 4/20/20 1430
Relinquished by: (signature) — Date/Time: 4/20/20 1735
Received by: (signature) — Date/Time: 4/20/20 1735
Relinquished by: (signature) — Date/Time:
Received by: (signature) — Date/Time:
Relinquished by: (signature) — Date/Time:
Received by: (signature) — Date/Time:

Client Comments:

Detection Limit Requirements

MA
RCP
Other:

Special Requirements

[X] MA MCP Required
MCP Certification Form Required
[ ] CT RCP Required
RCP Certification Form Required
[ ] MA State DW Required
PWSID #

NELAC and AIHA-LAP, LLC Accredited

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

Project Entity

Government [ ] Municipality [ ] MWRA [ ] WRTA [ ]
Federal [ ] 21 J [ ] School [ ]
City [ ] Brownfield [ ] MBTA [ ]

Other

Chromatogram [ ]
AIHA-LAP,LLC [ ]

PCB ONLY

Soxhlet [ ]
Non Soxhlet [ ]

[2] Preservation Code

Courier Use Only:
Total Number Of:
VIALS
GLASS
PLASTIC
BACTERIA
ENCORE

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N
*Contest is not responsible for missing samples from prepacked coolers

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] **Preservation Codes:**
I = Iced
H = HCL
M = Methanol
N = Nitric Acid
S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

r call with client - run same tests that we ran for 20A0917, this eans - do not run 8260, 8270, 8082, or TPH and run 625 (std d std low), O&G SGT-HEM 1664, run metals per project, and n TB per client - 4/21/2020 mmk

Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine wha analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Cor Test values your partnership on each project and will try to assist with missing information, but will not l held accountable.

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MMM

2000783 ~~2000782~~

con-test ANALYTICAL LABORATORY

Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com
http://www.contestlabs.com
39 Spruce Street
East Longmeadow, MA 01028

CHAIN OF CUSTODY RECORD

Doc # 381 Rev 2_06262019

Page 2 of 2

Company Name:	CDW Consultants
Address:	6 Huron Dr, Natick
Phone:	508 - 875 - 2657
Project Name:	Sagamore Bridges
Project Location:	2 46 Monsignor Highway
Project Number:	1476.1
Project Manager:	Alan Sundquist
Con-Test Quote Name/Number:	
Invoice Recipient:	
Sampled By:	A. Sundquist

Requested Turnaround Time: 7-Day ~~7~~ 5 [X] 10-Day [ ] PFAS 10-Day (std) [ ] Due Date:

Rush-Approval Required: 1-Day [ ] 3-Day [ ] 2-Day [ ] 4-Day [ ]

Dissolved Metals Samples: ○ Field Filtered ○ Lab to Filter

Orthophosphate Samples: ○ Field Filtered ○ Lab to Filter

Data Delivery: Format: PDF [X] EXCEL [X]
Other:
CLP Like Data Pkg Required: [ ]
Email To: asundquist @ cdwconsultants.com
Fax To #:

ANALYSIS REQUESTED: 8270 Standard; 8100 MCP TPH; 8082; 625 Standard; ~~CORA~~ Total metals; ~~[illegible]~~; Chloride/TRC/Hex Chem

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	COMP/GRAB	[1]Matrix Code	Conc Code	VIALS	GLASS	PLASTIC	BACTERIA	ENCORE	8270 Standard	8100 MCP TPH	8082	625 Standard	Total metals	[illegible]	Chloride/TRC/Hex Chem				
1	HW #1	4/20/20	9:00	Comp	W	U	11	15	6			X	X	X	X	X		X				

[2] Preservation Code

Courier Use Only
Total Number Of:
VIALS___
GLASS___
PLASTIC___
BACTERIA___
ENCORE___

Glassware in the fridge? Y / N
Glassware in freezer? Y / N
Prepackaged Cooler? Y / N
*Contest is not responsible for missing samples from prepacked coolers

Relinquished by: (signature) [signature]	Date/Time: 4/20/20 1430
Received by: (signature) [signature]	Date/Time: 4/20/20 1430
Relinquished by: (signature) [signature]	Date/Time: 4/20/20 1735
Received by: (signature) [signature] 4.9, 5.9	Date/Time: 4/20/20 1735
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Client Comments:

Detection Limit Requirements — MA / CT / Other

Special Requirements
[X] MA MCP Required
MCP Certification Form Required
[ ] CT RCP Required
RCP Certification Form Required
[ ] MA State DW Required
PWSID #

Please use the following codes to indicate possible sample concentration within the Conc Code column above:
H - High; M - Medium; L - Low; C - Clean; U - Unknown

NELAC and AIHA-LAP, LLC Accredited

Project Entity
Government [ ] Municipality [ ] MWRA [ ] WRTA [ ]
Federal [ ] 21 J [ ] School [ ]
City [ ] Brownfield [ ] MBTA [ ]

Other
[ ] Chromatogram
[ ] *AIHA-LAP,LLC*

[1] **Matrix Codes:**
GW = Ground Water
WW = Waste Water
DW = Drinking Water
A = Air
S = Soil
SL = Sludge
SOL = Solid
O = Other (please define)

[2] **Preservation Codes:**
I = Iced
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S = Sulfuric Acid
B = Sodium Bisulfate
X = Sodium Hydroxide
T = Sodium Thiosulfate
O = Other (please define)

PCB ONLY
[ ] Soxhlet
[ ] Non Soxhlet

Comments:

Disclaimer: Con-Test Labs is not responsible for any omitted information on the Chain of Custody. The Chain of Custody is a legal document that must be complete and accurate and is used to determine what analyses the laboratory will perform. Any missing information is not the laboratory's responsibility. Con-Test values your partnership on each project and will try to assist with missing information, but will not be held accountable.

I Have Not Confirmed Sample Container Numbers With Lab Staff Before Relinquishing Over Samples_____

con-test® ANALYTICAL LABORATORY

Doc# 277 Rev 5 2017

Login Sample Receipt Checklist - (Rejection Criteria Listing - Using Acceptance Policy) Any False Statement will be brought to the attention of the Client - State True or False

Client CDE

Received By SGA Date 4/20/20 Time 1235

How were the samples received? In Cooler T No Cooler _____ On Ice T No Ice _____ Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 5 Actual Temp - 4.9, 5.9 By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? n/a Were Samples Tampered with? n/a

Was COC Relinquished ? T Does Chain Agree With Samples? T

Are there broken/leaking/loose caps on any samples? F

Is COC in ink/ Legible? T Were samples received within holding time? T

Did COC include all pertinent Information? Client T Analysis T Sampler Name T Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F Who was notified? _____

Are there Rushes? F Who was notified? _____

Are there Short Holds? T Who was notified? Katie

Is there enough Volume? T

Is there Headspace where applicable? T MS/MSD? F

Proper Media/Containers Used? T Is splitting samples required? F

Were trip blanks received? T On COC? F

Do all samples have the proper pH? Acid pH<2 Base 13

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.	14	1 Liter Plastic	2	16 oz Amb.	
HCL-	11	500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.	1	250 mL Plastic	4	4oz Amb/Clear	
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Comments:

Received TB, not on COC.