



89 Crawford Street
Leominster, Massachusetts 01453
Tel: 774.450.7177
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October 21, 2020

U.S. Environmental Protection Agency
Office of Ecosystem Protection
EPA/OEP RGP Applications Coordinator
5 Post Office Square, Suite 100 (OEP06-4)
Boston, Massachusetts 02109-3912

Reference: Notice of Intent (NOI) - Remediation General Permit (RGP)
20 Inner Belt Road
Somerville, Massachusetts

Dear Sir/Madam:

On behalf of Boston Environmental Corporation (BEC), Lockwood Remediation Technologies, LLC (LRT) has prepared this Notice of Intent (NOI) requesting a determination of coverage under the United States Environmental Protection Agency's (EPA's) Remediation General Permit (RGP), pursuant to EPA's National Pollutant Discharge Elimination System (NPDES) program. This NOI was prepared in accordance with the general requirements of the NPDES and related guidance documentation provided by the EPA. The completed NOI Form is provided in **Appendix A**.

Site Information

This NOI is for the management of groundwater that will be generated during dewatering activities associated with the construction of a new residential building located at 20 Inner Belt Road in Somerville, Massachusetts (the Site). A Site Locus is provided as **Figure 1** and a Site Plan satisfying the requirements of RGP Appendix IV Part I.B and I.D is provided as **Figure 2**.

Work Summary

The project includes the construction of a new multi-story building with a single story of below grade parking. To complete portions of the excavations in the dry, dewatering is required to lower the groundwater table as the work is being performed. To do this, filtered sumps will be placed in low spots within the excavation. The water generated during dewatering (Source water) will be pumped to a treatment system prior to discharge to a storm drain with a final outfall in the Millers River. To characterize groundwater from the proposed excavation area, BEC collected representative groundwater samples from monitoring wells located on the site on July 18 and July 24, 2018 and July 7 and September 23, 2020. A sample of the receiving water (The Millers river) was collected by LRT on October 9, 2020. Please be advised that laboratory data was collected for a Phase II environmental assessment and a MWRA permit application prior to pursuance of this NPDES RGP NOI. Some analytes and testing methods are unnecessary for this permit application however all required NPDES parameters with there

required methods have been tested for the samples were analyzed for various parameters in accordance with the NPDES RGP Activity Category III-G.

Discharge and Receiving Surface Water Information

A summary of the analytical results is provided in **Tables 1 and 2** included within **Appendix A**, and copies of the laboratory data reports are provided in **Appendix B**. Concentrations of Naphthalene, iron and total suspended solids were detected in groundwater at concentrations above the respective NPDES RGP Effluent Limitations. Concentrations of EPH and VPH were also detected and reported. To meet these standards, Source water will undergo treatment that includes bag filtration, carbon filtration and prior to discharge. Details of the water treatment system are provided below.

Water Treatment System

A water treatment system schematic is provided as **Figure 3**. Cutsheets of the system components, product information and Safety Data Sheets (SDS) are included in **Appendix C**.

Source water will be pumped to a treatment system with a design flow of up to 100 gallons per minute (gpm); the average effluent flow of the system is estimated to be 75 gpm, and the maximum flow will not exceed 100 gpm. Source water will enter one 18,000-gallon weir tank at the head of the system from the weir tank, the water will be pumped to a triple-bag filter skid (with three single bag filters), followed by two carbon vessels plumbed in series. Discharge from the carbon vessel will pass through a flow/totalizer meter prior to discharge into a storm drain with an outfall in the Millers River. The discharge will be at one location (Discharge Location 2) as depicted on **Figure 2**. Effluent sampling will correspond with this discharge location.

If required to meet discharge requirements, ion exchange may be used on the project to meet discharge criteria. A Notice of Change (NOC) will be submitted to EPA if additional treatment components need to be mobilized at the site.

Consultation with Federal Services

LRT reviewed online electronic data viewers and databases from the Massachusetts Geographical Information System (MassGIS), the Massachusetts Division of Fisheries and Wildlife (MassWildlife; Natural Heritage and Endangered Species Program), and the U.S. National Parks Service Natural Historic Places (NPS). Based on this review, the site, and the point where the proposed discharge reaches the receiving surface water body are not located within an Area of Critical Environmental Concern (ACEC). The Site and the proposed discharge point are not located within Habitats of Rare Wetland Wildlife, Habitats of Rare Species, Estimated Habitats of Rare Wildlife, or listed as a National Historic Place. Documentation is included in **Appendix D**.

Coverage under NPDES RGP

It is our opinion that the proposed discharge is eligible for coverage under the NPDES RGP. On behalf of Boston Environmental Corporation, we are requesting coverage under the NPDES RGP for the discharge of treated wastewater to the Millers River in support of construction dewatering activities that are to take place at 20 Inner Belt Road.

The enclosed NOI form provides required information on the general site conditions, discharge, treatment system, receiving water, and consultation with federal services. For this project, BEC is considered the Operator and has operational control over the construction plans and specifications, including the ability to make modifications to those plans and specifications.

Please feel free to contact us at 774-450-7177 if you have any questions or if you require additional information.

Sincerely,
Lockwood Remediation Technologies, LLC

James Bennett

James Bennett
Project Manager

Kim Gravelle

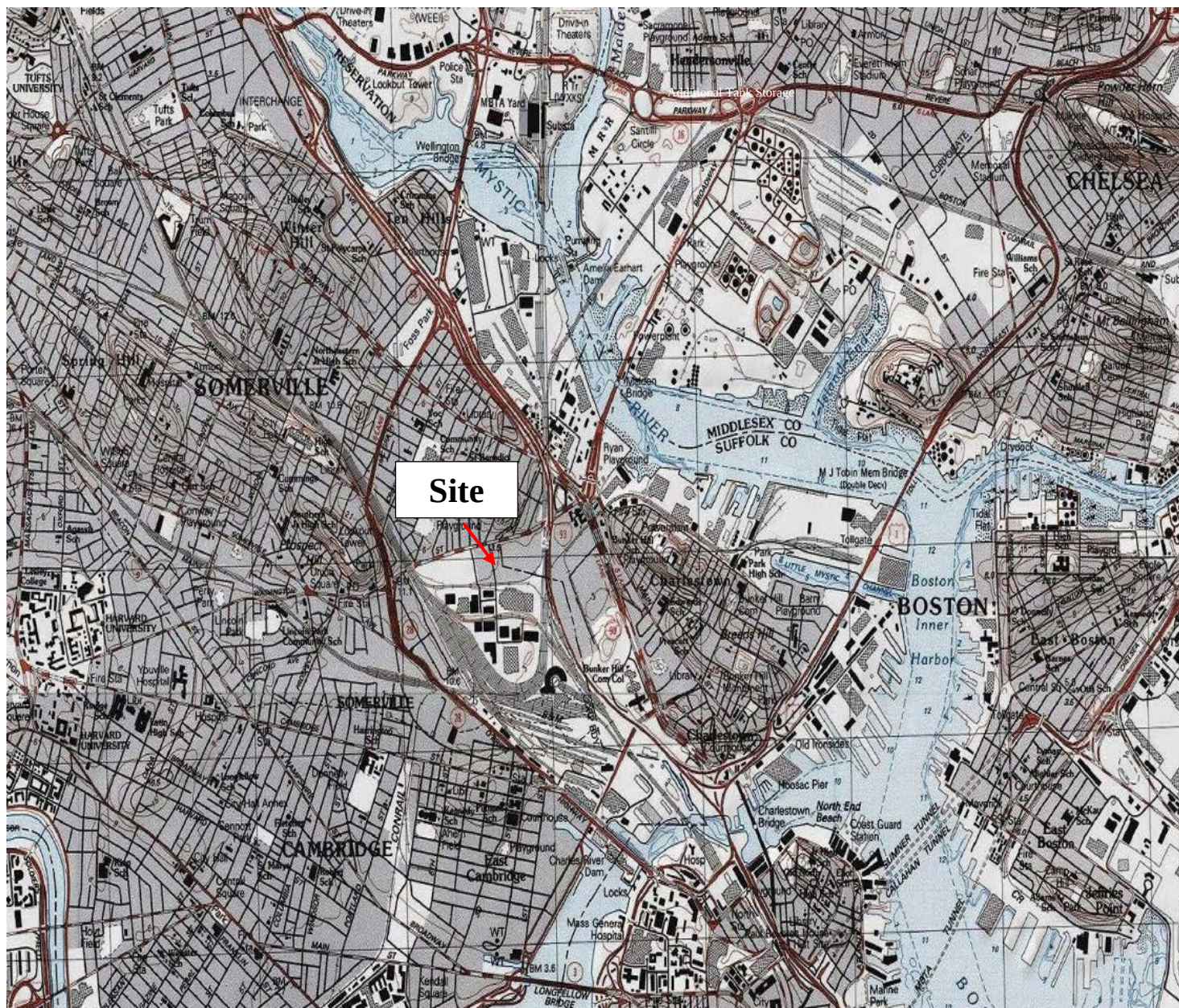
Kim Gravelle, P.G.
Senior Project Manager

Encl: Figure 1 - Locus Plan
Figure 2 - Site Plan
Figure 3 - Water Treatment System Schematic
Appendix A - NOI Form
Appendix B - Laboratory Data
Appendix C - Water Treatment System
Appendix D - Supplemental Information

cc: Mike Toomey - Boston Environmental Corporation
Cathy Vakalopoulos – MADEP
City of Somerville, Carlos Perez and Brian C. Postlewaite, PE

Figures





Source: ArcGIS Map Viewer

Notes

- Figure is not to scale.



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Figure 1A – Locus Plan
20 Inner Belt Road
Somerville, MA



Source:

Notes

1. Figure is not to scale.

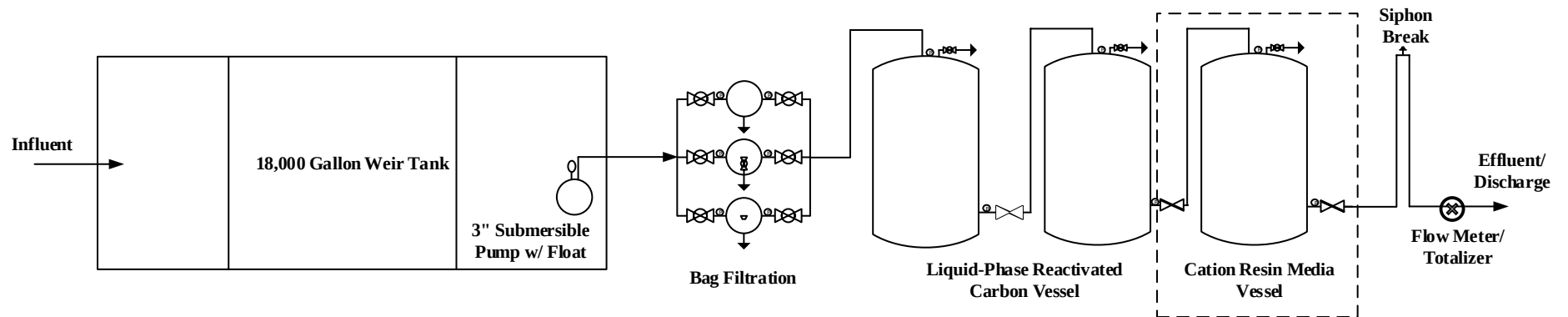
Key:

- Site
- Discharge Path
- Discharge Point
- Sample Location



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Figure 2 – Site Plan
20 Inner Belt Road
Somerville, MA



Notes:

- 1.) Figure is not to scale
- 2.) System rated for 100 GPM

Key:

- Piping/Hose
- Butterfly valve
- Pressure gauge
- Ball valve
- Contingent



Lockwood Remediation Technologies, LLC
89 Crawford Street
Leominster, MA 01453
Office: 774-450-7177

DESIGNED BY: LRT

DRAWN BY: JHJ

CHECKED BY:

DATE:

Water Treatment System Schematic

20 Inner Belt Road
Somerville, MA

PROJECT No.
2-1947

FIGURE No.
3



Appendix A

NOI Form

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

A. General site information:

1. Name of site:	Site address:		
	Street:		
	City:	State:	Zip:
2. Site owner Owner is (check one): ☐ Federal ☐ State/Tribal ☐ Private ☐ Other; if so, specify:	Contact Person:		
	Telephone:	Email:	
	Mailing address:		
	Street:		
	City:	State:	Zip:
3. Site operator, if different than owner	Contact Person:		
	Telephone:	Email:	
	Mailing address:		
	Street:		
	City:	State:	Zip:
4. NPDES permit number assigned by EPA: NPDES permit is (check all that apply): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	5. Other regulatory program(s) that apply to the site (check all that apply):		
	☐ MA Chapter 21e; list RTN(s): ☐ NH Groundwater Management Permit or Groundwater Release Detection Permit: ☐ CERCLA ☐ UIC Program ☐ POTW Pretreatment ☐ CWA Section 404		

B. Receiving water information:

1. Name of receiving water(s):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
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.		
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.		
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.		
6. Has the operator received confirmation from the appropriate State for the 7Q10 and dilution factor indicated? (check one): ☐ Yes ☐ No If yes, indicate date confirmation received:		
7. Has the operator attached a summary of receiving water sampling results as required in Part 4.2 of the RGP in accordance with the instruction in Appendix VIII? (check one): ☐ Yes ☐ No		

C. Source water information:

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

2. Source water contaminants:	
a. For source waters that are contaminated groundwater or contaminated surface water, indicate are any contaminants present that are not included in the RGP? (check one): ☐ Yes ☐ No If yes, indicate the contaminant(s) and the maximum concentration present in accordance with the instructions in Appendix VIII.	b. For a source water that is a surface water other than the receiving water, potable water or other, indicate any contaminants present at the maximum concentration in accordance with the instructions in Appendix VIII? (check one): ☐ Yes ☐ No
3. Has the source water been previously chlorinated or otherwise contains residual chlorine? (check one): ☐ Yes ☐ No	

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ☐ Existing discharge ☐ New discharge ☐ New source	
Outfall(s):	Outfall location(s): (Latitude, Longitude)
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ☐ Indirect discharge, if so, specify: ☐ A private storm sewer system ☐ A municipal storm sewer system If the discharge enters the receiving water via a private or municipal storm sewer system: Has notification been provided to the owner of this system? (check one): ☐ Yes ☐ No Has the operator has received permission from the owner to use such system for discharges? (check one): ☐ Yes ☐ No, if so, explain, with an estimated timeframe for obtaining permission: Has the operator attached a summary of any additional requirements the owner of this system has specified? (check one): ☐ Yes ☐ No	
Provide the expected start and end dates of discharge(s) (month/year):	
Indicate if the discharge is expected to occur over a duration of: ☐ less than 12 months ☐ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ☐ Yes ☐ No	

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

MAG910000
NHG910000

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit ($\mu\text{g/l}$)	Influent		Effluent Limitations	
						Daily maximum ($\mu\text{g/l}$)	Daily average ($\mu\text{g/l}$)	TBEL	WQBEL
A. Inorganics									
Ammonia								Report mg/L	---
Chloride								Report $\mu\text{g/l}$	---
Total Residual Chlorine								0.2 mg/L	
Total Suspended Solids								30 mg/L	---
Antimony								206 $\mu\text{g/L}$	
Arsenic								104 $\mu\text{g/L}$	
Cadmium								10.2 $\mu\text{g/L}$	
Chromium III								323 $\mu\text{g/L}$	
Chromium VI								323 $\mu\text{g/L}$	
Copper								242 $\mu\text{g/L}$	
Iron								5,000 $\mu\text{g/L}$	
Lead								160 $\mu\text{g/L}$	
Mercury								0.739 $\mu\text{g/L}$	
Nickel								1,450 $\mu\text{g/L}$	
Selenium								235.8 $\mu\text{g/L}$	
Silver								35.1 $\mu\text{g/L}$	
Zinc								420 $\mu\text{g/L}$	
Cyanide								178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX								100 $\mu\text{g/L}$	---
Benzene								5.0 $\mu\text{g/L}$	---
1,4 Dioxane								200 $\mu\text{g/L}$	---
Acetone								7.97 mg/L	---
Phenol								1,080 $\mu\text{g/L}$	

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								4.4 µg/L	
1,2 Dichlorobenzene								600 µg/L	---
1,3 Dichlorobenzene								320 µg/L	---
1,4 Dichlorobenzene								5.0 µg/L	---
Total dichlorobenzene								763 µg/L in NH	---
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	
cis-1,2 Dichloroethylene								70 µg/L	---
Vinyl Chloride								2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates								190 µg/L	
Diethylhexyl phthalate								101 µg/L	
Total Group I PAHs								1.0 µg/L	---
Benzo(a)anthracene								As Total PAHs	
Benzo(a)pyrene									
Benzo(b)fluoranthene									
Benzo(k)fluoranthene									
Chrysene									
Dibenzo(a,h)anthracene									
Indeno(1,2,3-cd)pyrene									

[illegible]

Other Contaminants

Parameter	# of samples	Test Method	DL	Daily Max	Daily Average
C11-C22 Aromatics	6	EPH04 1.1	100	350	58
C9-C18 Aliphatics	6	EPH04 1.1	100	100	16.6
C19-C36 Aliphatics	6	EPH04 1.1	100	250	41

E. Treatment system information

1. Indicate the type(s) of treatment that will be applied to effluent prior to discharge: (check all that apply) ☐ Adsorption/Absorption ☐ Advanced Oxidation Processes ☐ Air Stripping ☐ Granulated Activated Carbon (“GAC”)/Liquid Phase Carbon Adsorption ☐ Ion Exchange ☐ Precipitation/Coagulation/Flocculation ☐ Separation/Filtration ☐ Other; if so, specify:	
2. Provide a written description of all treatment system(s) or processes that will be applied to the effluent prior to discharge. Identify each major treatment component (check any that apply): ☐ Fractionation tanks ☐ Equalization tank ☐ Oil/water separator ☐ Mechanical filter ☐ Media filter ☐ Chemical feed tank ☐ Air stripping unit ☐ Bag filter ☐ Other; if so, specify: Indicate if either of the following will occur (check any that apply): ☐ Chlorination ☐ De-chlorination	
3. Provide the design flow capacity in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: Is use of a flow meter feasible? (check one): ☐ Yes ☐ No, if so, provide justification:	
Provide the proposed maximum effluent flow in gpm.	
Provide the average effluent flow in gpm.	
If Activity Category IV applies, indicate the estimated total volume of water that will be discharged:	
4. Has the operator attached a schematic of flow in accordance with the instructions in E, above? (check one): ☐ Yes ☐ No	

F. Chemical and additive information

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

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

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

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

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

G. Endangered Species Act eligibility determination

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

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

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

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

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

H. National Historic Preservation Act eligibility determination

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

- ☐ **Criterion A:** No historic properties are present. The discharges and discharge-related activities (e.g., BMPs) do not have the potential to cause effects on historic properties.
- ☐ **Criterion B:** Historic properties are present. Discharges and discharge related activities do not have the potential to cause effects on historic properties.
- ☐ **Criterion C:** Historic properties are present. The discharges and discharge-related activities have the potential to have an effect or will have an adverse effect on historic properties.

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

Does the supporting documentation include any written agreement with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (TPHO), or other tribal representative that outlines measures the operator will carry out to mitigate or prevent any adverse effects on historic properties? (check one): ☐ Yes ☐ 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 maintained to meet the requirements of this permit. The BMPP will be implemented on-site prior to the initiation of discharge.

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

Check one: Yes ☒ No ☐

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

Check one: Yes ☒ No ☐

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

Check one: Yes ☒ No ☐ NA ☐

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

Check one: Yes ☒ No ☐ NA ☐

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

Check one: Yes ☐ No ☐ NA ☒

Signature:



Date: 10/24/2020

Print Name and Title:

JAY ZAMAN DEV. DIR.



MA Limits

WQBEL

Lockwood Remediation
Technologies LLC

Enter number values in green boxes below

Enter values in the units specified



0	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



230	C_d = Enter influent hardness in mg/L CaCO_3
530	C_s = Enter receiving water hardness in mg/L CaCO_3

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



7.1	pH in Standard Units
25	Temperature in °C
0	Ammonia in mg/L
530	Hardness in mg/L CaCO_3
0	Salinity in ppt
0	Antimony in µg/L
5.2	Arsenic in µg/L
0	Cadmium in µg/L
2.9	Chromium III in µg/L
0	Chromium VI in µg/L
10	Copper in µg/L
1400	Iron in µg/L
3.4	Lead in µg/L
0	Mercury in µg/L
0	Nickel in µg/L
18	Selenium in µg/L
0	Silver in µg/L
13	Zinc in µg/L

Enter **influent** concentrations in the units specified

↓

0.073	TRC in µg/L
25.6	Ammonia in mg/L
0	Antimony in µg/L
0.025	Arsenic in µg/L
0	Cadmium in µg/L
0	Chromium III in µg/L
0	Chromium VI in µg/L
11	Copper in µg/L
77000	Iron in µg/L
0	Lead in µg/L
0	Mercury in µg/L
0	Nickel in µg/L
0	Selenium in µg/L
8.3	Silver in µg/L
170	Zinc in µg/L
0	Cyanide in µg/L
0	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

Notes:

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

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

Dilution Factor

1.0

A. Inorganics

TBEL applies if bolded

WQBEL applies if bolded

Ammonia	Report	mg/L	---	
Chloride	Report	µg/L	---	
Total Residual Chlorine	0.2	mg/L	11	µg/L
Total Suspended Solids	30	mg/L	---	
Antimony	206	µg/L	640	µg/L
Arsenic	104	µg/L	10	µg/L
Cadmium	10.2	µg/L	0.5016	µg/L
Chromium III	323	µg/L	170.5	µg/L
Chromium VI	323	µg/L	11.4	µg/L
Copper	242	µg/L	19.0	µg/L
Iron	5000	µg/L	1000	µg/L
Lead	160	µg/L	9.19	µg/L
Mercury	0.739	µg/L	0.91	µg/L
Nickel	1450	µg/L	105.5	µg/L
Selenium	235.8	µg/L	5.0	µg/L
Silver	35.1	µg/L	15.9	µg/L
Zinc	420	µg/L	242.7	µg/L
Cyanide	178	mg/L	5.2	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	300	µg/L

C. Halogenated VOCs

Carbon Tetrachloride	4.4	µg/L	1.6	µg/L
1,2 Dichlorobenzene	600	µg/L	---	
1,3 Dichlorobenzene	320	µg/L	---	
1,4 Dichlorobenzene	5.0	µg/L	---	
Total dichlorobenzene	---	µg/L	---	
1,1 Dichloroethane	70	µg/L	---	
1,2 Dichloroethane	5.0	µg/L	---	
1,1 Dichloroethylene	3.2	µg/L	---	
Ethylene Dibromide	0.05	µg/L	---	
Methylene Chloride	4.6	µg/L	---	
1,1,1 Trichloroethane	200	µg/L	---	
1,1,2 Trichloroethane	5.0	µg/L	---	
Trichloroethylene	5.0	µg/L	---	
Tetrachloroethylene	5.0	µg/L	3.3	µg/L
cis-1,2 Dichloroethylene	70	µg/L	---	

Vinyl Chloride	2.0	µg/L	---
----------------	-----	------	-----

D. Non-Halogenated SVOCs

Total Phthalates	190	µg/L	---	µg/L
Diethylhexyl phthalate	101	µg/L	2.2	µg/L
Total Group I Polycyclic Aromatic Hydrocarbons	1.0	µg/L	---	
Benzo(a)anthracene	1.0	µg/L	0.0038	µg/L
Benzo(a)pyrene	1.0	µg/L	0.0038	µg/L
Benzo(b)fluoranthene	1.0	µg/L	0.0038	µg/L
Benzo(k)fluoranthene	1.0	µg/L	0.0038	µg/L
Chrysene	1.0	µg/L	0.0038	µg/L
Dibenzo(a,h)anthracene	1.0	µg/L	0.0038	µg/L
Indeno(1,2,3-cd)pyrene	1.0	µg/L	0.0038	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	---
Pentachlorophenol	1.0	µg/L	---

F. Fuels Parameters

Total Petroleum Hydrocarbons	5.0	mg/L	---	
Ethanol	Report	mg/L	---	
Methyl-tert-Butyl Ether	70	µg/L	20	µg/L
tert-Butyl Alcohol	120	µg/L	---	
tert-Amyl Methyl Ether	90	µg/L	---	

The logo for Lockwood Remediation Technologies LLC (LRT) features the letters "LRT" in large, green, 3D block letters. A thick, light purple swoosh curves around the letters from the bottom left to the top right. Below the letters, the text "Lockwood Remediation Technologies LLC" is written in a smaller, grey, sans-serif font. To the right of the text is a small, realistic illustration of the Earth showing continents and oceans.

Discharge Location

From: [Ruan, Xiaodan \(DEP\)](#)
To: [Jake Jennings](#)
Cc: [Vakalopoulos, Catherine \(DEP\)](#)
Subject: RE: NPDES Discharge to Millers River Boston, MA
Date: Monday, October 19, 2020 11:31:47 AM

Hi Jake,

The Millers River flows into the segment MA72-38 of the Charles River. Here is water quality information in assisting you in filling out the NOI:

Waterbody and ID: Charles River (MA72-38) within Charles River Watershed
Classification: B
Outstanding Resource Water?: no
State's most recent Integrated List is located
here: <https://www.epa.gov/sites/production/files/2020-01/documents/2016-ma-303d-list-report.pdf>, search for "MA72-38" to see the causes of impairments.
TMDLs: There are two TMDLs (pathogens and phosphorus) for this segment

Also, if this is not a *current* MCP site, then in addition to submitting the NOI to EPA, you need to apply with MassDEP and submit a \$500 fee (unless fee exempt, e.g., municipality). As you might already know that MassDEP has started using ePLACE, an online application submittal process where you will set up a user ID and be able to submit NOIs for various projects and pay by credit card. The instructions are located on this page: <https://www.mass.gov/how-to/wm-15-npdes-general-permit-notice-of-intent>. Technical assistant information for using the ePLACE is available on the ePLACE application webpage.

Please let me know if you have any questions.

Thanks,
Xiaodan

From: Jake Jennings <JJennings@lrt-llc.net>
Sent: Monday, October 19, 2020 10:23 AM
To: Vakalopoulos, Catherine (DEP) <catherine.vakalopoulos@mass.gov>; Ruan, Xiaodan (DEP) <xiaodan.uan@mass.gov>
Subject: RE: NPDES Discharge to Millers River Boston, MA

CAUTION: This email originated from a sender outside of the Commonwealth of Massachusetts mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Thank you Cathy!

I do need all the waterbody info if possible.

Thanks Again,

Jake

From: [Vakalopoulos, Catherine \(DEP\)](#)
Sent: Monday, October 19, 2020 10:18 AM
To: [Jake Jennings](#); [Ruan, Xiaodan \(DEP\)](#)
Subject: Re: NPDES Discharge to Millers River Boston, MA

Hi Jake,

I'm quite familiar with the Millers River in Boston. It is stormwater dominant and since 7Q10 looks at low flow conditions, you can't calculate a DF. So there is no dilution factor for the Millers River. Do you need all the waterbody info? Xiaodan can get that for you (the Charles TMDLs apply here).
Cathy

From: Jake Jennings <JJennings@lrt-llc.net>
Date: Monday, October 19, 2020 at 10:13 AM
To: "Vakalopoulos, Catherine (DEP)" <catherine.vakalopoulos@mass.gov>, "Ruan, Xiaodan (DEP)" <xiaodan.ruan@mass.gov>
Subject: NPDES Discharge to Millers River Boston, MA

CAUTION: This email originated from a sender outside of the Commonwealth of Massachusetts mail system. Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Hi Cathy,

I am working on a new NPDES RGP permit application with proposed discharge to the Millers River located in Boston. I am having trouble with Stremstats, I cannot delineate a basin that provides the required 10 year low flow calcs where the Millers river is located. Have you had issues with this in the past or does the Millers River not receive enough flow to get a dilution. I've attached a location map for your reference. Let me know.

Thank you,

Jake

Jamie Bennett

From: Jake Jennings
Sent: Tuesday, October 20, 2020 3:57 PM
To: Jamie Bennett
Subject: FW: [External] FW: MWRA Permit 20 Inner Belt Road

Sent from [Mail](#) for Windows 10

From: [Mike Toomey](#)
Sent: Wednesday, October 7, 2020 4:17 PM
To: [Kim Gravelle](#); [Jake Jennings](#)
Subject: FW: [External] FW: MWRA Permit 20 Inner Belt Road

Here is the drawing showing it going to the Miller's river outfall looks like we are back to EPA can we get the MWRA to refund our permit fee

T. Michael Toomey
Executive Vice President
Boston Environmental Corporation
203 Spark St. Brockton, MA 02302
O 508.897.8062 | C 617.877.6648
www.bostonenvironmentalcorp.com



From: Nagle, Conor <CNagle@VHB.com>
Sent: Wednesday, October 7, 2020 3:09 PM
To: Mike Toomey <toomey@bostonenvcorp.com>
Subject: RE: [External] FW: MWRA Permit 20 Inner Belt Road

My understanding from the City of Somerville masterplan, and talking with the Engineering Dept in 2019 (Rich Raiche and Brian Postlewaite), it that this is a storm drain outfall. Formerly a combined lined. But the sewer was separated and now discharges to the MWRA line in Roland St.



Conor P. Nagle
Project Manager

P 617.607.2594
www.vhb.com

From: Mike Toomey <toomey@bostonenvcorp.com>
Sent: Wednesday, October 7, 2020 3:02 PM
To: Nagle, Conor <CNagle@VHB.com>
Subject: [External] FW: MWRA Permit 20 Inner Belt Road

This is what I got back from Carlos Perez at the City of Somerville

T. Michael Toomey
Executive Vice President
Boston Environmental Corporation
203 Spark St. Brockton, MA 02302
O 508.897.8062 | C 617.877.6648
www.bostonenvironmentalcorp.com



From: Carlos Perez <cperez@somervillema.gov>
Sent: Wednesday, September 30, 2020 10:54 AM
To: Mike Toomey <toomey@bostonenvcorp.com>; Jake Jennings <JJennings@lrt-llc.net>
Cc: Jay Hayden <jhayden@somervillema.gov>; Brian Postlewaite <bpostlewaite@somervillema.gov>
Subject: RE: MWRA Permit 20 Inner Belt Road

Good morning Mike,

We have completed a dye test for the catch basin at the corner of Washington St and Innerbelt Rd. Are findings are as follows:

The basin discharges into the 15" storm drain in the street until it reaches 20 Innerbelt Rd and then discharges into 2 manholes on the property. The pipe between the two property manholes is a large concrete pipe between 45-60 inches in size. The last manhole the water was stagnant and the dye did not move on from that point.

It is possible that our GIS data is a little off on the locations of the mains and the large 45-60 inch pipe is in fact the 54 inch combined drain that is shown downstream before entering Boston. Unfortunately there were no other manholes to check to confirm this.

I will contact Boston to see if they have any information on where this line dumps into.

Best,

Carlos Perez
Water and Sewer Engineer
City of Somerville
Water and Sewer Department
17 Franey Road
Somerville, MA 02145
(617) 625-6600 x5815
cperez@somervillema.gov

From: Jake Jennings <JJennings@lrt-llc.net>
Sent: Monday, August 24, 2020 1:17 PM
To: Engineering <engineering@somervillema.gov>
Subject: MWRA Permit 20 Inner Belt Road

To Whom it May Concern,

I am working on a MWRA permit for 20 Innerbelt road. Please see attached GIS sewer maps provided by the Somerville GIS department. I am looking for information on where the catch basin I have labeled on the map goes, does it go to combined sewer? I appreciate any assistance you can provide me.

Thank you,

Jake Jennings

Lockwood Remediation Technologies, LLC

89 Crawford Street
Leominster, MA 01453
O: 774.450.7177
F: 888.835.0617
M: 978.751.5431
jjennings@lrt-llc.net



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Appendix B

Laboratory Data

July 30, 2018

Rick Stromberg
Boston Environmental Corp. - Brockton, MA
203 Spark St., Brockton, MA
Brockton, MA 02302

Project Location: 20 Inner Belt Rd., Somerville, MA
Client Job Number:
Project Number: BEC18134
Laboratory Work Order Number: 18G0928

Enclosed are results of analyses for samples received by the laboratory on July 24, 2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Kerry K. McGee". The signature is written in a cursive, flowing style.

Kerry K. McGee
Project Manager

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

Boston Environmental Corp. - Brockton, MA
203 Spark St., Brockton, MA
Brockton, MA 02302
ATTN: Rick Stromberg

REPORT DATE: 7/30/2018

PURCHASE ORDER NUMBER: BEC18134

PROJECT NUMBER: BEC18134

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18G0928

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

PROJECT LOCATION: 20 Inner Belt Rd., Somerville, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
MW-1	18G0928-01	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SW-846 6020B SW-846 7470A SW-846 8082A SW-846 8260C	
BEC-28 MW	18G0928-02	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SW-846 8082A	

CASE NARRATIVE SUMMARY

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

For method 6020, only a select list of metals was requested and reported.

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

SW-846 7470A

Qualifications:**B**

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

Analyte & Samples(s) Qualified:**Mercury**

B208632-BLK1, B208632-BS1, B208632-BSD1

SW-846 8260C

Qualifications:**L-07**

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.

Analyte & Samples(s) Qualified:**1,1-Dichloroethane**

B208644-BS1

L-07A

Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.

Analyte & Samples(s) Qualified:**Vinyl Chloride**

B208644-BS1

R-05

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:**Vinyl Chloride**

18G0928-01[MW-1], B208644-BLK1, B208644-BS1, B208644-BSD1, S025580-CCV1

RL-07Elevated reporting limit based on lowest point in calibration.
MA CAM reporting limit not met.**Analyte & Samples(s) Qualified:****1,2,4-Trichlorobenzene**

18G0928-01[MW-1]

Carbon Disulfide

18G0928-01[MW-1]

Chloromethane

18G0928-01[MW-1]

Methylene Chloride

18G0928-01[MW-1]

Naphthalene

18G0928-01[MW-1]

V-16

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:**1,4-Dioxane**

18G0928-01[MW-1], B208644-BLK1, B208644-BS1, B208644-BSD1, S025580-CCV1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:**1,1-Dichloroethane**

B208644-BS1, B208644-BSD1, S025580-CCV1

2-Butanone (MEK)

B208644-BS1, B208644-BSD1, S025580-CCV1

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

MADEP-EPH-04-1.1

SPE cartridge contamination with non-petroleum compounds, if present, is verified by GC/MS in each method blank per extraction batch and excluded from C11-C22 aromatic range fraction in all samples in the batch. No significant modifications were made to the method.

MADEP-VPH-Feb 2018 Rev 2.1

No significant modifications were made to the method. All VPH samples were received preserved properly at pH <2 in the proper containers as specified on the chain-of-custody form unless specified in this narrative.

Analytical column used for VPH analysis is Restek, Rtx-502.2, 105meter, 0.53mmID, 3um df. Trap used for VPH analysis is CarboSieve B/CarboSieveS-III.

SW-846 8260C

Laboratory control sample recoveries for required MCP Data Enhancement 8260 compounds were all within limits specified by the method except for "difficult analytes" where recovery control limits of 40-160% are used and/or unless otherwise listed in this narrative. Difficult analytes: MIBK, MEK, acetone, 1,4-dioxane, chloromethane, dichlorodifluoromethane, 2-hexanone, and bromomethane.

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.

A handwritten signature in black ink, appearing to read "Tod Kopyscinski", written in a cursive style.

Tod E. Kopyscinski
Laboratory Director

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

Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0928

Date Received: 7/24/2018

Field Sample #: MW-1

Sampled: 7/23/2018 08:00

Sample ID: 18G0928-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	10	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Benzene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Bromobenzene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Bromochloromethane	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Bromodichloromethane	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Bromoform	ND	2.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Bromomethane	ND	2.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
2-Butanone (MEK)	ND	10	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
n-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
sec-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
tert-Butylbenzene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Carbon Disulfide	ND	5.0	µg/L	1	RL-07	SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Carbon Tetrachloride	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Chlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Chlorodibromomethane	ND	0.50	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Chloroethane	ND	2.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Chloroform	ND	2.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Chloromethane	ND	5.0	µg/L	1	RL-07	SW-846 8260C	7/25/18	7/25/18 16:55	EEH
2-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
4-Chlorotoluene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
1,2-Dibromoethane (EDB)	ND	0.50	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Dibromomethane	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
1,2-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
1,3-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
1,4-Dichlorobenzene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
1,1-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
1,2-Dichloroethane	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
1,1-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
cis-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
trans-1,2-Dichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
1,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
1,3-Dichloropropane	ND	0.50	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
2,2-Dichloropropane	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
1,1-Dichloropropene	ND	0.50	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
cis-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
trans-1,3-Dichloropropene	ND	0.40	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Diethyl Ether	ND	2.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Diisopropyl Ether (DIPE)	ND	0.50	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
1,4-Dioxane	ND	50	µg/L	1	V-16	SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Ethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0928

Date Received: 7/24/2018

Field Sample #: MW-1

Sampled: 7/23/2018 08:00

Sample ID: 18G0928-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	2.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
2-Hexanone (MBK)	ND	10	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Isopropylbenzene (Cumene)	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Methylene Chloride	ND	5.0	µg/L	1	RL-07	SW-846 8260C	7/25/18	7/25/18 16:55	EEH
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Naphthalene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	7/25/18	7/25/18 16:55	EEH
n-Propylbenzene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Styrene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Tetrachloroethylene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Tetrahydrofuran	ND	2.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Toluene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
1,2,3-Trichlorobenzene	ND	2.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1	RL-07	SW-846 8260C	7/25/18	7/25/18 16:55	EEH
1,1,1-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
1,1,2-Trichloroethane	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Trichloroethylene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
1,2,3-Trichloropropane	ND	2.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
1,2,4-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
1,3,5-Trimethylbenzene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
Vinyl Chloride	ND	2.0	µg/L	1	R-05	SW-846 8260C	7/25/18	7/25/18 16:55	EEH
m+p Xylene	ND	2.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH
o-Xylene	ND	1.0	µg/L	1		SW-846 8260C	7/25/18	7/25/18 16:55	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	96.7	70-130	
Toluene-d8	100	70-130	
4-Bromofluorobenzene	98.1	70-130	

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0928

Date Received: 7/24/2018

Field Sample #: MW-1

Sampled: 7/23/2018 08:00

Sample ID: 18G0928-01

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/25/18	7/26/18 11:39	KAL
Aroclor-1221 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/25/18	7/26/18 11:39	KAL
Aroclor-1232 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/25/18	7/26/18 11:39	KAL
Aroclor-1242 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/25/18	7/26/18 11:39	KAL
Aroclor-1248 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/25/18	7/26/18 11:39	KAL
Aroclor-1254 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/25/18	7/26/18 11:39	KAL
Aroclor-1260 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/25/18	7/26/18 11:39	KAL
Aroclor-1262 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/25/18	7/26/18 11:39	KAL
Aroclor-1268 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/25/18	7/26/18 11:39	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	63.6	30-150							
Decachlorobiphenyl [2]	67.7	30-150							
Tetrachloro-m-xylene [1]	74.9	30-150							
Tetrachloro-m-xylene [2]	76.7	30-150							

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0928

Date Received: 7/24/2018

Field Sample #: MW-1

Sampled: 7/23/2018 08:00

Sample ID: 18G0928-01

Sample Matrix: Ground Water

Petrolium Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:30	KLB
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:30	KLB
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:30	KLB
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:30	KLB
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:30	KLB
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:30	KLB
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:30	KLB
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:30	KLB
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:30	KLB
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:30	KLB
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:30	KLB
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:30	KLB
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:30	KLB
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:30	KLB
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:30	KLB
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:30	KLB
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:30	KLB
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:30	KLB
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:30	KLB
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:30	KLB
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:30	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Chlorooctadecane (COD)	76.8	40-140							
o-Terphenyl (OTP)	76.6	40-140							
2-Bromonaphthalene	101	40-140							
2-Fluorobiphenyl	91.0	40-140							

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

Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0928

Date Received: 7/24/2018

Field Sample #: MW-1

Sampled: 7/23/2018 08:00

Sample ID: 18G0928-01

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 9:36	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 9:36	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 9:36	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 9:36	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 9:36	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 9:36	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 9:36	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 9:36	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 9:36	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 9:36	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 9:36	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 9:36	EEH
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,5-Dibromotoluene (FID)	113	70-130						7/25/18 9:36	
2,5-Dibromotoluene (PID)	103	70-130						7/25/18 9:36	

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

Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0928

Date Received: 7/24/2018

Field Sample #: MW-1

Sampled: 7/23/2018 08:00

Sample ID: 18G0928-01

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	2.6	0.40	µg/L	1		SW-846 6020B	7/25/18	7/27/18 11:13	WSD
Barium	84	10	µg/L	1		SW-846 6020B	7/25/18	7/27/18 11:13	WSD
Cadmium	ND	0.50	µg/L	1		SW-846 6020B	7/25/18	7/27/18 11:13	WSD
Chromium	1.0	1.0	µg/L	1		SW-846 6020B	7/25/18	7/27/18 11:13	WSD
Lead	1.6	1.0	µg/L	1		SW-846 6020B	7/25/18	7/30/18 3:51	MJH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	7/25/18	7/26/18 9:14	EJB
Selenium	ND	5.0	µg/L	1		SW-846 6020B	7/25/18	7/27/18 11:13	WSD
Silver	ND	0.50	µg/L	1		SW-846 6020B	7/25/18	7/27/18 11:13	WSD

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Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0928

Date Received: 7/24/2018

Field Sample #: BEC-28 MW

Sampled: 7/23/2018 13:00

Sample ID: 18G0928-02

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/25/18	7/26/18 11:51	KAL
Aroclor-1221 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/25/18	7/26/18 11:51	KAL
Aroclor-1232 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/25/18	7/26/18 11:51	KAL
Aroclor-1242 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/25/18	7/26/18 11:51	KAL
Aroclor-1248 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/25/18	7/26/18 11:51	KAL
Aroclor-1254 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/25/18	7/26/18 11:51	KAL
Aroclor-1260 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/25/18	7/26/18 11:51	KAL
Aroclor-1262 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/25/18	7/26/18 11:51	KAL
Aroclor-1268 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/25/18	7/26/18 11:51	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	89.7	30-150							
Decachlorobiphenyl [2]	95.7	30-150							
Tetrachloro-m-xylene [1]	92.5	30-150							
Tetrachloro-m-xylene [2]	94.6	30-150							

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0928

Date Received: 7/24/2018

Field Sample #: BEC-28 MW

Sampled: 7/23/2018 13:00

Sample ID: 18G0928-02

Sample Matrix: Ground Water

Petrolium Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:49	KLB
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:49	KLB
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:49	KLB
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:49	KLB
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:49	KLB
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:49	KLB
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:49	KLB
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:49	KLB
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:49	KLB
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:49	KLB
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:49	KLB
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:49	KLB
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:49	KLB
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:49	KLB
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:49	KLB
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:49	KLB
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:49	KLB
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:49	KLB
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:49	KLB
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:49	KLB
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/25/18	7/26/18 12:49	KLB
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Chlorooctadecane (COD)	72.2	40-140							
o-Terphenyl (OTP)	70.7	40-140							
2-Bromonaphthalene	111	40-140							
2-Fluorobiphenyl	99.2	40-140							

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

Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0928

Date Received: 7/24/2018

Field Sample #: BEC-28 MW

Sampled: 7/23/2018 13:00

Sample ID: 18G0928-02

Sample Matrix: Ground Water

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 10:05	EEH
C5-C8 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 10:05	EEH
Unadjusted C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 10:05	EEH
C9-C12 Aliphatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 10:05	EEH
C9-C10 Aromatics	ND	100	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 10:05	EEH
Benzene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 10:05	EEH
Ethylbenzene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 10:05	EEH
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 10:05	EEH
Naphthalene	ND	5.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 10:05	EEH
Toluene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 10:05	EEH
m+p Xylene	ND	2.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 10:05	EEH
o-Xylene	ND	1.0	µg/L	1		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/25/18 10:05	EEH
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,5-Dibromotoluene (FID)	111	70-130							
2,5-Dibromotoluene (PID)	104	70-130							

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

Sample Extraction Data**Prep Method: SW-846 3510C-MADEP-EPH-04-1.1**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18G0928-01 [MW-1]	B208677	1000	2.00	07/25/18
18G0928-02 [BEC-28 MW]	B208677	1000	2.00	07/25/18

Prep Method: MA VPH-MADEP-VPH-Feb 2018 Rev 2.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18G0928-01 [MW-1]	B208504	5	5.00	07/23/18
18G0928-02 [BEC-28 MW]	B208504	5	5.00	07/23/18

Prep Method: SW-846 3005A Dissolved-SW-846 6020B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18G0928-01 [MW-1]	B208668	50.0	50.0	07/25/18

Prep Method: SW-846 7470A Dissolved-SW-846 7470A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18G0928-01 [MW-1]	B208632	6.00	6.00	07/25/18

Prep Method: SW-846 3510C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18G0928-01 [MW-1]	B208670	1000	10.0	07/25/18
18G0928-02 [BEC-28 MW]	B208670	1000	10.0	07/25/18

Prep Method: SW-846 5030B-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18G0928-01 [MW-1]	B208644	5	5.00	07/25/18

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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
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Batch B208644 - SW-846 5030B
Blank (B208644-BLK1)

Prepared & Analyzed: 07/25/18

Acetone	ND	10	µg/L
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L
Benzene	ND	1.0	µg/L
Bromobenzene	ND	1.0	µg/L
Bromochloromethane	ND	1.0	µg/L
Bromodichloromethane	ND	1.0	µg/L
Bromoform	ND	1.0	µg/L
Bromomethane	ND	2.0	µg/L
2-Butanone (MEK)	ND	10	µg/L
n-Butylbenzene	ND	1.0	µg/L
sec-Butylbenzene	ND	1.0	µg/L
tert-Butylbenzene	ND	1.0	µg/L
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L
Carbon Disulfide	ND	5.0	µg/L
Carbon Tetrachloride	ND	1.0	µg/L
Chlorobenzene	ND	1.0	µg/L
Chlorodibromomethane	ND	0.50	µg/L
Chloroethane	ND	2.0	µg/L
Chloroform	ND	2.0	µg/L
Chloromethane	ND	2.0	µg/L
2-Chlorotoluene	ND	1.0	µg/L
4-Chlorotoluene	ND	1.0	µg/L
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L
1,2-Dibromoethane (EDB)	ND	0.50	µg/L
Dibromomethane	ND	1.0	µg/L
1,2-Dichlorobenzene	ND	1.0	µg/L
1,3-Dichlorobenzene	ND	1.0	µg/L
1,4-Dichlorobenzene	ND	1.0	µg/L
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L
1,1-Dichloroethane	ND	1.0	µg/L
1,2-Dichloroethane	ND	1.0	µg/L
1,1-Dichloroethylene	ND	1.0	µg/L
cis-1,2-Dichloroethylene	ND	1.0	µg/L
trans-1,2-Dichloroethylene	ND	1.0	µg/L
1,2-Dichloropropane	ND	1.0	µg/L
1,3-Dichloropropane	ND	0.50	µg/L
2,2-Dichloropropane	ND	1.0	µg/L
1,1-Dichloropropene	ND	0.50	µg/L
cis-1,3-Dichloropropene	ND	0.40	µg/L
trans-1,3-Dichloropropene	ND	0.40	µg/L
Diethyl Ether	ND	2.0	µg/L
Diisopropyl Ether (DIPE)	ND	0.50	µg/L
1,4-Dioxane	ND	50	µg/L
Ethylbenzene	ND	1.0	µg/L
Hexachlorobutadiene	ND	0.60	µg/L
2-Hexanone (MBK)	ND	10	µg/L
Isopropylbenzene (Cumene)	ND	1.0	µg/L
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L
Methylene Chloride	ND	5.0	µg/L
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L
Naphthalene	ND	2.0	µg/L

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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 B208644 - SW-846 5030B										
Blank (B208644-BLK1)										
Prepared & Analyzed: 07/25/18										
n-Propylbenzene	ND	1.0	µg/L							
Styrene	ND	1.0	µg/L							
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L							
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L							
Tetrachloroethylene	ND	1.0	µg/L							
Tetrahydrofuran	ND	2.0	µg/L							
Toluene	ND	1.0	µg/L							
1,2,3-Trichlorobenzene	ND	2.0	µg/L							
1,2,4-Trichlorobenzene	ND	1.0	µg/L							
1,1,1-Trichloroethane	ND	1.0	µg/L							
1,1,2-Trichloroethane	ND	1.0	µg/L							
Trichloroethylene	ND	1.0	µg/L							
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L							
1,2,3-Trichloropropane	ND	2.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
1,3,5-Trimethylbenzene	ND	1.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							R-05
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	24.4		µg/L	25.0		97.6	70-130			
Surrogate: Toluene-d8	25.5		µg/L	25.0		102	70-130			
Surrogate: 4-Bromofluorobenzene	23.8		µg/L	25.0		95.1	70-130			
LCS (B208644-BS1)										
Prepared & Analyzed: 07/25/18										
Acetone	117	10	µg/L	100		117	40-160			†
tert-Amyl Methyl Ether (TAME)	9.79	0.50	µg/L	10.0		97.9	70-130			
Benzene	10.5	1.0	µg/L	10.0		105	70-130			
Bromobenzene	10.9	1.0	µg/L	10.0		109	70-130			
Bromochloromethane	11.8	1.0	µg/L	10.0		118	70-130			
Bromodichloromethane	10.8	1.0	µg/L	10.0		108	70-130			
Bromoform	11.2	1.0	µg/L	10.0		112	70-130			
Bromomethane	5.95	2.0	µg/L	10.0		59.5	40-160		L-14	†
2-Butanone (MEK)	139	10	µg/L	100		139	40-160		L-14, V-20	†
n-Butylbenzene	10.5	1.0	µg/L	10.0		105	70-130			
sec-Butylbenzene	10.2	1.0	µg/L	10.0		102	70-130			
tert-Butylbenzene	9.66	1.0	µg/L	10.0		96.6	70-130			
tert-Butyl Ethyl Ether (TBEE)	10.2	0.50	µg/L	10.0		102	70-130			
Carbon Disulfide	11.2	5.0	µg/L	10.0		112	70-130			
Carbon Tetrachloride	11.0	1.0	µg/L	10.0		110	70-130			
Chlorobenzene	10.6	1.0	µg/L	10.0		106	70-130			
Chlorodibromomethane	10.8	0.50	µg/L	10.0		108	70-130			
Chloroethane	9.97	2.0	µg/L	10.0		99.7	70-130			
Chloroform	11.0	2.0	µg/L	10.0		110	70-130			
Chloromethane	10.5	2.0	µg/L	10.0		105	40-160			†
2-Chlorotoluene	9.78	1.0	µg/L	10.0		97.8	70-130			
4-Chlorotoluene	10.8	1.0	µg/L	10.0		108	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	9.90	2.0	µg/L	10.0		99.0	70-130			
1,2-Dibromoethane (EDB)	11.4	0.50	µg/L	10.0		114	70-130			
Dibromomethane	11.8	1.0	µg/L	10.0		118	70-130			
1,2-Dichlorobenzene	10.3	1.0	µg/L	10.0		103	70-130			
1,3-Dichlorobenzene	10.6	1.0	µg/L	10.0		106	70-130			
1,4-Dichlorobenzene	10.4	1.0	µg/L	10.0		104	70-130			

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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 B208644 - SW-846 5030B										
LCS (B208644-BS1)				Prepared & Analyzed: 07/25/18						
Dichlorodifluoromethane (Freon 12)	8.42	2.0	µg/L	10.0		84.2	40-160			†
1,1-Dichloroethane	13.2	1.0	µg/L	10.0		132 *	70-130			L-07, V-20
1,2-Dichloroethane	10.6	1.0	µg/L	10.0		106	70-130			
1,1-Dichloroethylene	9.44	1.0	µg/L	10.0		94.4	70-130			
cis-1,2-Dichloroethylene	10.5	1.0	µg/L	10.0		105	70-130			
trans-1,2-Dichloroethylene	10.4	1.0	µg/L	10.0		104	70-130			
1,2-Dichloropropane	10.7	1.0	µg/L	10.0		107	70-130			
1,3-Dichloropropane	10.4	0.50	µg/L	10.0		104	70-130			
2,2-Dichloropropane	11.2	1.0	µg/L	10.0		112	70-130			
1,1-Dichloropropene	10.3	0.50	µg/L	10.0		103	70-130			
cis-1,3-Dichloropropene	9.88	0.40	µg/L	10.0		98.8	70-130			
trans-1,3-Dichloropropene	9.84	0.40	µg/L	10.0		98.4	70-130			
Diethyl Ether	10.2	2.0	µg/L	10.0		102	70-130			
Diisopropyl Ether (DIPE)	9.66	0.50	µg/L	10.0		96.6	70-130			
1,4-Dioxane	120	50	µg/L	100		120	40-160			V-16 †
Ethylbenzene	10.5	1.0	µg/L	10.0		105	70-130			
Hexachlorobutadiene	12.6	0.60	µg/L	10.0		126	70-130			
2-Hexanone (MBK)	123	10	µg/L	100		123	40-160			†
Isopropylbenzene (Cumene)	11.2	1.0	µg/L	10.0		112	70-130			
p-Isopropyltoluene (p-Cymene)	10.3	1.0	µg/L	10.0		103	70-130			
Methyl tert-Butyl Ether (MTBE)	12.8	1.0	µg/L	10.0		128	70-130			
Methylene Chloride	9.88	5.0	µg/L	10.0		98.8	70-130			
4-Methyl-2-pentanone (MIBK)	117	10	µg/L	100		117	40-160			†
Naphthalene	11.0	2.0	µg/L	10.0		110	70-130			
n-Propylbenzene	10.4	1.0	µg/L	10.0		104	70-130			
Styrene	10.6	1.0	µg/L	10.0		106	70-130			
1,1,1,2-Tetrachloroethane	11.0	1.0	µg/L	10.0		110	70-130			
1,1,1,2,2-Tetrachloroethane	11.9	0.50	µg/L	10.0		119	70-130			
Tetrachloroethylene	11.8	1.0	µg/L	10.0		118	70-130			
Tetrahydrofuran	12.4	2.0	µg/L	10.0		124	70-130			
Toluene	10.7	1.0	µg/L	10.0		107	70-130			
1,2,3-Trichlorobenzene	10.4	2.0	µg/L	10.0		104	70-130			
1,2,4-Trichlorobenzene	9.70	1.0	µg/L	10.0		97.0	70-130			
1,1,1-Trichloroethane	10.7	1.0	µg/L	10.0		107	70-130			
1,1,2-Trichloroethane	11.4	1.0	µg/L	10.0		114	70-130			
Trichloroethylene	11.0	1.0	µg/L	10.0		110	70-130			
Trichlorofluoromethane (Freon 11)	8.86	2.0	µg/L	10.0		88.6	70-130			
1,2,3-Trichloropropane	11.6	2.0	µg/L	10.0		116	70-130			
1,2,4-Trimethylbenzene	10.1	1.0	µg/L	10.0		101	70-130			
1,3,5-Trimethylbenzene	10.7	1.0	µg/L	10.0		107	70-130			
Vinyl Chloride	13.8	2.0	µg/L	10.0		138 *	70-130			L-07A, R-05
m+p Xylene	20.9	2.0	µg/L	20.0		105	70-130			
o-Xylene	10.4	1.0	µg/L	10.0		104	70-130			
Surrogate: 1,2-Dichloroethane-d4	24.4		µg/L	25.0		97.7	70-130			
Surrogate: Toluene-d8	25.0		µg/L	25.0		99.9	70-130			
Surrogate: 4-Bromofluorobenzene	25.6		µg/L	25.0		103	70-130			

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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 B208644 - SW-846 5030B										
LCS Dup (B208644-BS1)				Prepared & Analyzed: 07/25/18						
Acetone	124	10	µg/L	100		124	40-160	5.24	20	†
tert-Amyl Methyl Ether (TAME)	9.38	0.50	µg/L	10.0		93.8	70-130	4.28	20	
Benzene	10.3	1.0	µg/L	10.0		103	70-130	1.44	20	
Bromobenzene	10.3	1.0	µg/L	10.0		103	70-130	5.09	20	
Bromochloromethane	11.2	1.0	µg/L	10.0		112	70-130	4.94	20	
Bromodichloromethane	10.4	1.0	µg/L	10.0		104	70-130	3.58	20	
Bromoform	10.7	1.0	µg/L	10.0		107	70-130	5.21	20	
Bromomethane	6.53	2.0	µg/L	10.0		65.3	40-160	9.29	20	L-14 †
2-Butanone (MEK)	124	10	µg/L	100		124	40-160	11.0	20	V-20 †
n-Butylbenzene	10.2	1.0	µg/L	10.0		102	70-130	2.51	20	
sec-Butylbenzene	9.72	1.0	µg/L	10.0		97.2	70-130	4.92	20	
tert-Butylbenzene	9.29	1.0	µg/L	10.0		92.9	70-130	3.91	20	
tert-Butyl Ethyl Ether (TBEE)	9.59	0.50	µg/L	10.0		95.9	70-130	6.07	20	
Carbon Disulfide	11.1	5.0	µg/L	10.0		111	70-130	0.900	20	
Carbon Tetrachloride	10.5	1.0	µg/L	10.0		105	70-130	4.65	20	
Chlorobenzene	9.99	1.0	µg/L	10.0		99.9	70-130	5.83	20	
Chlorodibromomethane	10.4	0.50	µg/L	10.0		104	70-130	4.33	20	
Chloroethane	9.33	2.0	µg/L	10.0		93.3	70-130	6.63	20	
Chloroform	10.8	2.0	µg/L	10.0		108	70-130	2.39	20	
Chloromethane	8.60	2.0	µg/L	10.0		86.0	40-160	19.9	20	†
2-Chlorotoluene	9.16	1.0	µg/L	10.0		91.6	70-130	6.55	20	
4-Chlorotoluene	9.92	1.0	µg/L	10.0		99.2	70-130	8.86	20	
1,2-Dibromo-3-chloropropane (DBCP)	9.99	2.0	µg/L	10.0		99.9	70-130	0.905	20	
1,2-Dibromoethane (EDB)	11.0	0.50	µg/L	10.0		110	70-130	3.65	20	
Dibromomethane	11.0	1.0	µg/L	10.0		110	70-130	7.28	20	
1,2-Dichlorobenzene	9.95	1.0	µg/L	10.0		99.5	70-130	3.75	20	
1,3-Dichlorobenzene	10.4	1.0	µg/L	10.0		104	70-130	1.81	20	
1,4-Dichlorobenzene	9.96	1.0	µg/L	10.0		99.6	70-130	4.80	20	
Dichlorodifluoromethane (Freon 12)	8.33	2.0	µg/L	10.0		83.3	40-160	1.07	20	†
1,1-Dichloroethane	12.3	1.0	µg/L	10.0		123	70-130	7.08	20	V-20
1,2-Dichloroethane	10.0	1.0	µg/L	10.0		100	70-130	5.43	20	
1,1-Dichloroethylene	9.64	1.0	µg/L	10.0		96.4	70-130	2.10	20	
cis-1,2-Dichloroethylene	10.1	1.0	µg/L	10.0		101	70-130	3.99	20	
trans-1,2-Dichloroethylene	10.9	1.0	µg/L	10.0		109	70-130	3.85	20	
1,2-Dichloropropane	10.4	1.0	µg/L	10.0		104	70-130	2.55	20	
1,3-Dichloropropane	10.4	0.50	µg/L	10.0		104	70-130	0.0964	20	
2,2-Dichloropropane	10.0	1.0	µg/L	10.0		100	70-130	11.2	20	
1,1-Dichloropropene	10.0	0.50	µg/L	10.0		100	70-130	3.24	20	
cis-1,3-Dichloropropene	9.30	0.40	µg/L	10.0		93.0	70-130	6.05	20	
trans-1,3-Dichloropropene	9.51	0.40	µg/L	10.0		95.1	70-130	3.41	20	
Diethyl Ether	10.4	2.0	µg/L	10.0		104	70-130	2.13	20	
Diisopropyl Ether (DIPE)	9.48	0.50	µg/L	10.0		94.8	70-130	1.88	20	
1,4-Dioxane	120	50	µg/L	100		120	40-160	0.175	20	V-16 †
Ethylbenzene	9.87	1.0	µg/L	10.0		98.7	70-130	6.09	20	
Hexachlorobutadiene	11.8	0.60	µg/L	10.0		118	70-130	6.21	20	
2-Hexanone (MBK)	122	10	µg/L	100		122	40-160	0.891	20	†
Isopropylbenzene (Cumene)	10.3	1.0	µg/L	10.0		103	70-130	7.92	20	
p-Isopropyltoluene (p-Cymene)	9.95	1.0	µg/L	10.0		99.5	70-130	3.84	20	
Methyl tert-Butyl Ether (MTBE)	12.9	1.0	µg/L	10.0		129	70-130	1.32	20	
Methylene Chloride	10.2	5.0	µg/L	10.0		102	70-130	3.58	20	
4-Methyl-2-pentanone (MIBK)	116	10	µg/L	100		116	40-160	0.909	20	†
Naphthalene	10.9	2.0	µg/L	10.0		109	70-130	0.640	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 B208644 - SW-846 5030B										
LCS Dup (B208644-BSD1)										
Prepared & Analyzed: 07/25/18										
n-Propylbenzene	9.72	1.0	µg/L	10.0		97.2	70-130	7.24	20	
Styrene	10.0	1.0	µg/L	10.0		100	70-130	6.10	20	
1,1,1,2-Tetrachloroethane	10.5	1.0	µg/L	10.0		105	70-130	4.56	20	
1,1,2,2-Tetrachloroethane	11.4	0.50	µg/L	10.0		114	70-130	4.56	20	
Tetrachloroethylene	11.2	1.0	µg/L	10.0		112	70-130	5.83	20	
Tetrahydrofuran	12.1	2.0	µg/L	10.0		121	70-130	2.77	20	
Toluene	10.4	1.0	µg/L	10.0		104	70-130	2.18	20	
1,2,3-Trichlorobenzene	10.2	2.0	µg/L	10.0		102	70-130	1.75	20	
1,2,4-Trichlorobenzene	9.37	1.0	µg/L	10.0		93.7	70-130	3.46	20	
1,1,1-Trichloroethane	10.3	1.0	µg/L	10.0		103	70-130	3.81	20	
1,1,2-Trichloroethane	11.0	1.0	µg/L	10.0		110	70-130	3.67	20	
Trichloroethylene	10.5	1.0	µg/L	10.0		105	70-130	4.28	20	
Trichlorofluoromethane (Freon 11)	9.04	2.0	µg/L	10.0		90.4	70-130	2.01	20	
1,2,3-Trichloropropane	10.9	2.0	µg/L	10.0		109	70-130	6.29	20	
1,2,4-Trimethylbenzene	9.70	1.0	µg/L	10.0		97.0	70-130	3.64	20	
1,3,5-Trimethylbenzene	10.1	1.0	µg/L	10.0		101	70-130	5.39	20	
Vinyl Chloride	9.51	2.0	µg/L	10.0		95.1	70-130	37.2 *	20	R-05
m+p Xylene	19.7	2.0	µg/L	20.0		98.4	70-130	6.06	20	
o-Xylene	9.98	1.0	µg/L	10.0		99.8	70-130	4.22	20	
Surrogate: 1,2-Dichloroethane-d4	24.6		µg/L	25.0		98.2	70-130			
Surrogate: Toluene-d8	25.2		µg/L	25.0		101	70-130			
Surrogate: 4-Bromofluorobenzene	25.0		µg/L	25.0		99.9	70-130			

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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 B208670 - SW-846 3510C										
Blank (B208670-BLK1)										
Prepared: 07/25/18 Analyzed: 07/26/18										
Aroclor-1016	ND	0.20	µg/L							
Aroclor-1016 [2C]	ND	0.20	µg/L							
Aroclor-1221	ND	0.20	µg/L							
Aroclor-1221 [2C]	ND	0.20	µg/L							
Aroclor-1232	ND	0.20	µg/L							
Aroclor-1232 [2C]	ND	0.20	µg/L							
Aroclor-1242	ND	0.20	µg/L							
Aroclor-1242 [2C]	ND	0.20	µg/L							
Aroclor-1248	ND	0.20	µg/L							
Aroclor-1248 [2C]	ND	0.20	µg/L							
Aroclor-1254	ND	0.20	µg/L							
Aroclor-1254 [2C]	ND	0.20	µg/L							
Aroclor-1260	ND	0.20	µg/L							
Aroclor-1260 [2C]	ND	0.20	µg/L							
Aroclor-1262	ND	0.20	µg/L							
Aroclor-1262 [2C]	ND	0.20	µg/L							
Aroclor-1268	ND	0.20	µg/L							
Aroclor-1268 [2C]	ND	0.20	µg/L							
Surrogate: Decachlorobiphenyl	1.80		µg/L	2.00		90.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.93		µg/L	2.00		96.3	30-150			
Surrogate: Tetrachloro-m-xylene	1.82		µg/L	2.00		90.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.86		µg/L	2.00		93.0	30-150			
LCS (B208670-BS1)										
Prepared: 07/25/18 Analyzed: 07/26/18										
Aroclor-1016	0.45	0.20	µg/L	0.500		90.0	40-140			
Aroclor-1016 [2C]	0.44	0.20	µg/L	0.500		87.1	40-140			
Aroclor-1260	0.44	0.20	µg/L	0.500		87.7	40-140			
Aroclor-1260 [2C]	0.46	0.20	µg/L	0.500		92.0	40-140			
Surrogate: Decachlorobiphenyl	1.56		µg/L	2.00		78.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.66		µg/L	2.00		83.2	30-150			
Surrogate: Tetrachloro-m-xylene	1.50		µg/L	2.00		74.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.55		µg/L	2.00		77.5	30-150			
LCS Dup (B208670-BSD1)										
Prepared: 07/25/18 Analyzed: 07/26/18										
Aroclor-1016	0.47	0.20	µg/L	0.500		94.3	40-140	4.69	20	
Aroclor-1016 [2C]	0.46	0.20	µg/L	0.500		91.7	40-140	5.15	20	
Aroclor-1260	0.44	0.20	µg/L	0.500		87.8	40-140	0.219	20	
Aroclor-1260 [2C]	0.46	0.20	µg/L	0.500		91.0	40-140	1.13	20	
Surrogate: Decachlorobiphenyl	1.55		µg/L	2.00		77.6	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.67		µg/L	2.00		83.7	30-150			
Surrogate: Tetrachloro-m-xylene	1.58		µg/L	2.00		78.9	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.65		µg/L	2.00		82.6	30-150			

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B208677 - SW-846 3510C
Blank (B208677-BLK1)

Prepared: 07/25/18 Analyzed: 07/26/18

C9-C18 Aliphatics	ND	100	µg/L							
C19-C36 Aliphatics	ND	100	µg/L							
Unadjusted C11-C22 Aromatics	ND	100	µg/L							
C11-C22 Aromatics	ND	100	µg/L							
Acenaphthene	ND	2.0	µg/L							
Acenaphthylene	ND	2.0	µg/L							
Anthracene	ND	2.0	µg/L							
Benzo(a)anthracene	ND	2.0	µg/L							
Benzo(a)pyrene	ND	2.0	µg/L							
Benzo(b)fluoranthene	ND	2.0	µg/L							
Benzo(g,h,i)perylene	ND	2.0	µg/L							
Benzo(k)fluoranthene	ND	2.0	µg/L							
Chrysene	ND	2.0	µg/L							
Dibenz(a,h)anthracene	ND	2.0	µg/L							
Fluoranthene	ND	2.0	µg/L							
Fluorene	ND	2.0	µg/L							
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L							
2-Methylnaphthalene	ND	2.0	µg/L							
Naphthalene	ND	2.0	µg/L							
Phenanthrene	ND	2.0	µg/L							
Pyrene	ND	2.0	µg/L							
n-Decane	ND	2.0	µg/L							
n-Docosane	ND	2.0	µg/L							
n-Dodecane	ND	2.0	µg/L							
n-Eicosane	ND	2.0	µg/L							
n-Hexacosane	ND	2.0	µg/L							
n-Hexadecane	ND	2.0	µg/L							
n-Hexatriacontane	ND	2.0	µg/L							
n-Nonadecane	ND	2.0	µg/L							
n-Nonane	ND	2.0	µg/L							
n-Octacosane	ND	2.0	µg/L							
n-Octadecane	ND	2.0	µg/L							
n-Tetracosane	ND	2.0	µg/L							
n-Tetradecane	ND	2.0	µg/L							
n-Triacontane	ND	2.0	µg/L							
Naphthalene-aliphatic fraction	ND	2.0	µg/L							
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L							
Surrogate: Chlorooctadecane (COD)	79.4		µg/L	100		79.4	40-140			
Surrogate: o-Terphenyl (OTP)	78.7		µg/L	100		78.7	40-140			
Surrogate: 2-Bromonaphthalene	105		µg/L	100		105	40-140			
Surrogate: 2-Fluorobiphenyl	95.7		µg/L	100		95.7	40-140			

LCS (B208677-BS1)

Prepared: 07/25/18 Analyzed: 07/26/18

C9-C18 Aliphatics	520	100	µg/L	600		86.6	0-200			
C19-C36 Aliphatics	773	100	µg/L	800		96.6	0-200			
Acenaphthene	83.8	2.0	µg/L	100		83.8	40-140			
Acenaphthylene	80.7	2.0	µg/L	100		80.7	40-140			
Anthracene	87.8	2.0	µg/L	100		87.8	40-140			
Benzo(a)anthracene	89.3	2.0	µg/L	100		89.3	40-140			
Benzo(a)pyrene	88.0	2.0	µg/L	100		88.0	40-140			
Benzo(b)fluoranthene	89.5	2.0	µg/L	100		89.5	40-140			
Benzo(g,h,i)perylene	89.6	2.0	µg/L	100		89.6	40-140			

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B208677 - SW-846 3510C
LCS (B208677-BS1)

Prepared: 07/25/18 Analyzed: 07/26/18

Benzo(k)fluoranthene	88.8	2.0	µg/L	100		88.8	40-140			
Chrysene	89.4	2.0	µg/L	100		89.4	40-140			
Dibenz(a,h)anthracene	92.4	2.0	µg/L	100		92.4	40-140			
Fluoranthene	88.6	2.0	µg/L	100		88.6	40-140			
Fluorene	85.1	2.0	µg/L	100		85.1	40-140			
Indeno(1,2,3-cd)pyrene	84.5	2.0	µg/L	100		84.5	40-140			
2-Methylnaphthalene	81.4	2.0	µg/L	100		81.4	40-140			
Naphthalene	76.2	2.0	µg/L	100		76.2	40-140			
Phenanthrene	90.3	2.0	µg/L	100		90.3	40-140			
Pyrene	90.8	2.0	µg/L	100		90.8	40-140			
n-Decane	60.6	2.0	µg/L	100		60.6	40-140			
n-Docosane	92.8	2.0	µg/L	100		92.8	40-140			
n-Dodecane	73.9	2.0	µg/L	100		73.9	40-140			
n-Eicosane	93.8	2.0	µg/L	100		93.8	40-140			
n-Hexacosane	89.8	2.0	µg/L	100		89.8	40-140			
n-Hexadecane	90.9	2.0	µg/L	100		90.9	40-140			
n-Hexatriacontane	83.8	2.0	µg/L	100		83.8	40-140			
n-Nonadecane	93.0	2.0	µg/L	100		93.0	40-140			
n-Nonane	45.3	2.0	µg/L	100		45.3	30-140			
n-Octacosane	86.5	2.0	µg/L	100		86.5	40-140			
n-Octadecane	95.7	2.0	µg/L	100		95.7	40-140			
n-Tetracosane	91.8	2.0	µg/L	100		91.8	40-140			
n-Tetradecane	83.0	2.0	µg/L	100		83.0	40-140			
n-Triacontane	85.5	2.0	µg/L	100		85.5	40-140			
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	85.8		µg/L	100		85.8	40-140			
Surrogate: o-Terphenyl (OTP)	89.9		µg/L	100		89.9	40-140			
Surrogate: 2-Bromonaphthalene	105		µg/L	100		105	40-140			
Surrogate: 2-Fluorobiphenyl	97.5		µg/L	100		97.5	40-140			

LCS Dup (B208677-BSD1)

Prepared: 07/25/18 Analyzed: 07/26/18

C9-C18 Aliphatics	553	100	µg/L	600		92.2	0-200	6.28		
C19-C36 Aliphatics	788	100	µg/L	800		98.5	0-200	1.98		
Acenaphthene	79.2	2.0	µg/L	100		79.2	40-140	5.69	25	
Acenaphthylene	75.1	2.0	µg/L	100		75.1	40-140	7.15	25	
Anthracene	83.7	2.0	µg/L	100		83.7	40-140	4.75	25	
Benzo(a)anthracene	84.5	2.0	µg/L	100		84.5	40-140	5.56	25	
Benzo(a)pyrene	83.5	2.0	µg/L	100		83.5	40-140	5.34	25	
Benzo(b)fluoranthene	84.7	2.0	µg/L	100		84.7	40-140	5.49	25	
Benzo(g,h,i)perylene	84.9	2.0	µg/L	100		84.9	40-140	5.30	25	
Benzo(k)fluoranthene	84.1	2.0	µg/L	100		84.1	40-140	5.42	25	
Chrysene	84.8	2.0	µg/L	100		84.8	40-140	5.19	25	
Dibenz(a,h)anthracene	87.8	2.0	µg/L	100		87.8	40-140	5.10	25	
Fluoranthene	84.0	2.0	µg/L	100		84.0	40-140	5.34	25	
Fluorene	81.2	2.0	µg/L	100		81.2	40-140	4.63	25	
Indeno(1,2,3-cd)pyrene	80.2	2.0	µg/L	100		80.2	40-140	5.21	25	
2-Methylnaphthalene	74.3	2.0	µg/L	100		74.3	40-140	9.22	25	
Naphthalene	69.7	2.0	µg/L	100		69.7	40-140	8.92	25	
Phenanthrene	86.1	2.0	µg/L	100		86.1	40-140	4.81	25	
Pyrene	86.0	2.0	µg/L	100		86.0	40-140	5.37	25	
n-Decane	59.8	2.0	µg/L	100		59.8	40-140	1.32	25	

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B208677 - SW-846 3510C
LCS Dup (B208677-BSD1)

Prepared: 07/25/18 Analyzed: 07/26/18

n-Docosane	96.2	2.0	µg/L	100		96.2	40-140	3.59	25	
n-Dodecane	72.3	2.0	µg/L	100		72.3	40-140	2.14	25	
n-Eicosane	97.7	2.0	µg/L	100		97.7	40-140	3.99	25	
n-Hexacosane	91.0	2.0	µg/L	100		91.0	40-140	1.30	25	
n-Hexadecane	96.6	2.0	µg/L	100		96.6	40-140	6.00	25	
n-Hexatriacontane	83.4	2.0	µg/L	100		83.4	40-140	0.514	25	
n-Nonadecane	97.0	2.0	µg/L	100		97.0	40-140	4.26	25	
n-Nonane	44.7	2.0	µg/L	100		44.7	30-140	1.31	25	
n-Octacosane	86.0	2.0	µg/L	100		86.0	40-140	0.494	25	
n-Octadecane	100	2.0	µg/L	100		100	40-140	4.39	25	
n-Tetracosane	94.3	2.0	µg/L	100		94.3	40-140	2.74	25	
n-Tetradecane	87.7	2.0	µg/L	100		87.7	40-140	5.46	25	
n-Triacontane	85.4	2.0	µg/L	100		85.4	40-140	0.124	25	
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	88.4		µg/L	100		88.4	40-140			
Surrogate: o-Terphenyl (OTP)	85.2		µg/L	100		85.2	40-140			
Surrogate: 2-Bromonaphthalene	98.6		µg/L	100		98.6	40-140			
Surrogate: 2-Fluorobiphenyl	90.9		µg/L	100		90.9	40-140			

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B208504 - MA VPH
Blank (B208504-BLK1)

Prepared: 07/23/18 Analyzed: 07/24/18

Unadjusted C5-C8 Aliphatics	ND	100	µg/L							
C5-C8 Aliphatics	ND	100	µg/L							
Unadjusted C9-C12 Aliphatics	ND	100	µg/L							
C9-C12 Aliphatics	ND	100	µg/L							
C9-C10 Aromatics	ND	100	µg/L							
Benzene	ND	1.0	µg/L							
Butylcyclohexane	ND	1.0	µg/L							
Decane	ND	1.0	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
2-Methylpentane	ND	1.0	µg/L							
Naphthalene	ND	5.0	µg/L							
Nonane	ND	1.0	µg/L							
Pentane	ND	1.0	µg/L							
Toluene	ND	1.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
2,2,4-Trimethylpentane	ND	1.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 2,5-Dibromotoluene (FID)	39.8		µg/L	40.0		99.5	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	37.2		µg/L	40.0		93.0	70-130			

LCS (B208504-BS1)

Prepared: 07/23/18 Analyzed: 07/24/18

Benzene	53.9	1.0	µg/L	50.0		108	70-130			
Butylcyclohexane	58.4	1.0	µg/L	50.0		117	70-130			
Decane	47.3	1.0	µg/L	50.0		94.6	70-130			
Ethylbenzene	55.6	1.0	µg/L	50.0		111	70-130			
Methyl tert-Butyl Ether (MTBE)	50.8	1.0	µg/L	50.0		102	70-130			
2-Methylpentane	53.0	1.0	µg/L	50.0		106	70-130			
Naphthalene	51.5	5.0	µg/L	50.0		103	70-130			
Nonane	57.4	1.0	µg/L	50.0		115	30-130			
Pentane	46.0	1.0	µg/L	50.0		92.1	70-130			
Toluene	54.4	1.0	µg/L	50.0		109	70-130			
1,2,4-Trimethylbenzene	55.3	1.0	µg/L	50.0		111	70-130			
2,2,4-Trimethylpentane	53.5	1.0	µg/L	50.0		107	70-130			
m+p Xylene	111	2.0	µg/L	100		111	70-130			
o-Xylene	54.3	1.0	µg/L	50.0		109	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	39.5		µg/L	40.0		98.8	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	37.7		µg/L	40.0		94.1	70-130			

LCS Dup (B208504-BSD1)

Prepared: 07/23/18 Analyzed: 07/24/18

Benzene	55.0	1.0	µg/L	50.0		110	70-130	2.09	25	
Butylcyclohexane	58.0	1.0	µg/L	50.0		116	70-130	0.593	25	
Decane	46.3	1.0	µg/L	50.0		92.6	70-130	2.13	25	
Ethylbenzene	56.4	1.0	µg/L	50.0		113	70-130	1.48	25	
Methyl tert-Butyl Ether (MTBE)	52.3	1.0	µg/L	50.0		105	70-130	2.88	25	
2-Methylpentane	53.9	1.0	µg/L	50.0		108	70-130	1.63	25	
Naphthalene	52.1	5.0	µg/L	50.0		104	70-130	1.18	25	
Nonane	57.1	1.0	µg/L	50.0		114	30-130	0.428	25	
Pentane	47.1	1.0	µg/L	50.0		94.1	70-130	2.18	25	
Toluene	55.5	1.0	µg/L	50.0		111	70-130	2.01	25	
1,2,4-Trimethylbenzene	55.9	1.0	µg/L	50.0		112	70-130	1.20	25	

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B208504 - MA VPH
LCS Dup (B208504-BSD1)

Prepared: 07/23/18 Analyzed: 07/24/18

2,2,4-Trimethylpentane	53.7	1.0	µg/L	50.0		107	70-130	0.287	25	
m+p Xylene	113	2.0	µg/L	100		113	70-130	1.77	25	
o-Xylene	55.3	1.0	µg/L	50.0		111	70-130	1.82	25	
Surrogate: 2,5-Dibromotoluene (FID)	41.0		µg/L	40.0		102	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	38.7		µg/L	40.0		96.8	70-130			

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

QUALITY CONTROL
Metals Analyses (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B208632 - SW-846 7470A Dissolved
Blank (B208632-BLK1)

Prepared: 07/25/18 Analyzed: 07/26/18

Mercury	ND	0.00010	mg/L							B
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LCS (B208632-BS1)

Prepared: 07/25/18 Analyzed: 07/26/18

Mercury	0.00195	0.00010	mg/L	0.00200		97.6	80-120			B
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LCS Dup (B208632-BSD1)

Prepared: 07/25/18 Analyzed: 07/26/18

Mercury	0.00194	0.00010	mg/L	0.00200		96.8	80-120	0.741	20	B
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Batch B208668 - SW-846 3005A Dissolved
Blank (B208668-BLK1)

Prepared: 07/25/18 Analyzed: 07/26/18

Arsenic	ND	0.40	µg/L							
Barium	ND	10	µg/L							
Cadmium	ND	0.50	µg/L							
Chromium	ND	1.0	µg/L							
Lead	ND	1.0	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.50	µg/L							

LCS (B208668-BS1)

Prepared: 07/25/18 Analyzed: 07/26/18

Arsenic	447	4.0	µg/L	500		89.4	80-120			
Barium	456	100	µg/L	500		91.2	80-120			
Cadmium	459	5.0	µg/L	500		91.7	80-120			
Chromium	453	10	µg/L	500		90.7	80-120			
Lead	452	10	µg/L	500		90.4	80-120			
Selenium	436	50	µg/L	500		87.3	80-120			
Silver	443	5.0	µg/L	500		88.6	80-120			

LCS Dup (B208668-BSD1)

Prepared: 07/25/18 Analyzed: 07/26/18

Arsenic	453	4.0	µg/L	500		90.7	80-120	1.36	20	
Barium	457	100	µg/L	500		91.3	80-120	0.165	20	
Cadmium	460	5.0	µg/L	500		92.1	80-120	0.401	20	
Chromium	455	10	µg/L	500		91.0	80-120	0.348	20	
Lead	453	10	µg/L	500		90.6	80-120	0.139	20	
Selenium	444	50	µg/L	500		88.8	80-120	1.77	20	
Silver	447	5.0	µg/L	500		89.4	80-120	0.820	20	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B208670-BS1 Date(s) Analyzed: 07/26/2018 07/26/2018

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.45	
	2	0.000	0.000	0.000	0.44	2.3
Aroclor-1260	1	0.000	0.000	0.000	0.44	
	2	0.000	0.000	0.000	0.46	4.4

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS Dup

Lab Sample ID: B208670-BSD1 Date(s) Analyzed: 07/26/2018 07/26/2018
Instrument ID (1): ECD 9 Instrument ID (2): ECD 9
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.47	
	2	0.000	0.000	0.000	0.46	2.2
Aroclor-1260	1	0.000	0.000	0.000	0.44	
	2	0.000	0.000	0.000	0.46	4.4

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.
L-07	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD between the two LFB/LCS results is within method specified criteria.
L-07A	Either laboratory fortified blank/laboratory control sample or duplicate recovery is outside of control limits, but the other is within limits. RPD outside of control limits. Reduced precision anticipated for any reported result for this compound.
L-14	Compound classified by MA CAM as difficult with acceptable recoveries of 40-160%. Recovery does not meet 70-130% criteria but does meet difficult compound criteria.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
RL-07	Elevated reporting limit based on lowest point in calibration. MA CAM reporting limit not met.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>MADEP-EPH-04-1.1 in Water</i>	
C9-C18 Aliphatics	CT,NC,ME,NH-P
C19-C36 Aliphatics	CT,NC,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,ME,NH-P
C11-C22 Aromatics	CT,NC,ME,NH-P
Acenaphthene	CT,NC,ME,NH-P
Acenaphthylene	CT,NC,ME,NH-P
Anthracene	CT,NC,ME,NH-P
Benzo(a)anthracene	CT,NC,ME,NH-P
Benzo(a)pyrene	CT,NC,ME,NH-P
Benzo(b)fluoranthene	CT,NC,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,ME,NH-P
Benzo(k)fluoranthene	CT,NC,ME,NH-P
Chrysene	CT,NC,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,ME,NH-P
Fluoranthene	CT,NC,ME,NH-P
Fluorene	CT,NC,ME
Indeno(1,2,3-cd)pyrene	CT,NC,ME,NH-P
2-Methylnaphthalene	CT,NC
Naphthalene	CT,NC,ME,NH-P
Phenanthrene	CT,NC,ME,NH-P
Pyrene	CT,NC,ME,NH-P
<i>MADEP-VPH-Feb 2018 Rev 2.1 in Water</i>	
Unadjusted C5-C8 Aliphatics	CT,NC,ME,NH-P
C5-C8 Aliphatics	CT,NC,ME,NH-P
Unadjusted C9-C12 Aliphatics	CT,NC,ME,NH-P
C9-C12 Aliphatics	CT,NC,ME,NH-P
C9-C10 Aromatics	CT,NC,ME,NH-P
Benzene	CT,NC,ME,NH-P
Ethylbenzene	CT,NC,ME,NH-P
Methyl tert-Butyl Ether (MTBE)	CT,NC,ME,NH-P
Naphthalene	CT,NC,ME,NH-P
Toluene	CT,NC,ME,NH-P
m+p Xylene	CT,NC,ME,NH-P
o-Xylene	CT,NC,ME,NH-P
<i>SW-846 6020B in Water</i>	
Arsenic	CT,NH,NY,NC,ME,VA
Barium	MA,NY,CT,NC,NH,ME,VA
Cadmium	CT,NH,NY,NC,ME,VA
Chromium	CT,NH,NY,NC,ME,VA
Lead	CT,NH,NY,NC,ME,VA
Selenium	CT,NH,NY,NC,ME,VA
Silver	CT,NC,NH,NY,ME,VA
<i>SW-846 7470A in Water</i>	
Mercury	CT,NH,NY,NC,ME,VA
<i>SW-846 8082A in Water</i>	

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8082A in Water</i>	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
<i>SW-846 8260C in Water</i>	
Acetone	CT,NH,NY,ME
tert-Amyl Methyl Ether (TAME)	NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	NY,ME
sec-Butylbenzene	NY,ME
tert-Butylbenzene	NY,ME
tert-Butyl Ethyl Ether (TBEE)	NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	NY,ME
4-Chlorotoluene	NY,ME
1,2-Dibromo-3-chloropropane (DBCP)	NY
1,2-Dibromoethane (EDB)	NY
Dibromomethane	NH,NY,ME
1,2-Dichlorobenzene	CT,NY,ME
1,3-Dichlorobenzene	CT,NH,NY,ME

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Water</i>	
1,4-Dichlorobenzene	CT,NH,NY,ME
Dichlorodifluoromethane (Freon 12)	NH,NY,ME
1,1-Dichloroethane	CT,NH,NY,ME
1,2-Dichloroethane	CT,NH,NY,ME
1,1-Dichloroethylene	CT,NH,NY,ME
cis-1,2-Dichloroethylene	NY,ME
trans-1,2-Dichloroethylene	CT,NH,NY,ME
1,2-Dichloropropane	CT,NH,NY,ME
1,3-Dichloropropane	NY,ME
2,2-Dichloropropane	NH,NY,ME
1,1-Dichloropropene	NH,NY,ME
cis-1,3-Dichloropropene	CT,NH,NY,ME
trans-1,3-Dichloropropene	CT,NH,NY,ME
Diisopropyl Ether (DIPE)	NH,NY,ME
Ethylbenzene	CT,NH,NY,ME
Hexachlorobutadiene	CT,NH,NY,ME
2-Hexanone (MBK)	CT,NH,NY,ME
Isopropylbenzene (Cumene)	NY,ME
p-Isopropyltoluene (p-Cymene)	CT,NH,NY,ME
Methyl tert-Butyl Ether (MTBE)	CT,NH,NY,ME
Methylene Chloride	CT,NH,NY,ME
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,ME
Naphthalene	NH,NY,ME
n-Propylbenzene	CT,NH,NY,ME
Styrene	CT,NH,NY,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME
Tetrachloroethylene	CT,NH,NY,ME
Toluene	CT,NH,NY,ME
1,2,3-Trichlorobenzene	NH,NY,ME
1,2,4-Trichlorobenzene	CT,NH,NY,ME
1,1,1-Trichloroethane	CT,NH,NY,ME
1,1,2-Trichloroethane	CT,NH,NY,ME
Trichloroethylene	CT,NH,NY,ME
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME
1,2,3-Trichloropropane	NH,NY,ME
1,2,4-Trimethylbenzene	NY,ME
1,3,5-Trimethylbenzene	NY,ME
Vinyl Chloride	CT,NH,NY,ME
m+p Xylene	CT,NH,NY,ME
o-Xylene	CT,NH,NY,ME

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2019
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2019
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2019
RI	Rhode Island Department of Health	LAO00112	12/30/2018
NC	North Carolina Div. of Water Quality	652	12/31/2018
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
FL	Florida Department of Health	E871027 NELAP	06/30/2019
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2019
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2018
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2018
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2019
NC-DW	North Carolina Department of Health	25703	07/31/2019


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 Boston EHV Corp.Received By ESD Date 7-24-18 Time 20:00
 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 # 7 Actual Temp -3.4
 By Blank # Actual Temp

 Was Custody Seal Intact? NA Were Samples Tampered with? NA
 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 Client T Analysis T Sampler Name T
 pertinent Information? 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? T Who was notified? R4y
 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? F On COC? F
 Do all samples have the proper pH? T Acid pH 2 Base

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.	<u>6</u>	1 Liter Plastic	<u> </u>	16 oz Amb.	
HCL-	<u>8</u>	500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic	<u>1</u>	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			

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:

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory		Project #: 18G0928	
Project Location: 20 Inner Belt Rd., Somerville, MA		RTN:	
This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)] 18G0928-01 thru 18G0928-02			
Matrices: Water			
CAM Protocol (check all that below)			
8260 VOC CAM II A (X)	7470/7471 Hg CAM IIIB (X)	MassDEP VPH CAM IV A (X)	8082 PCB CAM V A (X)
8270 SVOC CAM II B ()	7010 Metals CAM III C ()	MassDEP VPH CAM IV C ()	8081 Pesticides CAM V B ()
6010 Metals CAM III A ()	6020 Metals CAM III D (X)	MassDEP EPH CAM IV A (X)	8151 Herbicides CAM V C ()
		9014 Total Cyanide/PAC CAM VI A ()	6860 Perchlorate CAM VIII B ()
		7196 Hex Cr CAM VI B ()	MassDEP APH CAM IX A ()
		8330 Explosives CAM VIII A ()	TO-15 VOC CAM IX B ()
Affirmative response to Questions A through F is required for "Presumptive Certainty" status			
A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?		☒ Yes ☐ No ¹
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?		☒ Yes ☐ No ¹
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?		☒ Yes ☐ No ¹
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?		☒ Yes ☐ No ¹
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).		☒ Yes ☐ No ¹
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?		☐ Yes ☐ No ¹
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?		☒ Yes ☐ No ¹
A response to questions G, H and I below is required for "Presumptive Certainty" status			
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?		☐ Yes ☒ No ¹
Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.			
H	Were all QC performance standards specified in the CAM protocol(s) achieved?		☐ Yes ☒ No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?		☐ Yes ☒ No ¹
¹ All Negative responses must be addressed in an attached Environmental Laboratory case narrative.			
I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.			
Signature: <u>Tod E. Kopyscinski</u>		Position: Laboratory Director	
Printed Name: <u>Tod E. Kopyscinski</u>		Date: <u>07/30/18</u>	

July 24, 2018

Rick Stromberg
Boston Environmental Corp. - Brockton, MA
203 Spark St., Brockton, MA
Brockton, MA 02302

Project Location: 20 Inner Belt Rd., Somerville, MA
Client Job Number:
Project Number: BEC18134
Laboratory Work Order Number: 18G0762

Enclosed are results of analyses for samples received by the laboratory on July 19, 2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Kerry K. McGee". The signature is written in a cursive, flowing style.

Kerry K. McGee
Project Manager

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Boston Environmental Corp. - Brockton, MA
203 Spark St., Brockton, MA
Brockton, MA 02302
ATTN: Rick Stromberg

REPORT DATE: 7/24/2018

PURCHASE ORDER NUMBER: BEC18134

PROJECT NUMBER: BEC18134

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18G0762

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

PROJECT LOCATION: 20 Inner Belt Rd., Somerville, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
BEC-15 MW	18G0762-01	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SW-846 6020A-B SW-846 7470A SW-846 8082A SW-846 8260C SW-846 8270D	
RX-6R MW	18G0762-02	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SW-846 6020A-B SW-846 7470A SW-846 8082A SW-846 8260C SW-846 8270D	
RX-10R MW	18G0762-03	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SW-846 6020A-B SW-846 7470A SW-846 8082A SW-846 8260C	
BEC-5 MW	18G0762-04	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SW-846 6020A-B SW-846 7470A SW-846 8082A SW-846 8260C	
BEC-4 MW	18G0762-05	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SW-846 6020A-B SW-846 7470A SW-846 8082A SW-846 8260C SW-846 8270D	

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

Boston Environmental Corp. - Brockton, MA
203 Spark St., Brockton, MA
Brockton, MA 02302
ATTN: Rick Stromberg

REPORT DATE: 7/24/2018

PURCHASE ORDER NUMBER: BEC18134

PROJECT NUMBER: BEC18134

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18G0762

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

PROJECT LOCATION: 20 Inner Belt Rd., Somerville, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
BEC-7 MW	18G0762-06	Ground Water		MADEP-EPH-04-1.1 MADEP-VPH-Feb 2018 Rev 2.1 SW-846 6020A-B SW-846 7470A SW-846 8082A SW-846 8260C SW-846 8270D	

CASE NARRATIVE SUMMARY

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

For method 6020, only RCRA 8 metals were requested and reported.

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

MADEP-VPH-Feb 2018 Rev 2.1

Qualifications:**RL-14**

Elevated reporting limit due to foaming sample matrix. MA CAM reporting limit not met.

Analyte & Samples(s) Qualified:

18G0762-01[BEC-15 MW], 18G0762-02[RX-6R MW], 18G0762-03[RX-10R MW], 18G0762-04[BEC-5 MW], 18G0762-05[BEC-4 MW], 18G0762-06[BEC-7 MW]

SW-846 6020A-B**Qualifications:****DL-15**

Sample required a dilution due to low internal standard recovery of the lesser diluted digestion, reporting limit is elevated.

Analyte & Samples(s) Qualified:**Lead**

18G0762-02[RX-6R MW], 18G0762-03[RX-10R MW], 18G0762-05[BEC-4 MW]

SW-846 8260C**Qualifications:****R-05**

Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.

Analyte & Samples(s) Qualified:**Bromomethane**

18G0762-01[BEC-15 MW], 18G0762-02[RX-6R MW], 18G0762-03[RX-10R MW], 18G0762-04[BEC-5 MW], 18G0762-05[BEC-4 MW], 18G0762-06[BEC-7 MW], B208293-BLK1, B208293-BS1, B208293-BSD1, S025455-CCV1

RL-14

Elevated reporting limit due to foaming sample matrix. MA CAM reporting limit not met.

Analyte & Samples(s) Qualified:

18G0762-01[BEC-15 MW], 18G0762-02[RX-6R MW], 18G0762-03[RX-10R MW], 18G0762-04[BEC-5 MW], 18G0762-05[BEC-4 MW], 18G0762-06[BEC-7 MW]

V-05

Continuing calibration did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**1,2,3-Trichloropropane**

18G0762-01[BEC-15 MW], 18G0762-02[RX-6R MW], 18G0762-03[RX-10R MW], 18G0762-04[BEC-5 MW], 18G0762-05[BEC-4 MW], 18G0762-06[BEC-7 MW], B208293-BLK1, B208293-BS1, B208293-BSD1, S025455-CCV1

2-Butanone (MEK)

18G0762-01[BEC-15 MW], 18G0762-02[RX-6R MW], 18G0762-03[RX-10R MW], 18G0762-04[BEC-5 MW], 18G0762-05[BEC-4 MW], 18G0762-06[BEC-7 MW], B208293-BLK1, B208293-BS1, B208293-BSD1, S025455-CCV1

Dichlorodifluoromethane (Freon 12)

18G0762-01[BEC-15 MW], 18G0762-02[RX-6R MW], 18G0762-03[RX-10R MW], 18G0762-04[BEC-5 MW], 18G0762-05[BEC-4 MW], 18G0762-06[BEC-7 MW], B208293-BLK1, B208293-BS1, B208293-BSD1, S025455-CCV1

V-16

Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.

Analyte & Samples(s) Qualified:**1,4-Dioxane**

18G0762-01[BEC-15 MW], 18G0762-02[RX-6R MW], 18G0762-03[RX-10R MW], 18G0762-04[BEC-5 MW], 18G0762-05[BEC-4 MW], 18G0762-06[BEC-7 MW], B208293-BLK1, B208293-BS1, B208293-BSD1, S025455-CCV1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:**Bromomethane**

B208293-BS1, B208293-BSD1, S025455-CCV1

SW-846 8270D**Qualifications:**

L-04

Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.

Analyte & Samples(s) Qualified:**1,2-Dichlorobenzene**

18G0762-01[BEC-15 MW], 18G0762-02[RX-6R MW], 18G0762-05[BEC-4 MW], 18G0762-06[BEC-7 MW], B208332-BLK1, B208332-BS1, B208332-BSD1

1,3-Dichlorobenzene

18G0762-01[BEC-15 MW], 18G0762-02[RX-6R MW], 18G0762-05[BEC-4 MW], 18G0762-06[BEC-7 MW], B208332-BLK1, B208332-BS1, B208332-BSD1

1,4-Dichlorobenzene

18G0762-01[BEC-15 MW], 18G0762-02[RX-6R MW], 18G0762-05[BEC-4 MW], 18G0762-06[BEC-7 MW], B208332-BLK1, B208332-BS1, B208332-BSD1

Hexachloroethane

18G0762-01[BEC-15 MW], 18G0762-02[RX-6R MW], 18G0762-05[BEC-4 MW], 18G0762-06[BEC-7 MW], B208332-BLK1, B208332-BS1, B208332-BSD1

V-06

Continuing calibration did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**2,4-Dinitrotoluene**

B208332-BS1, B208332-BSD1

V-20

Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

Analyte & Samples(s) Qualified:**2,4-Dinitrotoluene**

18G0762-01[BEC-15 MW], 18G0762-02[RX-6R MW], 18G0762-05[BEC-4 MW], 18G0762-06[BEC-7 MW], B208332-BLK1

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**4-Chloroaniline**

18G0762-01[BEC-15 MW], 18G0762-02[RX-6R MW], 18G0762-05[BEC-4 MW], 18G0762-06[BEC-7 MW], B208332-BLK1, B208332-BS1, B208332-BSD1

MADEP-EPH-04-1.1

SPE cartridge contamination with non-petroleum compounds, if present, is verified by GC/MS in each method blank per extraction batch and excluded from C 11-C22 aromatic range fraction in all samples in the batch. No significant modifications were made to the method.

MADEP-VPH-Feb 2018 Rev 2.1

Analytical column used for VPH analysis is Restek, Rtx-502.2, 105meter, 0.53mmID, 3um df. Trap used for VPH analysis is CarboSieve B/CarboSieveS-III.

No significant modifications were made to the method. All VPH samples were received preserved properly at pH <2 in the proper containers as specified on the chain-of-custody form unless specified in this narrative.

SW-846 6010C/D SW-846 6020A/B

For NC, Metals methods SW-846 6010D and SW-846 6020B are followed, and for all other states methods SW-846 6010C and SW-846 6020A are followed.

SW-846 8260C

Laboratory control sample recoveries for required MCP Data Enhancement 8260 compounds were all within limits specified by the method except for "difficult analytes" where recovery control limits of 40-160% are used and/or unless otherwise listed in this narrative. Difficult analytes: MIBK, MEK, acetone, 1,4-dioxane, chloromethane, dichlorodifluoromethane, 2-hexanone, and bromomethane.

SW-846 8270D

Laboratory control sample recoveries for required MCP Data Enhancement 8270 compounds were all within control limits specified by the method, 40-140% for base/neutrals and 30-130% for acids except for "difficult analytes" listed below and/or otherwise listed in this narrative. Difficult analytes limits are 15 and 140%: 2,4-dinitrophenol, 4-chloroaniline, 4-nitrophenol, and phenol.

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

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-15 MW

Sampled: 7/17/2018 09:00

Sample ID: 18G0762-01

Sample Matrix: Ground Water

Sample Flags: RL-14

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	20	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
tert-Amyl Methyl Ether (TAME)	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Benzene	4.2	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Bromobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Bromochloromethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Bromodichloromethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Bromoform	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Bromomethane	ND	4.0	µg/L	2	R-05	SW-846 8260C	7/19/18	7/20/18 13:55	MFF
2-Butanone (MEK)	ND	20	µg/L	2	V-05	SW-846 8260C	7/19/18	7/20/18 13:55	MFF
n-Butylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
sec-Butylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
tert-Butylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Carbon Disulfide	ND	10	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Carbon Tetrachloride	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Chlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Chlorodibromomethane	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Chloroethane	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Chloroform	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Chloromethane	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
2-Chlorotoluene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
4-Chlorotoluene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
1,2-Dibromoethane (EDB)	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Dibromomethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
1,2-Dichlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
1,3-Dichlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
1,4-Dichlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Dichlorodifluoromethane (Freon 12)	ND	4.0	µg/L	2	V-05	SW-846 8260C	7/19/18	7/20/18 13:55	MFF
1,1-Dichloroethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
1,2-Dichloroethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
1,1-Dichloroethylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
cis-1,2-Dichloroethylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
trans-1,2-Dichloroethylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
1,2-Dichloropropane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
1,3-Dichloropropane	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
2,2-Dichloropropane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
1,1-Dichloropropene	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
cis-1,3-Dichloropropene	ND	0.80	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
trans-1,3-Dichloropropene	ND	0.80	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Diethyl Ether	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Diisopropyl Ether (DIPE)	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
1,4-Dioxane	ND	100	µg/L	2	V-16	SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Ethylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-15 MW

Sampled: 7/17/2018 09:00

Sample ID: 18G0762-01

Sample Matrix: Ground Water

Sample Flags: RL-14

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	1.2	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
2-Hexanone (MBK)	ND	20	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Isopropylbenzene (Cumene)	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
p-Isopropyltoluene (p-Cymene)	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Methylene Chloride	ND	10	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
4-Methyl-2-pentanone (MIBK)	ND	20	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Naphthalene	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
n-Propylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Styrene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
1,1,1,2-Tetrachloroethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
1,1,2,2-Tetrachloroethane	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Tetrachloroethylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Tetrahydrofuran	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Toluene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
1,2,3-Trichlorobenzene	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
1,2,4-Trichlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
1,1,1-Trichloroethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
1,1,2-Trichloroethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Trichloroethylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Trichlorofluoromethane (Freon 11)	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
1,2,3-Trichloropropane	ND	4.0	µg/L	2	V-05	SW-846 8260C	7/19/18	7/20/18 13:55	MFF
1,2,4-Trimethylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
1,3,5-Trimethylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
Vinyl Chloride	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
m+p Xylene	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF
o-Xylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 13:55	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	89.2	70-130	7/20/18 13:55
Toluene-d8	96.2	70-130	7/20/18 13:55
4-Bromofluorobenzene	94.2	70-130	7/20/18 13:55

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

Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-15 MW

Sampled: 7/17/2018 09:00

Sample ID: 18G0762-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Acenaphthylene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Acetophenone	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Aniline	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Anthracene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Benzo(a)anthracene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Benzo(a)pyrene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Benzo(b)fluoranthene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Benzo(g,h,i)perylene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Benzo(k)fluoranthene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Bis(2-chloroethoxy)methane	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Bis(2-chloroethyl)ether	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Bis(2-chloroisopropyl)ether	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
4-Bromophenylphenylether	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Butylbenzylphthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
4-Chloroaniline	ND	10	µg/L	1	V-34	SW-846 8270D	7/20/18	7/21/18 15:31	CDT
2-Chloronaphthalene	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
2-Chlorophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Chrysene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Dibenz(a,h)anthracene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Dibenzofuran	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Di-n-butylphthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
1,2-Dichlorobenzene	ND	5.0	µg/L	1	L-04	SW-846 8270D	7/20/18	7/21/18 15:31	CDT
1,3-Dichlorobenzene	ND	5.0	µg/L	1	L-04	SW-846 8270D	7/20/18	7/21/18 15:31	CDT
1,4-Dichlorobenzene	ND	5.0	µg/L	1	L-04	SW-846 8270D	7/20/18	7/21/18 15:31	CDT
3,3-Dichlorobenzidine	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
2,4-Dichlorophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Diethylphthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
2,4-Dimethylphenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Dimethylphthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
2,4-Dinitrophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
2,4-Dinitrotoluene	ND	10	µg/L	1	V-20	SW-846 8270D	7/20/18	7/21/18 15:31	CDT
2,6-Dinitrotoluene	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Di-n-octylphthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Fluoranthene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Fluorene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Hexachlorobenzene	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Hexachlorobutadiene	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Hexachloroethane	ND	10	µg/L	1	L-04	SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Isophorone	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
2-Methylnaphthalene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT

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

Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-15 MW

Sampled: 7/17/2018 09:00

Sample ID: 18G0762-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
3/4-Methylphenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Naphthalene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Nitrobenzene	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
2-Nitrophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
4-Nitrophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Pentachlorophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Phenanthrene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Phenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Pyrene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Pyridine	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
2,4,5-Trichlorophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
2,4,6-Trichlorophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:31	CDT
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	27.7	15-110							
Phenol-d6	23.5	15-110							
Nitrobenzene-d5	34.7	30-130							
2-Fluorobiphenyl	47.6	30-130							
2,4,6-Tribromophenol	56.9	15-110							
p-Terphenyl-d14	60.2	30-130							

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-15 MW

Sampled: 7/17/2018 09:00

Sample ID: 18G0762-01

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:22	KAL
Aroclor-1221 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:22	KAL
Aroclor-1232 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:22	KAL
Aroclor-1242 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:22	KAL
Aroclor-1248 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:22	KAL
Aroclor-1254 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:22	KAL
Aroclor-1260 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:22	KAL
Aroclor-1262 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:22	KAL
Aroclor-1268 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:22	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	69.5	30-150							
Decachlorobiphenyl [2]	73.6	30-150							
Tetrachloro-m-xylene [1]	66.0	30-150							
Tetrachloro-m-xylene [2]	67.9	30-150							

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-15 MW

Sampled: 7/17/2018 09:00

Sample ID: 18G0762-01

Sample Matrix: Ground Water

Petrolium Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:00	RMW
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:00	RMW
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:00	RMW
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:00	RMW
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:00	RMW
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:00	RMW
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:00	RMW
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:00	RMW
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:00	RMW
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:00	RMW
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:00	RMW
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:00	RMW
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:00	RMW
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:00	RMW
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:00	RMW
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:00	RMW
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:00	RMW
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:00	RMW
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:00	RMW
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:00	RMW
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:00	RMW

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Chlorooctadecane (COD)	77.1	40-140	
o-Terphenyl (OTP)	74.9	40-140	
2-Bromonaphthalene	94.9	40-140	
2-Fluorobiphenyl	87.7	40-140	

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-15 MW

Sampled: 7/17/2018 09:00

Sample ID: 18G0762-01

Sample Matrix: Ground Water

Sample Flags: RL-14

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	200	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/23/18 10:37	EEH
C5-C8 Aliphatics	ND	200	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/23/18 10:37	EEH
Unadjusted C9-C12 Aliphatics	ND	200	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/23/18 10:37	EEH
C9-C12 Aliphatics	ND	200	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/23/18 10:37	EEH
C9-C10 Aromatics	ND	200	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/23/18 10:37	EEH
Benzene	4.9	2.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/23/18 10:37	EEH
Ethylbenzene	ND	2.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/23/18 10:37	EEH
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/23/18 10:37	EEH
Naphthalene	ND	10	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/23/18 10:37	EEH
Toluene	ND	2.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/23/18 10:37	EEH
m+p Xylene	ND	4.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/23/18 10:37	EEH
o-Xylene	ND	2.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/23/18	7/23/18 10:37	EEH
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,5-Dibromotoluene (FID)	104	70-130							
2,5-Dibromotoluene (PID)	96.2	70-130							

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

Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-15 MW

Sampled: 7/17/2018 09:00

Sample ID: 18G0762-01

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	14	0.40	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:31	MJH
Barium	390	50	µg/L	5		SW-846 6020A-B	7/20/18	7/23/18 11:14	MJH
Cadmium	ND	0.50	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:31	MJH
Chromium	1.2	1.0	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:31	MJH
Lead	31	5.0	µg/L	5		SW-846 6020A-B	7/20/18	7/23/18 16:09	MJH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	7/23/18	7/23/18 12:31	EJB
Selenium	ND	5.0	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:31	MJH
Silver	ND	0.50	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:31	MJH

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: RX-6R MW

Sampled: 7/17/2018 10:00

Sample ID: 18G0762-02

Sample Matrix: Ground Water

Sample Flags: RL-14

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	20	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
tert-Amyl Methyl Ether (TAME)	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Benzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Bromobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Bromochloromethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Bromodichloromethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Bromoform	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Bromomethane	ND	4.0	µg/L	2	R-05	SW-846 8260C	7/19/18	7/20/18 14:21	MFF
2-Butanone (MEK)	ND	20	µg/L	2	V-05	SW-846 8260C	7/19/18	7/20/18 14:21	MFF
n-Butylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
sec-Butylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
tert-Butylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Carbon Disulfide	ND	10	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Carbon Tetrachloride	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Chlorobenzene	27	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Chlorodibromomethane	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Chloroethane	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Chloroform	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Chloromethane	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
2-Chlorotoluene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
4-Chlorotoluene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
1,2-Dibromoethane (EDB)	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Dibromomethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
1,2-Dichlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
1,3-Dichlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
1,4-Dichlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Dichlorodifluoromethane (Freon 12)	ND	4.0	µg/L	2	V-05	SW-846 8260C	7/19/18	7/20/18 14:21	MFF
1,1-Dichloroethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
1,2-Dichloroethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
1,1-Dichloroethylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
cis-1,2-Dichloroethylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
trans-1,2-Dichloroethylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
1,2-Dichloropropane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
1,3-Dichloropropane	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
2,2-Dichloropropane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
1,1-Dichloropropene	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
cis-1,3-Dichloropropene	ND	0.80	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
trans-1,3-Dichloropropene	ND	0.80	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Diethyl Ether	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Diisopropyl Ether (DIPE)	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
1,4-Dioxane	ND	100	µg/L	2	V-16	SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Ethylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: RX-6R MW

Sampled: 7/17/2018 10:00

Sample ID: 18G0762-02

Sample Matrix: Ground Water

Sample Flags: RL-14

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	1.2	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
2-Hexanone (MBK)	ND	20	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Isopropylbenzene (Cumene)	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
p-Isopropyltoluene (p-Cymene)	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Methylene Chloride	ND	10	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
4-Methyl-2-pentanone (MIBK)	ND	20	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Naphthalene	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
n-Propylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Styrene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
1,1,1,2-Tetrachloroethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
1,1,2,2-Tetrachloroethane	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Tetrachloroethylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Tetrahydrofuran	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Toluene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
1,2,3-Trichlorobenzene	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
1,2,4-Trichlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
1,1,1-Trichloroethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
1,1,2-Trichloroethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Trichloroethylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Trichlorofluoromethane (Freon 11)	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
1,2,3-Trichloropropane	ND	4.0	µg/L	2	V-05	SW-846 8260C	7/19/18	7/20/18 14:21	MFF
1,2,4-Trimethylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
1,3,5-Trimethylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
Vinyl Chloride	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
m+p Xylene	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF
o-Xylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:21	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	91.8	70-130	7/20/18 14:21
Toluene-d8	98.3	70-130	7/20/18 14:21
4-Bromofluorobenzene	93.0	70-130	7/20/18 14:21

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

Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: RX-6R MW

Sampled: 7/17/2018 10:00

Sample ID: 18G0762-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Acenaphthylene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Acetophenone	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Aniline	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Anthracene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Benzo(a)anthracene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Benzo(a)pyrene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Benzo(b)fluoranthene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Benzo(g,h,i)perylene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Benzo(k)fluoranthene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Bis(2-chloroethoxy)methane	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Bis(2-chloroethyl)ether	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Bis(2-chloroisopropyl)ether	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
4-Bromophenylphenylether	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Butylbenzylphthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
4-Chloroaniline	ND	10	µg/L	1	V-34	SW-846 8270D	7/20/18	7/21/18 15:57	CDT
2-Chloronaphthalene	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
2-Chlorophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Chrysene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Dibenz(a,h)anthracene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Dibenzofuran	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Di-n-butylphthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
1,2-Dichlorobenzene	ND	5.0	µg/L	1	L-04	SW-846 8270D	7/20/18	7/21/18 15:57	CDT
1,3-Dichlorobenzene	ND	5.0	µg/L	1	L-04	SW-846 8270D	7/20/18	7/21/18 15:57	CDT
1,4-Dichlorobenzene	ND	5.0	µg/L	1	L-04	SW-846 8270D	7/20/18	7/21/18 15:57	CDT
3,3-Dichlorobenzidine	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
2,4-Dichlorophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Diethylphthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
2,4-Dimethylphenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Dimethylphthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
2,4-Dinitrophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
2,4-Dinitrotoluene	ND	10	µg/L	1	V-20	SW-846 8270D	7/20/18	7/21/18 15:57	CDT
2,6-Dinitrotoluene	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Di-n-octylphthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Fluoranthene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Fluorene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Hexachlorobenzene	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Hexachlorobutadiene	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Hexachloroethane	ND	10	µg/L	1	L-04	SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Isophorone	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
2-Methylnaphthalene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT

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

Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: RX-6R MW

Sampled: 7/17/2018 10:00

Sample ID: 18G0762-02

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
3/4-Methylphenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Naphthalene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Nitrobenzene	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
2-Nitrophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
4-Nitrophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Pentachlorophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Phenanthrene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Phenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Pyrene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Pyridine	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
2,4,5-Trichlorophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
2,4,6-Trichlorophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 15:57	CDT
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	36.6	15-110						7/21/18 15:57	
Phenol-d6	31.5	15-110						7/21/18 15:57	
Nitrobenzene-d5	46.1	30-130						7/21/18 15:57	
2-Fluorobiphenyl	57.4	30-130						7/21/18 15:57	
2,4,6-Tribromophenol	65.5	15-110						7/21/18 15:57	
p-Terphenyl-d14	68.1	30-130						7/21/18 15:57	

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Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: RX-6R MW

Sampled: 7/17/2018 10:00

Sample ID: 18G0762-02

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:35	KAL
Aroclor-1221 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:35	KAL
Aroclor-1232 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:35	KAL
Aroclor-1242 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:35	KAL
Aroclor-1248 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:35	KAL
Aroclor-1254 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:35	KAL
Aroclor-1260 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:35	KAL
Aroclor-1262 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:35	KAL
Aroclor-1268 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:35	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	51.7	30-150							
Decachlorobiphenyl [2]	55.2	30-150							
Tetrachloro-m-xylene [1]	62.8	30-150							
Tetrachloro-m-xylene [2]	64.2	30-150							

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Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: RX-6R MW

Sampled: 7/17/2018 10:00

Sample ID: 18G0762-02

Sample Matrix: Ground Water

Petrolium Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:19	RMW
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:19	RMW
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:19	RMW
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:19	RMW
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:19	RMW
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:19	RMW
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:19	RMW
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:19	RMW
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:19	RMW
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:19	RMW
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:19	RMW
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:19	RMW
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:19	RMW
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:19	RMW
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:19	RMW
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:19	RMW
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:19	RMW
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:19	RMW
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:19	RMW
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:19	RMW
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 14:19	RMW

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Chlorooctadecane (COD)	68.9	40-140	
o-Terphenyl (OTP)	71.1	40-140	
2-Bromonaphthalene	96.5	40-140	
2-Fluorobiphenyl	91.1	40-140	

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

Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: RX-6R MW

Sampled: 7/17/2018 10:00

Sample ID: 18G0762-02

Sample Matrix: Ground Water

Sample Flags: RL-14

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	200	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:03	EEH
C5-C8 Aliphatics	ND	200	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:03	EEH
Unadjusted C9-C12 Aliphatics	ND	200	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:03	EEH
C9-C12 Aliphatics	ND	200	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:03	EEH
C9-C10 Aromatics	ND	200	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:03	EEH
Benzene	ND	2.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:03	EEH
Ethylbenzene	38	2.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:03	EEH
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:03	EEH
Naphthalene	ND	10	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:03	EEH
Toluene	ND	2.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:03	EEH
m+p Xylene	ND	4.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:03	EEH
o-Xylene	ND	2.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:03	EEH
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,5-Dibromotoluene (FID)	103	70-130							
2,5-Dibromotoluene (PID)	97.4	70-130							

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

Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: RX-6R MW

Sampled: 7/17/2018 10:00

Sample ID: 18G0762-02

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	0.82	0.40	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:35	MJH
Barium	350	50	µg/L	5		SW-846 6020A-B	7/20/18	7/23/18 11:17	MJH
Cadmium	ND	0.50	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:35	MJH
Chromium	3.3	1.0	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:35	MJH
Lead	ND	5.0	µg/L	5	DL-15	SW-846 6020A-B	7/20/18	7/23/18 11:17	MJH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	7/23/18	7/23/18 12:32	EJB
Selenium	ND	5.0	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:35	MJH
Silver	ND	0.50	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:35	MJH

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: RX-10R MW

Sampled: 7/17/2018 11:00

Sample ID: 18G0762-03

Sample Matrix: Ground Water

Sample Flags: RL-14

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	20	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
tert-Amyl Methyl Ether (TAME)	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Benzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Bromobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Bromochloromethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Bromodichloromethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Bromoform	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Bromomethane	ND	4.0	µg/L	2	R-05	SW-846 8260C	7/19/18	7/20/18 14:47	MFF
2-Butanone (MEK)	ND	20	µg/L	2	V-05	SW-846 8260C	7/19/18	7/20/18 14:47	MFF
n-Butylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
sec-Butylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
tert-Butylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Carbon Disulfide	ND	10	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Carbon Tetrachloride	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Chlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Chlorodibromomethane	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Chloroethane	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Chloroform	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Chloromethane	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
2-Chlorotoluene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
4-Chlorotoluene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
1,2-Dibromoethane (EDB)	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Dibromomethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
1,2-Dichlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
1,3-Dichlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
1,4-Dichlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Dichlorodifluoromethane (Freon 12)	ND	4.0	µg/L	2	V-05	SW-846 8260C	7/19/18	7/20/18 14:47	MFF
1,1-Dichloroethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
1,2-Dichloroethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
1,1-Dichloroethylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
cis-1,2-Dichloroethylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
trans-1,2-Dichloroethylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
1,2-Dichloropropane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
1,3-Dichloropropane	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
2,2-Dichloropropane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
1,1-Dichloropropene	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
cis-1,3-Dichloropropene	ND	0.80	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
trans-1,3-Dichloropropene	ND	0.80	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Diethyl Ether	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Diisopropyl Ether (DIPE)	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
1,4-Dioxane	ND	100	µg/L	2	V-16	SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Ethylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: RX-10R MW

Sampled: 7/17/2018 11:00

Sample ID: 18G0762-03

Sample Matrix: Ground Water

Sample Flags: RL-14

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	1.2	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
2-Hexanone (MBK)	ND	20	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Isopropylbenzene (Cumene)	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
p-Isopropyltoluene (p-Cymene)	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Methylene Chloride	ND	10	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
4-Methyl-2-pentanone (MIBK)	ND	20	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Naphthalene	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
n-Propylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Styrene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
1,1,1,2-Tetrachloroethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
1,1,2,2-Tetrachloroethane	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Tetrachloroethylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Tetrahydrofuran	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Toluene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
1,2,3-Trichlorobenzene	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
1,2,4-Trichlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
1,1,1-Trichloroethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
1,1,2-Trichloroethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Trichloroethylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Trichlorofluoromethane (Freon 11)	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
1,2,3-Trichloropropane	ND	4.0	µg/L	2	V-05	SW-846 8260C	7/19/18	7/20/18 14:47	MFF
1,2,4-Trimethylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
1,3,5-Trimethylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
Vinyl Chloride	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
m+p Xylene	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF
o-Xylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 14:47	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	88.3	70-130	7/20/18 14:47
Toluene-d8	98.8	70-130	7/20/18 14:47
4-Bromofluorobenzene	95.4	70-130	7/20/18 14:47

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: RX-10R MW

Sampled: 7/17/2018 11:00

Sample ID: 18G0762-03

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:47	KAL
Aroclor-1221 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:47	KAL
Aroclor-1232 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:47	KAL
Aroclor-1242 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:47	KAL
Aroclor-1248 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:47	KAL
Aroclor-1254 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:47	KAL
Aroclor-1260 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:47	KAL
Aroclor-1262 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:47	KAL
Aroclor-1268 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 0:47	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	58.2	30-150						7/24/18 0:47	
Decachlorobiphenyl [2]	60.9	30-150						7/24/18 0:47	
Tetrachloro-m-xylene [1]	65.4	30-150						7/24/18 0:47	
Tetrachloro-m-xylene [2]	66.9	30-150						7/24/18 0:47	

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

Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: RX-10R MW

Sampled: 7/17/2018 11:00

Sample ID: 18G0762-03

Sample Matrix: Ground Water

Petrochemical Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/24/18 8:08	RMW
C19-C36 Aliphatics	120	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/24/18 8:08	RMW
Unadjusted C11-C22 Aromatics	120	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/24/18 8:08	RMW
C11-C22 Aromatics	120	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/24/18 8:08	RMW
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/24/18 8:08	RMW
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/24/18 8:08	RMW
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/24/18 8:08	RMW
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/24/18 8:08	RMW
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/24/18 8:08	RMW
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/24/18 8:08	RMW
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/24/18 8:08	RMW
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/24/18 8:08	RMW
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/24/18 8:08	RMW
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/24/18 8:08	RMW
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/24/18 8:08	RMW
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/24/18 8:08	RMW
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/24/18 8:08	RMW
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/24/18 8:08	RMW
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/24/18 8:08	RMW
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/24/18 8:08	RMW
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/24/18 8:08	RMW
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Chlorooctadecane (COD)	70.1	40-140							
o-Terphenyl (OTP)	67.4	40-140							
2-Bromonaphthalene	99.2	40-140							
2-Fluorobiphenyl	91.7	40-140							

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

Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: RX-10R MW

Sampled: 7/17/2018 11:00

Sample ID: 18G0762-03

Sample Matrix: Ground Water

Sample Flags: RL-14

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	200	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:32	EEH
C5-C8 Aliphatics	ND	200	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:32	EEH
Unadjusted C9-C12 Aliphatics	ND	200	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:32	EEH
C9-C12 Aliphatics	ND	200	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:32	EEH
C9-C10 Aromatics	ND	200	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:32	EEH
Benzene	ND	2.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:32	EEH
Ethylbenzene	ND	2.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:32	EEH
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:32	EEH
Naphthalene	ND	10	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:32	EEH
Toluene	ND	2.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:32	EEH
m+p Xylene	ND	4.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:32	EEH
o-Xylene	ND	2.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 2:32	EEH
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,5-Dibromotoluene (FID)	102	70-130							
2,5-Dibromotoluene (PID)	95.2	70-130							

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

Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: RX-10R MW

Sampled: 7/17/2018 11:00

Sample ID: 18G0762-03

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	4.2	0.40	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:38	MJH
Barium	530	100	µg/L	10		SW-846 6020A-B	7/20/18	7/23/18 16:13	MJH
Cadmium	1.1	0.50	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:38	MJH
Chromium	ND	1.0	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:38	MJH
Lead	ND	5.0	µg/L	5	DL-15	SW-846 6020A-B	7/20/18	7/23/18 11:21	MJH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	7/23/18	7/23/18 12:34	EJB
Selenium	ND	5.0	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:38	MJH
Silver	ND	0.50	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:38	MJH

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-5 MW

Sampled: 7/17/2018 12:00

Sample ID: 18G0762-04

Sample Matrix: Ground Water

Sample Flags: RL-14

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	200	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
tert-Amyl Methyl Ether (TAME)	ND	10	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Benzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Bromobenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Bromochloromethane	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Bromodichloromethane	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Bromoform	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Bromomethane	ND	40	µg/L	20	R-05	SW-846 8260C	7/19/18	7/20/18 15:14	MFF
2-Butanone (MEK)	ND	200	µg/L	20	V-05	SW-846 8260C	7/19/18	7/20/18 15:14	MFF
n-Butylbenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
sec-Butylbenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
tert-Butylbenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	10	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Carbon Disulfide	ND	100	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Carbon Tetrachloride	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Chlorobenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Chlorodibromomethane	ND	10	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Chloroethane	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Chloroform	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Chloromethane	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
2-Chlorotoluene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
4-Chlorotoluene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
1,2-Dibromoethane (EDB)	ND	10	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Dibromomethane	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
1,2-Dichlorobenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
1,3-Dichlorobenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
1,4-Dichlorobenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Dichlorodifluoromethane (Freon 12)	ND	40	µg/L	20	V-05	SW-846 8260C	7/19/18	7/20/18 15:14	MFF
1,1-Dichloroethane	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
1,2-Dichloroethane	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
1,1-Dichloroethylene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
cis-1,2-Dichloroethylene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
trans-1,2-Dichloroethylene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
1,2-Dichloropropane	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
1,3-Dichloropropane	ND	10	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
2,2-Dichloropropane	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
1,1-Dichloropropene	ND	10	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
cis-1,3-Dichloropropene	ND	8.0	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
trans-1,3-Dichloropropene	ND	8.0	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Diethyl Ether	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Diisopropyl Ether (DIPE)	ND	10	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
1,4-Dioxane	ND	1000	µg/L	20	V-16	SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Ethylbenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-5 MW

Sampled: 7/17/2018 12:00

Sample ID: 18G0762-04

Sample Matrix: Ground Water

Sample Flags: RL-14

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	12	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
2-Hexanone (MBK)	ND	200	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Isopropylbenzene (Cumene)	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
p-Isopropyltoluene (p-Cymene)	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Methyl tert-Butyl Ether (MTBE)	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Methylene Chloride	ND	100	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
4-Methyl-2-pentanone (MIBK)	ND	200	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Naphthalene	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
n-Propylbenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Styrene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
1,1,1,2-Tetrachloroethane	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
1,1,2,2-Tetrachloroethane	ND	10	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Tetrachloroethylene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Tetrahydrofuran	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Toluene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
1,2,3-Trichlorobenzene	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
1,2,4-Trichlorobenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
1,1,1-Trichloroethane	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
1,1,2-Trichloroethane	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Trichloroethylene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Trichlorofluoromethane (Freon 11)	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
1,2,3-Trichloropropane	ND	40	µg/L	20	V-05	SW-846 8260C	7/19/18	7/20/18 15:14	MFF
1,2,4-Trimethylbenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
1,3,5-Trimethylbenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
Vinyl Chloride	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
m+p Xylene	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF
o-Xylene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:14	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	87.9	70-130	
Toluene-d8	97.5	70-130	
4-Bromofluorobenzene	92.6	70-130	

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-5 MW

Sampled: 7/17/2018 12:00

Sample ID: 18G0762-04

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:00	KAL
Aroclor-1221 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:00	KAL
Aroclor-1232 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:00	KAL
Aroclor-1242 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:00	KAL
Aroclor-1248 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:00	KAL
Aroclor-1254 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:00	KAL
Aroclor-1260 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:00	KAL
Aroclor-1262 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:00	KAL
Aroclor-1268 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:00	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	82.7	30-150						7/24/18 1:00	
Decachlorobiphenyl [2]	87.0	30-150						7/24/18 1:00	
Tetrachloro-m-xylene [1]	73.4	30-150						7/24/18 1:00	
Tetrachloro-m-xylene [2]	74.1	30-150						7/24/18 1:00	

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

Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-5 MW

Sampled: 7/17/2018 12:00

Sample ID: 18G0762-04

Sample Matrix: Ground Water

Petrolium Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	100	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 22:03	RMW
C19-C36 Aliphatics	250	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 22:03	RMW
Unadjusted C11-C22 Aromatics	140	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 22:03	RMW
C11-C22 Aromatics	140	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 22:03	RMW
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 22:03	RMW
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 22:03	RMW
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 22:03	RMW
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 22:03	RMW
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 22:03	RMW
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 22:03	RMW
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 22:03	RMW
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 22:03	RMW
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 22:03	RMW
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 22:03	RMW
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 22:03	RMW
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 22:03	RMW
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 22:03	RMW
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 22:03	RMW
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 22:03	RMW
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 22:03	RMW
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 22:03	RMW

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Chlorooctadecane (COD)	80.0	40-140	
o-Terphenyl (OTP)	79.4	40-140	
2-Bromonaphthalene	93.8	40-140	
2-Fluorobiphenyl	91.5	40-140	

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-5 MW

Sampled: 7/17/2018 12:00

Sample ID: 18G0762-04

Sample Matrix: Ground Water

Sample Flags: RL-14

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	2000	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 4:59	EEH
C5-C8 Aliphatics	ND	2000	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 4:59	EEH
Unadjusted C9-C12 Aliphatics	ND	2000	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 4:59	EEH
C9-C12 Aliphatics	ND	2000	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 4:59	EEH
C9-C10 Aromatics	ND	2000	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 4:59	EEH
Benzene	ND	20	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 4:59	EEH
Ethylbenzene	ND	20	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 4:59	EEH
Methyl tert-Butyl Ether (MTBE)	ND	20	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 4:59	EEH
Naphthalene	ND	100	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 4:59	EEH
Toluene	ND	20	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 4:59	EEH
m+p Xylene	ND	40	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 4:59	EEH
o-Xylene	ND	20	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 4:59	EEH
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,5-Dibromotoluene (FID)	103	70-130							
2,5-Dibromotoluene (PID)	100	70-130							

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

Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-5 MW

Sampled: 7/17/2018 12:00

Sample ID: 18G0762-04

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	26	0.40	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:42	MJH
Barium	230	50	µg/L	5		SW-846 6020A-B	7/20/18	7/23/18 11:24	MJH
Cadmium	ND	0.50	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:42	MJH
Chromium	1.3	1.0	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:42	MJH
Lead	17	5.0	µg/L	5		SW-846 6020A-B	7/20/18	7/23/18 11:24	MJH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	7/23/18	7/23/18 12:40	EJB
Selenium	ND	5.0	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:42	MJH
Silver	ND	0.50	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:42	MJH

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-4 MW

Sampled: 7/17/2018 13:00

Sample ID: 18G0762-05

Sample Matrix: Ground Water

Sample Flags: RL-14

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	200	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
tert-Amyl Methyl Ether (TAME)	ND	10	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Benzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Bromobenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Bromochloromethane	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Bromodichloromethane	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Bromoform	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Bromomethane	ND	40	µg/L	20	R-05	SW-846 8260C	7/19/18	7/20/18 15:40	MFF
2-Butanone (MEK)	ND	200	µg/L	20	V-05	SW-846 8260C	7/19/18	7/20/18 15:40	MFF
n-Butylbenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
sec-Butylbenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
tert-Butylbenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	10	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Carbon Disulfide	ND	100	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Carbon Tetrachloride	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Chlorobenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Chlorodibromomethane	ND	10	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Chloroethane	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Chloroform	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Chloromethane	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
2-Chlorotoluene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
4-Chlorotoluene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
1,2-Dibromoethane (EDB)	ND	10	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Dibromomethane	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
1,2-Dichlorobenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
1,3-Dichlorobenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
1,4-Dichlorobenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Dichlorodifluoromethane (Freon 12)	ND	40	µg/L	20	V-05	SW-846 8260C	7/19/18	7/20/18 15:40	MFF
1,1-Dichloroethane	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
1,2-Dichloroethane	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
1,1-Dichloroethylene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
cis-1,2-Dichloroethylene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
trans-1,2-Dichloroethylene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
1,2-Dichloropropane	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
1,3-Dichloropropane	ND	10	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
2,2-Dichloropropane	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
1,1-Dichloropropene	ND	10	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
cis-1,3-Dichloropropene	ND	8.0	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
trans-1,3-Dichloropropene	ND	8.0	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Diethyl Ether	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Diisopropyl Ether (DIPE)	ND	10	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
1,4-Dioxane	ND	1000	µg/L	20	V-16	SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Ethylbenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-4 MW

Sampled: 7/17/2018 13:00

Sample ID: 18G0762-05

Sample Matrix: Ground Water

Sample Flags: RL-14

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	12	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
2-Hexanone (MBK)	ND	200	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Isopropylbenzene (Cumene)	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
p-Isopropyltoluene (p-Cymene)	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Methyl tert-Butyl Ether (MTBE)	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Methylene Chloride	ND	100	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
4-Methyl-2-pentanone (MIBK)	ND	200	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Naphthalene	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
n-Propylbenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Styrene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
1,1,1,2-Tetrachloroethane	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
1,1,2,2-Tetrachloroethane	ND	10	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Tetrachloroethylene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Tetrahydrofuran	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Toluene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
1,2,3-Trichlorobenzene	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
1,2,4-Trichlorobenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
1,1,1-Trichloroethane	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
1,1,2-Trichloroethane	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Trichloroethylene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Trichlorofluoromethane (Freon 11)	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
1,2,3-Trichloropropane	ND	40	µg/L	20	V-05	SW-846 8260C	7/19/18	7/20/18 15:40	MFF
1,2,4-Trimethylbenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
1,3,5-Trimethylbenzene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
Vinyl Chloride	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
m+p Xylene	ND	40	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF
o-Xylene	ND	20	µg/L	20		SW-846 8260C	7/19/18	7/20/18 15:40	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	91.0	70-130	
Toluene-d8	98.1	70-130	
4-Bromofluorobenzene	94.3	70-130	

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

Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-4 MW

Sampled: 7/17/2018 13:00

Sample ID: 18G0762-05

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Acenaphthylene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Acetophenone	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Aniline	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Anthracene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Benzo(a)anthracene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Benzo(a)pyrene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Benzo(b)fluoranthene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Benzo(g,h,i)perylene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Benzo(k)fluoranthene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Bis(2-chloroethoxy)methane	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Bis(2-chloroethyl)ether	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Bis(2-chloroisopropyl)ether	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
4-Bromophenylphenylether	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Butylbenzylphthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
4-Chloroaniline	ND	10	µg/L	1	V-34	SW-846 8270D	7/20/18	7/21/18 16:23	CDT
2-Chloronaphthalene	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
2-Chlorophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Chrysene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Dibenz(a,h)anthracene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Dibenzofuran	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Di-n-butylphthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
1,2-Dichlorobenzene	ND	5.0	µg/L	1	L-04	SW-846 8270D	7/20/18	7/21/18 16:23	CDT
1,3-Dichlorobenzene	ND	5.0	µg/L	1	L-04	SW-846 8270D	7/20/18	7/21/18 16:23	CDT
1,4-Dichlorobenzene	ND	5.0	µg/L	1	L-04	SW-846 8270D	7/20/18	7/21/18 16:23	CDT
3,3-Dichlorobenzidine	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
2,4-Dichlorophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Diethylphthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
2,4-Dimethylphenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Dimethylphthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
2,4-Dinitrophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
2,4-Dinitrotoluene	ND	10	µg/L	1	V-20	SW-846 8270D	7/20/18	7/21/18 16:23	CDT
2,6-Dinitrotoluene	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Di-n-octylphthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Fluoranthene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Fluorene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Hexachlorobenzene	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Hexachlorobutadiene	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Hexachloroethane	ND	10	µg/L	1	L-04	SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Isophorone	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
2-Methylnaphthalene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT

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

Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-4 MW

Sampled: 7/17/2018 13:00

Sample ID: 18G0762-05

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
3/4-Methylphenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Naphthalene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Nitrobenzene	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
2-Nitrophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
4-Nitrophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Pentachlorophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Phenanthrene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Phenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Pyrene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Pyridine	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
2,4,5-Trichlorophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
2,4,6-Trichlorophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:23	CDT
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	37.0	15-110							
Phenol-d6	31.1	15-110							
Nitrobenzene-d5	55.7	30-130							
2-Fluorobiphenyl	64.2	30-130							
2,4,6-Tribromophenol	74.0	15-110							
p-Terphenyl-d14	70.6	30-130							

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Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-4 MW

Sampled: 7/17/2018 13:00

Sample ID: 18G0762-05

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:12	KAL
Aroclor-1221 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:12	KAL
Aroclor-1232 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:12	KAL
Aroclor-1242 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:12	KAL
Aroclor-1248 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:12	KAL
Aroclor-1254 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:12	KAL
Aroclor-1260 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:12	KAL
Aroclor-1262 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:12	KAL
Aroclor-1268 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:12	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	65.0	30-150						7/24/18 1:12	
Decachlorobiphenyl [2]	68.1	30-150						7/24/18 1:12	
Tetrachloro-m-xylene [1]	68.8	30-150						7/24/18 1:12	
Tetrachloro-m-xylene [2]	69.2	30-150						7/24/18 1:12	

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Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-4 MW

Sampled: 7/17/2018 13:00

Sample ID: 18G0762-05

Sample Matrix: Ground Water

Petrolium Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:26	RMW
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:26	RMW
Unadjusted C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:26	RMW
C11-C22 Aromatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:26	RMW
Acenaphthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:26	RMW
Acenaphthylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:26	RMW
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:26	RMW
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:26	RMW
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:26	RMW
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:26	RMW
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:26	RMW
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:26	RMW
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:26	RMW
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:26	RMW
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:26	RMW
Fluorene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:26	RMW
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:26	RMW
2-Methylnaphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:26	RMW
Naphthalene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:26	RMW
Phenanthrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:26	RMW
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:26	RMW

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Chlorooctadecane (COD)	59.1	40-140	
o-Terphenyl (OTP)	53.8	40-140	
2-Bromonaphthalene	96.6	40-140	
2-Fluorobiphenyl	90.6	40-140	

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Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-4 MW

Sampled: 7/17/2018 13:00

Sample ID: 18G0762-05

Sample Matrix: Ground Water

Sample Flags: RL-14

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	2000	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 5:28	EEH
C5-C8 Aliphatics	ND	2000	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 5:28	EEH
Unadjusted C9-C12 Aliphatics	ND	2000	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 5:28	EEH
C9-C12 Aliphatics	ND	2000	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 5:28	EEH
C9-C10 Aromatics	ND	2000	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 5:28	EEH
Benzene	ND	20	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 5:28	EEH
Ethylbenzene	ND	20	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 5:28	EEH
Methyl tert-Butyl Ether (MTBE)	ND	20	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 5:28	EEH
Naphthalene	ND	100	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 5:28	EEH
Toluene	ND	20	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 5:28	EEH
m+p Xylene	ND	40	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 5:28	EEH
o-Xylene	ND	20	µg/L	20		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 5:28	EEH
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,5-Dibromotoluene (FID)	103	70-130							
2,5-Dibromotoluene (PID)	97.9	70-130							

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Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-4 MW

Sampled: 7/17/2018 13:00

Sample ID: 18G0762-05

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	2.1	0.40	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:45	MJH
Barium	98	50	µg/L	5		SW-846 6020A-B	7/20/18	7/23/18 11:28	MJH
Cadmium	ND	0.50	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:45	MJH
Chromium	5.3	1.0	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:45	MJH
Lead	ND	5.0	µg/L	5	DL-15	SW-846 6020A-B	7/20/18	7/23/18 11:28	MJH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	7/23/18	7/23/18 12:41	EJB
Selenium	6.2	5.0	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:45	MJH
Silver	ND	0.50	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 10:45	MJH

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Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-7 MW

Sampled: 7/17/2018 14:00

Sample ID: 18G0762-06

Sample Matrix: Ground Water

Sample Flags: RL-14

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	ND	20	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
tert-Amyl Methyl Ether (TAME)	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Benzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Bromobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Bromochloromethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Bromodichloromethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Bromoform	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Bromomethane	ND	4.0	µg/L	2	R-05	SW-846 8260C	7/19/18	7/20/18 16:06	MFF
2-Butanone (MEK)	ND	20	µg/L	2	V-05	SW-846 8260C	7/19/18	7/20/18 16:06	MFF
n-Butylbenzene	2.6	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
sec-Butylbenzene	2.3	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
tert-Butylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
tert-Butyl Ethyl Ether (TBEE)	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Carbon Disulfide	ND	10	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Carbon Tetrachloride	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Chlorobenzene	3.8	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Chlorodibromomethane	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Chloroethane	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Chloroform	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Chloromethane	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
2-Chlorotoluene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
4-Chlorotoluene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
1,2-Dibromo-3-chloropropane (DBCP)	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
1,2-Dibromoethane (EDB)	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Dibromomethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
1,2-Dichlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
1,3-Dichlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
1,4-Dichlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Dichlorodifluoromethane (Freon 12)	ND	4.0	µg/L	2	V-05	SW-846 8260C	7/19/18	7/20/18 16:06	MFF
1,1-Dichloroethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
1,2-Dichloroethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
1,1-Dichloroethylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
cis-1,2-Dichloroethylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
trans-1,2-Dichloroethylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
1,2-Dichloropropane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
1,3-Dichloropropane	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
2,2-Dichloropropane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
1,1-Dichloropropene	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
cis-1,3-Dichloropropene	ND	0.80	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
trans-1,3-Dichloropropene	ND	0.80	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Diethyl Ether	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Diisopropyl Ether (DIPE)	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
1,4-Dioxane	ND	100	µg/L	2	V-16	SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Ethylbenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-7 MW

Sampled: 7/17/2018 14:00

Sample ID: 18G0762-06

Sample Matrix: Ground Water

Sample Flags: RL-14

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Hexachlorobutadiene	ND	1.2	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
2-Hexanone (MBK)	ND	20	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Isopropylbenzene (Cumene)	4.4	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
p-Isopropyltoluene (p-Cymene)	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Methylene Chloride	ND	10	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
4-Methyl-2-pentanone (MIBK)	ND	20	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Naphthalene	120	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
n-Propylbenzene	5.7	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Styrene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
1,1,1,2-Tetrachloroethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
1,1,2,2-Tetrachloroethane	ND	1.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Tetrachloroethylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Tetrahydrofuran	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Toluene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
1,2,3-Trichlorobenzene	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
1,2,4-Trichlorobenzene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
1,1,1-Trichloroethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
1,1,2-Trichloroethane	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Trichloroethylene	ND	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Trichlorofluoromethane (Freon 11)	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
1,2,3-Trichloropropane	ND	4.0	µg/L	2	V-05	SW-846 8260C	7/19/18	7/20/18 16:06	MFF
1,2,4-Trimethylbenzene	56	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
1,3,5-Trimethylbenzene	19	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
Vinyl Chloride	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
m+p Xylene	ND	4.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF
o-Xylene	5.6	2.0	µg/L	2		SW-846 8260C	7/19/18	7/20/18 16:06	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	88.2	70-130	7/20/18 16:06
Toluene-d8	97.6	70-130	7/20/18 16:06
4-Bromofluorobenzene	97.0	70-130	7/20/18 16:06

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-7 MW

Sampled: 7/17/2018 14:00

Sample ID: 18G0762-06

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	30	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Acenaphthylene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Acetophenone	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Aniline	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Anthracene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Benzo(a)anthracene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Benzo(a)pyrene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Benzo(b)fluoranthene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Benzo(g,h,i)perylene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Benzo(k)fluoranthene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Bis(2-chloroethoxy)methane	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Bis(2-chloroethyl)ether	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Bis(2-chloroisopropyl)ether	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
4-Bromophenylphenylether	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Butylbenzylphthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
4-Chloroaniline	ND	10	µg/L	1	V-34	SW-846 8270D	7/20/18	7/21/18 16:49	CDT
2-Chloronaphthalene	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
2-Chlorophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Chrysene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Dibenz(a,h)anthracene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Dibenzofuran	26	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Di-n-butylphthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
1,2-Dichlorobenzene	ND	5.0	µg/L	1	L-04	SW-846 8270D	7/20/18	7/21/18 16:49	CDT
1,3-Dichlorobenzene	ND	5.0	µg/L	1	L-04	SW-846 8270D	7/20/18	7/21/18 16:49	CDT
1,4-Dichlorobenzene	ND	5.0	µg/L	1	L-04	SW-846 8270D	7/20/18	7/21/18 16:49	CDT
3,3-Dichlorobenzidine	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
2,4-Dichlorophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Diethylphthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
2,4-Dimethylphenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Dimethylphthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
2,4-Dinitrophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
2,4-Dinitrotoluene	ND	10	µg/L	1	V-20	SW-846 8270D	7/20/18	7/21/18 16:49	CDT
2,6-Dinitrotoluene	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Di-n-octylphthalate	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Fluoranthene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Fluorene	32	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Hexachlorobenzene	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Hexachlorobutadiene	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Hexachloroethane	ND	10	µg/L	1	L-04	SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Isophorone	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
2-Methylnaphthalene	28	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT

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

Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-7 MW

Sampled: 7/17/2018 14:00

Sample ID: 18G0762-06

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
2-Methylphenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
3/4-Methylphenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Naphthalene	29	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Nitrobenzene	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
2-Nitrophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
4-Nitrophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Pentachlorophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Phenanthrene	24	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Phenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Pyrene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Pyridine	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
1,2,4-Trichlorobenzene	ND	5.0	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
2,4,5-Trichlorophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
2,4,6-Trichlorophenol	ND	10	µg/L	1		SW-846 8270D	7/20/18	7/21/18 16:49	CDT
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2-Fluorophenol	21.7	15-110						7/21/18 16:49	
Phenol-d6	23.3	15-110						7/21/18 16:49	
Nitrobenzene-d5	35.5	30-130						7/21/18 16:49	
2-Fluorobiphenyl	52.2	30-130						7/21/18 16:49	
2,4,6-Tribromophenol	66.4	15-110						7/21/18 16:49	
p-Terphenyl-d14	66.5	30-130						7/21/18 16:49	

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-7 MW

Sampled: 7/17/2018 14:00

Sample ID: 18G0762-06

Sample Matrix: Ground Water

Polychlorinated Biphenyls By GC/ECD

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aroclor-1016 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:24	KAL
Aroclor-1221 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:24	KAL
Aroclor-1232 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:24	KAL
Aroclor-1242 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:24	KAL
Aroclor-1248 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:24	KAL
Aroclor-1254 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:24	KAL
Aroclor-1260 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:24	KAL
Aroclor-1262 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:24	KAL
Aroclor-1268 [1]	ND	0.20	µg/L	1		SW-846 8082A	7/20/18	7/24/18 1:24	KAL
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
Decachlorobiphenyl [1]	59.0	30-150						7/24/18 1:24	
Decachlorobiphenyl [2]	61.8	30-150						7/24/18 1:24	
Tetrachloro-m-xylene [1]	67.2	30-150						7/24/18 1:24	
Tetrachloro-m-xylene [2]	69.7	30-150						7/24/18 1:24	

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-7 MW

Sampled: 7/17/2018 14:00

Sample ID: 18G0762-06

Sample Matrix: Ground Water

Petrolium Hydrocarbons Analyses - EPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
C9-C18 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:44	RMW
C19-C36 Aliphatics	ND	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:44	RMW
Unadjusted C11-C22 Aromatics	480	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:44	RMW
C11-C22 Aromatics	350	100	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:44	RMW
Acenaphthene	32	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:44	RMW
Acenaphthylene	2.4	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:44	RMW
Anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:44	RMW
Benzo(a)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:44	RMW
Benzo(a)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:44	RMW
Benzo(b)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:44	RMW
Benzo(g,h,i)perylene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:44	RMW
Benzo(k)fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:44	RMW
Chrysene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:44	RMW
Dibenz(a,h)anthracene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:44	RMW
Fluoranthene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:44	RMW
Fluorene	21	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:44	RMW
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:44	RMW
2-Methylnaphthalene	29	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:44	RMW
Naphthalene	34	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:44	RMW
Phenanthrene	10	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:44	RMW
Pyrene	ND	2.0	µg/L	1		MADEP-EPH-04-1.1	7/20/18	7/23/18 21:44	RMW

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Chlorooctadecane (COD)	78.3	40-140	
o-Terphenyl (OTP)	76.5	40-140	
2-Bromonaphthalene	101	40-140	
2-Fluorobiphenyl	93.1	40-140	

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-7 MW

Sampled: 7/17/2018 14:00

Sample ID: 18G0762-06

Sample Matrix: Ground Water

Sample Flags: RL-14

Petroleum Hydrocarbons Analyses - VPH

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Unadjusted C5-C8 Aliphatics	ND	200	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 3:02	EEH
C5-C8 Aliphatics	ND	200	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 3:02	EEH
Unadjusted C9-C12 Aliphatics	390	200	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 3:02	EEH
C9-C12 Aliphatics	370	200	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 3:02	EEH
C9-C10 Aromatics	370	200	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 3:02	EEH
Benzene	ND	2.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 3:02	EEH
Ethylbenzene	7.0	2.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 3:02	EEH
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 3:02	EEH
Naphthalene	100	10	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 3:02	EEH
Toluene	ND	2.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 3:02	EEH
m+p Xylene	4.6	4.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 3:02	EEH
o-Xylene	6.3	2.0	µg/L	2		MADEP-VPH-Feb 2018 Rev 2.1	7/20/18	7/21/18 3:02	EEH
Surrogates	% Recovery	Recovery Limits	Flag/Qual						
2,5-Dibromotoluene (FID)	121	70-130							
2,5-Dibromotoluene (PID)	100	70-130							

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Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 18G0762

Date Received: 7/19/2018

Field Sample #: BEC-7 MW

Sampled: 7/17/2018 14:00

Sample ID: 18G0762-06

Sample Matrix: Ground Water

Metals Analyses (Dissolved)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Arsenic	3.0	0.40	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 16:30	MJH
Barium	410	50	µg/L	5		SW-846 6020A-B	7/20/18	7/23/18 16:16	MJH
Cadmium	ND	0.50	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 16:30	MJH
Chromium	1.3	1.0	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 16:30	MJH
Lead	ND	1.0	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 16:30	MJH
Mercury	ND	0.00010	mg/L	1		SW-846 7470A	7/23/18	7/23/18 12:43	EJB
Selenium	ND	5.0	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 16:30	MJH
Silver	ND	0.50	µg/L	1		SW-846 6020A-B	7/20/18	7/23/18 16:30	MJH

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Sample Extraction Data

Prep Method: SW-846 3510C-MADEP-EPH-04-1.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18G0762-01 [BEC-15 MW]	B208330	1000	2.00	07/20/18
18G0762-02 [RX-6R MW]	B208330	1000	2.00	07/20/18
18G0762-03 [RX-10R MW]	B208330	1000	2.00	07/20/18
18G0762-04 [BEC-5 MW]	B208330	1000	2.00	07/20/18
18G0762-05 [BEC-4 MW]	B208330	1000	2.00	07/20/18
18G0762-06 [BEC-7 MW]	B208330	1000	2.00	07/20/18

Prep Method: MA VPH-MADEP-VPH-Feb 2018 Rev 2.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18G0762-02 [RX-6R MW]	B208360	2.5	5.00	07/20/18
18G0762-03 [RX-10R MW]	B208360	2.5	5.00	07/20/18
18G0762-04 [BEC-5 MW]	B208360	0.25	5.00	07/20/18
18G0762-05 [BEC-4 MW]	B208360	0.25	5.00	07/20/18
18G0762-06 [BEC-7 MW]	B208360	2.5	5.00	07/20/18

Prep Method: MA VPH-MADEP-VPH-Feb 2018 Rev 2.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18G0762-01 [BEC-15 MW]	B208443	2.5	5.00	07/23/18

Prep Method: SW-846 3005A Dissolved-SW-846 6020A-B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18G0762-01 [BEC-15 MW]	B208362	50.0	50.0	07/20/18
18G0762-02 [RX-6R MW]	B208362	50.0	50.0	07/20/18
18G0762-03 [RX-10R MW]	B208362	50.0	50.0	07/20/18
18G0762-04 [BEC-5 MW]	B208362	50.0	50.0	07/20/18
18G0762-05 [BEC-4 MW]	B208362	50.0	50.0	07/20/18
18G0762-06 [BEC-7 MW]	B208362	50.0	50.0	07/20/18

Prep Method: SW-846 7470A Dissolved-SW-846 7470A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18G0762-01 [BEC-15 MW]	B208447	6.00	6.00	07/23/18
18G0762-02 [RX-6R MW]	B208447	6.00	6.00	07/23/18
18G0762-03 [RX-10R MW]	B208447	6.00	6.00	07/23/18
18G0762-04 [BEC-5 MW]	B208447	6.00	6.00	07/23/18
18G0762-05 [BEC-4 MW]	B208447	6.00	6.00	07/23/18
18G0762-06 [BEC-7 MW]	B208447	6.00	6.00	07/23/18

Prep Method: SW-846 3510C-SW-846 8082A

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18G0762-01 [BEC-15 MW]	B208329	1020	10.0	07/20/18
18G0762-02 [RX-6R MW]	B208329	1020	10.0	07/20/18
18G0762-03 [RX-10R MW]	B208329	1000	10.0	07/20/18
18G0762-04 [BEC-5 MW]	B208329	1020	10.0	07/20/18
18G0762-05 [BEC-4 MW]	B208329	1000	10.0	07/20/18

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332**Sample Extraction Data****Prep Method: SW-846 3510C-SW-846 8082A**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18G0762-06 [BEC-7 MW]	B208329	1020	10.0	07/20/18

Prep Method: SW-846 5030B-SW-846 8260C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18G0762-01 [BEC-15 MW]	B208293	2.5	5.00	07/19/18
18G0762-02 [RX-6R MW]	B208293	2.5	5.00	07/19/18
18G0762-03 [RX-10R MW]	B208293	2.5	5.00	07/19/18
18G0762-04 [BEC-5 MW]	B208293	0.25	5.00	07/19/18
18G0762-05 [BEC-4 MW]	B208293	0.25	5.00	07/19/18
18G0762-06 [BEC-7 MW]	B208293	2.5	5.00	07/19/18

Prep Method: SW-846 3510C-SW-846 8270D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18G0762-01 [BEC-15 MW]	B208332	1000	1.00	07/20/18
18G0762-02 [RX-6R MW]	B208332	1000	1.00	07/20/18
18G0762-05 [BEC-4 MW]	B208332	1000	1.00	07/20/18
18G0762-06 [BEC-7 MW]	B208332	1000	1.00	07/20/18

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

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 B208293 - SW-846 5030B										
Blank (B208293-BLK1)				Prepared: 07/19/18 Analyzed: 07/20/18						
Acetone	ND	10	µg/L							
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							
Benzene	ND	1.0	µg/L							
Bromobenzene	ND	1.0	µg/L							
Bromochloromethane	ND	1.0	µg/L							
Bromodichloromethane	ND	1.0	µg/L							
Bromoform	ND	2.0	µg/L							
Bromomethane	ND	2.0	µg/L							R-05
2-Butanone (MEK)	ND	10	µg/L							V-05
n-Butylbenzene	ND	1.0	µg/L							
sec-Butylbenzene	ND	1.0	µg/L							
tert-Butylbenzene	ND	1.0	µg/L							
tert-Butyl Ethyl Ether (TBEE)	ND	0.50	µg/L							
Carbon Disulfide	ND	5.0	µg/L							
Carbon Tetrachloride	ND	1.0	µg/L							
Chlorobenzene	ND	1.0	µg/L							
Chlorodibromomethane	ND	0.50	µg/L							
Chloroethane	ND	2.0	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							
2-Chlorotoluene	ND	1.0	µg/L							
4-Chlorotoluene	ND	1.0	µg/L							
1,2-Dibromo-3-chloropropane (DBCP)	ND	2.0	µg/L							
1,2-Dibromoethane (EDB)	ND	0.50	µg/L							
Dibromomethane	ND	1.0	µg/L							
1,2-Dichlorobenzene	ND	1.0	µg/L							
1,3-Dichlorobenzene	ND	1.0	µg/L							
1,4-Dichlorobenzene	ND	1.0	µg/L							
Dichlorodifluoromethane (Freon 12)	ND	2.0	µg/L							V-05
1,1-Dichloroethane	ND	1.0	µg/L							
1,2-Dichloroethane	ND	1.0	µg/L							
1,1-Dichloroethylene	ND	1.0	µg/L							
cis-1,2-Dichloroethylene	ND	1.0	µg/L							
trans-1,2-Dichloroethylene	ND	1.0	µg/L							
1,2-Dichloropropane	ND	1.0	µg/L							
1,3-Dichloropropane	ND	0.50	µg/L							
2,2-Dichloropropane	ND	1.0	µg/L							
1,1-Dichloropropene	ND	0.50	µg/L							
cis-1,3-Dichloropropene	ND	0.40	µg/L							
trans-1,3-Dichloropropene	ND	0.40	µg/L							
Diethyl Ether	ND	2.0	µg/L							
Diisopropyl Ether (DIPE)	ND	0.50	µg/L							
1,4-Dioxane	ND	50	µg/L							V-16
Ethylbenzene	ND	1.0	µg/L							
Hexachlorobutadiene	ND	0.60	µg/L							
2-Hexanone (MBK)	ND	10	µg/L							
Isopropylbenzene (Cumene)	ND	1.0	µg/L							
p-Isopropyltoluene (p-Cymene)	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
Methylene Chloride	ND	5.0	µg/L							
4-Methyl-2-pentanone (MIBK)	ND	10	µg/L							
Naphthalene	ND	2.0	µg/L							

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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 B208293 - SW-846 5030B										
Blank (B208293-BLK1)										
Prepared: 07/19/18 Analyzed: 07/20/18										
n-Propylbenzene	ND	1.0	µg/L							
Styrene	ND	1.0	µg/L							
1,1,1,2-Tetrachloroethane	ND	1.0	µg/L							
1,1,2,2-Tetrachloroethane	ND	0.50	µg/L							
Tetrachloroethylene	ND	1.0	µg/L							
Tetrahydrofuran	ND	2.0	µg/L							
Toluene	ND	1.0	µg/L							
1,2,3-Trichlorobenzene	ND	2.0	µg/L							
1,2,4-Trichlorobenzene	ND	1.0	µg/L							
1,1,1-Trichloroethane	ND	1.0	µg/L							
1,1,2-Trichloroethane	ND	1.0	µg/L							
Trichloroethylene	ND	1.0	µg/L							
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L							
1,2,3-Trichloropropane	ND	2.0	µg/L							V-05
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
1,3,5-Trimethylbenzene	ND	1.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	22.8		µg/L	25.0		91.2	70-130			
Surrogate: Toluene-d8	24.4		µg/L	25.0		97.5	70-130			
Surrogate: 4-Bromofluorobenzene	23.2		µg/L	25.0		92.9	70-130			
LCS (B208293-BS1)										
Prepared: 07/19/18 Analyzed: 07/20/18										
Acetone	131	10	µg/L	100		131	40-160			L-14 †
tert-Amyl Methyl Ether (TAME)	9.57	0.50	µg/L	10.0		95.7	70-130			
Benzene	9.86	1.0	µg/L	10.0		98.6	70-130			
Bromobenzene	10.6	1.0	µg/L	10.0		106	70-130			
Bromochloromethane	9.98	1.0	µg/L	10.0		99.8	70-130			
Bromodichloromethane	9.76	1.0	µg/L	10.0		97.6	70-130			
Bromoform	10.4	2.0	µg/L	10.0		104	70-130			
Bromomethane	9.81	2.0	µg/L	10.0		98.1	40-160			R-05, V-20 †
2-Butanone (MEK)	89.1	10	µg/L	100		89.1	40-160			V-05 †
n-Butylbenzene	11.5	1.0	µg/L	10.0		115	70-130			
sec-Butylbenzene	11.4	1.0	µg/L	10.0		114	70-130			
tert-Butylbenzene	10.8	1.0	µg/L	10.0		108	70-130			
tert-Butyl Ethyl Ether (TBEE)	8.50	0.50	µg/L	10.0		85.0	70-130			
Carbon Disulfide	11.9	5.0	µg/L	10.0		119	70-130			
Carbon Tetrachloride	9.05	1.0	µg/L	10.0		90.5	70-130			
Chlorobenzene	10.7	1.0	µg/L	10.0		107	70-130			
Chlorodibromomethane	9.88	0.50	µg/L	10.0		98.8	70-130			
Chloroethane	10.5	2.0	µg/L	10.0		105	70-130			
Chloroform	10.2	2.0	µg/L	10.0		102	70-130			
Chloromethane	7.12	2.0	µg/L	10.0		71.2	40-160			†
2-Chlorotoluene	10.2	1.0	µg/L	10.0		102	70-130			
4-Chlorotoluene	10.3	1.0	µg/L	10.0		103	70-130			
1,2-Dibromo-3-chloropropane (DBCP)	9.88	2.0	µg/L	10.0		98.8	70-130			
1,2-Dibromoethane (EDB)	10.4	0.50	µg/L	10.0		104	70-130			
Dibromomethane	10.8	1.0	µg/L	10.0		108	70-130			
1,2-Dichlorobenzene	10.8	1.0	µg/L	10.0		108	70-130			
1,3-Dichlorobenzene	11.4	1.0	µg/L	10.0		114	70-130			
1,4-Dichlorobenzene	10.5	1.0	µg/L	10.0		105	70-130			

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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 B208293 - SW-846 5030B										
LCS (B208293-BS1)				Prepared: 07/19/18 Analyzed: 07/20/18						
Dichlorodifluoromethane (Freon 12)	5.74	2.0	µg/L	10.0		57.4	40-160			L-14, V-05 †
1,1-Dichloroethane	9.84	1.0	µg/L	10.0		98.4	70-130			
1,2-Dichloroethane	8.92	1.0	µg/L	10.0		89.2	70-130			
1,1-Dichloroethylene	11.1	1.0	µg/L	10.0		111	70-130			
cis-1,2-Dichloroethylene	9.37	1.0	µg/L	10.0		93.7	70-130			
trans-1,2-Dichloroethylene	9.65	1.0	µg/L	10.0		96.5	70-130			
1,2-Dichloropropane	9.87	1.0	µg/L	10.0		98.7	70-130			
1,3-Dichloropropane	9.45	0.50	µg/L	10.0		94.5	70-130			
2,2-Dichloropropane	10.6	1.0	µg/L	10.0		106	70-130			
1,1-Dichloropropene	9.75	0.50	µg/L	10.0		97.5	70-130			
cis-1,3-Dichloropropene	9.86	0.40	µg/L	10.0		98.6	70-130			
trans-1,3-Dichloropropene	10.1	0.40	µg/L	10.0		101	70-130			
Diethyl Ether	11.1	2.0	µg/L	10.0		111	70-130			
Diisopropyl Ether (DIPE)	8.06	0.50	µg/L	10.0		80.6	70-130			
1,4-Dioxane	100	50	µg/L	100		100	40-160			V-16 †
Ethylbenzene	11.0	1.0	µg/L	10.0		110	70-130			
Hexachlorobutadiene	11.7	0.60	µg/L	10.0		117	70-130			
2-Hexanone (MBK)	91.3	10	µg/L	100		91.3	40-160			†
Isopropylbenzene (Cumene)	11.5	1.0	µg/L	10.0		115	70-130			
p-Isopropyltoluene (p-Cymene)	11.4	1.0	µg/L	10.0		114	70-130			
Methyl tert-Butyl Ether (MTBE)	10.2	1.0	µg/L	10.0		102	70-130			
Methylene Chloride	10.7	5.0	µg/L	10.0		107	70-130			
4-Methyl-2-pentanone (MIBK)	90.0	10	µg/L	100		90.0	40-160			†
Naphthalene	10.7	2.0	µg/L	10.0		107	70-130			
n-Propylbenzene	10.7	1.0	µg/L	10.0		107	70-130			
Styrene	11.1	1.0	µg/L	10.0		111	70-130			
1,1,1,2-Tetrachloroethane	10.9	1.0	µg/L	10.0		109	70-130			
1,1,2,2-Tetrachloroethane	11.2	0.50	µg/L	10.0		112	70-130			
Tetrachloroethylene	10.6	1.0	µg/L	10.0		106	70-130			
Tetrahydrofuran	9.10	2.0	µg/L	10.0		91.0	70-130			
Toluene	10.4	1.0	µg/L	10.0		104	70-130			
1,2,3-Trichlorobenzene	10.8	2.0	µg/L	10.0		108	70-130			
1,2,4-Trichlorobenzene	10.6	1.0	µg/L	10.0		106	70-130			
1,1,1-Trichloroethane	10.1	1.0	µg/L	10.0		101	70-130			
1,1,2-Trichloroethane	10.5	1.0	µg/L	10.0		105	70-130			
Trichloroethylene	10.3	1.0	µg/L	10.0		103	70-130			
Trichlorofluoromethane (Freon 11)	9.83	2.0	µg/L	10.0		98.3	70-130			
1,2,3-Trichloropropane	8.78	2.0	µg/L	10.0		87.8	70-130			V-05
1,2,4-Trimethylbenzene	10.3	1.0	µg/L	10.0		103	70-130			
1,3,5-Trimethylbenzene	10.7	1.0	µg/L	10.0		107	70-130			
Vinyl Chloride	8.84	2.0	µg/L	10.0		88.4	70-130			
m+p Xylene	21.5	2.0	µg/L	20.0		107	70-130			
o-Xylene	10.7	1.0	µg/L	10.0		107	70-130			
Surrogate: 1,2-Dichloroethane-d4	22.5		µg/L	25.0		89.9	70-130			
Surrogate: Toluene-d8	24.6		µg/L	25.0		98.6	70-130			
Surrogate: 4-Bromofluorobenzene	24.2		µg/L	25.0		96.6	70-130			

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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 B208293 - SW-846 5030B										
LCS Dup (B208293-BS01)										
Prepared: 07/19/18 Analyzed: 07/20/18										
Acetone	123	10	µg/L	100		123	40-160	5.91	20	†
tert-Amyl Methyl Ether (TAME)	9.31	0.50	µg/L	10.0		93.1	70-130	2.75	20	
Benzene	9.93	1.0	µg/L	10.0		99.3	70-130	0.707	20	
Bromobenzene	10.1	1.0	µg/L	10.0		101	70-130	4.85	20	
Bromochloromethane	10.2	1.0	µg/L	10.0		102	70-130	1.69	20	
Bromodichloromethane	9.82	1.0	µg/L	10.0		98.2	70-130	0.613	20	
Bromoform	9.75	2.0	µg/L	10.0		97.5	70-130	6.16	20	
Bromomethane	12.3	2.0	µg/L	10.0		123	40-160	22.4 *	20	R-05, V-20 †
2-Butanone (MEK)	88.2	10	µg/L	100		88.2	40-160	1.08	20	V-05 †
n-Butylbenzene	11.5	1.0	µg/L	10.0		115	70-130	0.261	20	
sec-Butylbenzene	11.2	1.0	µg/L	10.0		112	70-130	1.41	20	
tert-Butylbenzene	10.9	1.0	µg/L	10.0		109	70-130	0.368	20	
tert-Butyl Ethyl Ether (TBEE)	8.52	0.50	µg/L	10.0		85.2	70-130	0.235	20	
Carbon Disulfide	11.2	5.0	µg/L	10.0		112	70-130	5.96	20	
Carbon Tetrachloride	9.05	1.0	µg/L	10.0		90.5	70-130	0.00	20	
Chlorobenzene	10.6	1.0	µg/L	10.0		106	70-130	0.563	20	
Chlorodibromomethane	9.85	0.50	µg/L	10.0		98.5	70-130	0.304	20	
Chloroethane	10.5	2.0	µg/L	10.0		105	70-130	0.0949	20	
Chloroform	10.3	2.0	µg/L	10.0		103	70-130	1.27	20	
Chloromethane	7.19	2.0	µg/L	10.0		71.9	40-160	0.978	20	†
2-Chlorotoluene	10.3	1.0	µg/L	10.0		103	70-130	0.685	20	
4-Chlorotoluene	10.2	1.0	µg/L	10.0		102	70-130	1.46	20	
1,2-Dibromo-3-chloropropane (DBCP)	9.62	2.0	µg/L	10.0		96.2	70-130	2.67	20	
1,2-Dibromoethane (EDB)	10.3	0.50	µg/L	10.0		103	70-130	0.867	20	
Dibromomethane	10.7	1.0	µg/L	10.0		107	70-130	0.746	20	
1,2-Dichlorobenzene	10.5	1.0	µg/L	10.0		105	70-130	3.18	20	
1,3-Dichlorobenzene	11.1	1.0	µg/L	10.0		111	70-130	2.13	20	
1,4-Dichlorobenzene	10.2	1.0	µg/L	10.0		102	70-130	2.51	20	
Dichlorodifluoromethane (Freon 12)	5.72	2.0	µg/L	10.0		57.2	40-160	0.349	20	L-14, V-05 †
1,1-Dichloroethane	9.82	1.0	µg/L	10.0		98.2	70-130	0.203	20	
1,2-Dichloroethane	8.76	1.0	µg/L	10.0		87.6	70-130	1.81	20	
1,1-Dichloroethylene	11.0	1.0	µg/L	10.0		110	70-130	0.725	20	
cis-1,2-Dichloroethylene	9.46	1.0	µg/L	10.0		94.6	70-130	0.956	20	
trans-1,2-Dichloroethylene	10.9	1.0	µg/L	10.0		109	70-130	12.4	20	
1,2-Dichloropropane	9.81	1.0	µg/L	10.0		98.1	70-130	0.610	20	
1,3-Dichloropropane	9.34	0.50	µg/L	10.0		93.4	70-130	1.17	20	
2,2-Dichloropropane	10.6	1.0	µg/L	10.0		106	70-130	0.472	20	
1,1-Dichloropropene	9.33	0.50	µg/L	10.0		93.3	70-130	4.40	20	
cis-1,3-Dichloropropene	9.81	0.40	µg/L	10.0		98.1	70-130	0.508	20	
trans-1,3-Dichloropropene	10.1	0.40	µg/L	10.0		101	70-130	0.693	20	
Diethyl Ether	11.0	2.0	µg/L	10.0		110	70-130	0.633	20	
Diisopropyl Ether (DIPE)	7.94	0.50	µg/L	10.0		79.4	70-130	1.50	20	
1,4-Dioxane	102	50	µg/L	100		102	40-160	1.50	20	V-16 †
Ethylbenzene	10.9	1.0	µg/L	10.0		109	70-130	0.640	20	
Hexachlorobutadiene	12.5	0.60	µg/L	10.0		125	70-130	6.63	20	
2-Hexanone (MBK)	89.2	10	µg/L	100		89.2	40-160	2.34	20	†
Isopropylbenzene (Cumene)	11.3	1.0	µg/L	10.0		113	70-130	1.93	20	
p-Isopropyltoluene (p-Cymene)	11.2	1.0	µg/L	10.0		112	70-130	2.12	20	
Methyl tert-Butyl Ether (MTBE)	11.2	1.0	µg/L	10.0		112	70-130	9.31	20	
Methylene Chloride	10.5	5.0	µg/L	10.0		105	70-130	1.42	20	
4-Methyl-2-pentanone (MIBK)	88.0	10	µg/L	100		88.0	40-160	2.17	20	†
Naphthalene	10.4	2.0	µg/L	10.0		104	70-130	2.93	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 B208293 - SW-846 5030B										
LCS Dup (B208293-BSD1)										
Prepared: 07/19/18 Analyzed: 07/20/18										
n-Propylbenzene	10.6	1.0	µg/L	10.0		106	70-130	1.50	20	
Styrene	10.9	1.0	µg/L	10.0		109	70-130	1.72	20	
1,1,1,2-Tetrachloroethane	10.6	1.0	µg/L	10.0		106	70-130	2.32	20	
1,1,2,2-Tetrachloroethane	11.0	0.50	µg/L	10.0		110	70-130	1.98	20	
Tetrachloroethylene	10.8	1.0	µg/L	10.0		108	70-130	1.49	20	
Tetrahydrofuran	9.00	2.0	µg/L	10.0		90.0	70-130	1.10	20	
Toluene	10.4	1.0	µg/L	10.0		104	70-130	0.193	20	
1,2,3-Trichlorobenzene	10.5	2.0	µg/L	10.0		105	70-130	2.92	20	
1,2,4-Trichlorobenzene	10.6	1.0	µg/L	10.0		106	70-130	0.00	20	
1,1,1-Trichloroethane	9.76	1.0	µg/L	10.0		97.6	70-130	3.23	20	
1,1,2-Trichloroethane	10.5	1.0	µg/L	10.0		105	70-130	0.0956	20	
Trichloroethylene	10.5	1.0	µg/L	10.0		105	70-130	1.92	20	
Trichlorofluoromethane (Freon 11)	9.88	2.0	µg/L	10.0		98.8	70-130	0.507	20	
1,2,3-Trichloropropane	7.98	2.0	µg/L	10.0		79.8	70-130	9.55	20	V-05
1,2,4-Trimethylbenzene	10.2	1.0	µg/L	10.0		102	70-130	0.973	20	
1,3,5-Trimethylbenzene	10.4	1.0	µg/L	10.0		104	70-130	3.22	20	
Vinyl Chloride	8.90	2.0	µg/L	10.0		89.0	70-130	0.676	20	
m+p Xylene	20.8	2.0	µg/L	20.0		104	70-130	2.93	20	
o-Xylene	10.5	1.0	µg/L	10.0		105	70-130	2.17	20	
Surrogate: 1,2-Dichloroethane-d4	22.1		µg/L	25.0		88.3	70-130			
Surrogate: Toluene-d8	24.6		µg/L	25.0		98.2	70-130			
Surrogate: 4-Bromofluorobenzene	23.8		µg/L	25.0		95.2	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 B208332 - SW-846 3510C										
Blank (B208332-BLK1)				Prepared: 07/20/18 Analyzed: 07/21/18						
Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Acetophenone	ND	10	µg/L							
Aniline	ND	5.0	µg/L							
Anthracene	ND	5.0	µg/L							
Benzo(a)anthracene	ND	5.0	µg/L							
Benzo(a)pyrene	ND	5.0	µg/L							
Benzo(b)fluoranthene	ND	5.0	µg/L							
Benzo(g,h,i)perylene	ND	5.0	µg/L							
Benzo(k)fluoranthene	ND	5.0	µg/L							
Bis(2-chloroethoxy)methane	ND	10	µg/L							
Bis(2-chloroethyl)ether	ND	10	µg/L							
Bis(2-chloroisopropyl)ether	ND	10	µg/L							
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L							
4-Bromophenylphenylether	ND	10	µg/L							
Butylbenzylphthalate	ND	10	µg/L							
4-Chloroaniline	ND	10	µg/L							V-34
2-Chloronaphthalene	ND	10	µg/L							
2-Chlorophenol	ND	10	µg/L							
Chrysene	ND	5.0	µg/L							
Dibenz(a,h)anthracene	ND	5.0	µg/L							
Dibenzofuran	ND	5.0	µg/L							
Di-n-butylphthalate	ND	10	µg/L							
1,2-Dichlorobenzene	ND	5.0	µg/L							L-04
1,3-Dichlorobenzene	ND	5.0	µg/L							L-04
1,4-Dichlorobenzene	ND	5.0	µg/L							L-04
3,3-Dichlorobenzidine	ND	10	µg/L							
2,4-Dichlorophenol	ND	10	µg/L							
Diethylphthalate	ND	10	µg/L							
2,4-Dimethylphenol	ND	10	µg/L							
Dimethylphthalate	ND	10	µg/L							
2,4-Dinitrophenol	ND	10	µg/L							
2,4-Dinitrotoluene	ND	10	µg/L							V-20
2,6-Dinitrotoluene	ND	10	µg/L							
Di-n-octylphthalate	ND	10	µg/L							
1,2-Diphenylhydrazine (as Azobenzene)	ND	10	µg/L							
Fluoranthene	ND	5.0	µg/L							
Fluorene	ND	5.0	µg/L							
Hexachlorobenzene	ND	10	µg/L							
Hexachlorobutadiene	ND	10	µg/L							
Hexachloroethane	ND	10	µg/L							L-04
Indeno(1,2,3-cd)pyrene	ND	5.0	µg/L							
Isophorone	ND	10	µg/L							
2-Methylnaphthalene	ND	5.0	µg/L							
2-Methylphenol	ND	10	µg/L							
3/4-Methylphenol	ND	10	µg/L							
Naphthalene	ND	5.0	µg/L							
Nitrobenzene	ND	10	µg/L							
2-Nitrophenol	ND	10	µg/L							
4-Nitrophenol	ND	10	µg/L							
Pentachlorophenol	ND	10	µg/L							
Phenanthrene	ND	5.0	µg/L							

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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 B208332 - SW-846 3510C										
Blank (B208332-BLK1)										
Prepared: 07/20/18 Analyzed: 07/21/18										
Phenol	ND	10	µg/L							
Pyrene	ND	5.0	µg/L							
Pyridine	ND	5.0	µg/L							
1,2,4-Trichlorobenzene	ND	5.0	µg/L							
2,4,5-Trichlorophenol	ND	10	µg/L							
2,4,6-Trichlorophenol	ND	10	µg/L							
Surrogate: 2-Fluorophenol	97.6		µg/L	200		48.8	15-110			
Surrogate: Phenol-d6	69.9		µg/L	200		34.9	15-110			
Surrogate: Nitrobenzene-d5	61.5		µg/L	100		61.5	30-130			
Surrogate: 2-Fluorobiphenyl	56.6		µg/L	100		56.6	30-130			
Surrogate: 2,4,6-Tribromophenol	128		µg/L	200		64.0	15-110			
Surrogate: p-Terphenyl-d14	74.6		µg/L	100		74.6	30-130			
LCS (B208332-BS1)										
Prepared: 07/20/18 Analyzed: 07/21/18										
Acenaphthene	31.5	5.0	µg/L	50.0		63.0	40-140			
Acenaphthylene	31.0	5.0	µg/L	50.0		62.0	40-140			
Acetophenone	26.7	10	µg/L	50.0		53.4	40-140			
Aniline	24.4	5.0	µg/L	50.0		48.9	40-140			
Anthracene	35.1	5.0	µg/L	50.0		70.1	40-140			
Benzo(a)anthracene	35.0	5.0	µg/L	50.0		70.0	40-140			
Benzo(a)pyrene	35.1	5.0	µg/L	50.0		70.1	40-140			
Benzo(b)fluoranthene	34.7	5.0	µg/L	50.0		69.3	40-140			
Benzo(g,h,i)perylene	37.3	5.0	µg/L	50.0		74.6	40-140			
Benzo(k)fluoranthene	35.3	5.0	µg/L	50.0		70.5	40-140			
Bis(2-chloroethoxy)methane	32.4	10	µg/L	50.0		64.7	40-140			
Bis(2-chloroethyl)ether	23.0	10	µg/L	50.0		46.0	40-140			
Bis(2-chloroisopropyl)ether	26.9	10	µg/L	50.0		53.8	40-140			
Bis(2-Ethylhexyl)phthalate	37.1	10	µg/L	50.0		74.2	40-140			
4-Bromophenylphenylether	35.8	10	µg/L	50.0		71.6	40-140			
Butylbenzylphthalate	35.5	10	µg/L	50.0		70.9	40-140			
4-Chloroaniline	33.6	10	µg/L	50.0		67.3	15-140			V-34 †
2-Chloronaphthalene	28.8	10	µg/L	50.0		57.5	40-140			
2-Chlorophenol	22.9	10	µg/L	50.0		45.8	30-130			
Chrysene	34.3	5.0	µg/L	50.0		68.6	40-140			
Dibenz(a,h)anthracene	37.4	5.0	µg/L	50.0		74.9	40-140			
Dibenzofuran	33.5	5.0	µg/L	50.0		67.0	40-140			
Di-n-butylphthalate	36.7	10	µg/L	50.0		73.4	40-140			
1,2-Dichlorobenzene	18.5	5.0	µg/L	50.0		37.0	* 40-140			L-04
1,3-Dichlorobenzene	17.2	5.0	µg/L	50.0		34.3	* 40-140			L-04
1,4-Dichlorobenzene	17.7	5.0	µg/L	50.0		35.5	* 40-140			L-04
3,3-Dichlorobenzidine	36.6	10	µg/L	50.0		73.3	40-140			
2,4-Dichlorophenol	29.5	10	µg/L	50.0		59.0	30-130			
Diethylphthalate	34.2	10	µg/L	50.0		68.5	40-140			
2,4-Dimethylphenol	26.6	10	µg/L	50.0		53.3	30-130			
Dimethylphthalate	35.2	10	µg/L	50.0		70.3	40-140			
2,4-Dinitrophenol	33.5	10	µg/L	50.0		67.0	15-140			†
2,4-Dinitrotoluene	38.4	10	µg/L	50.0		76.8	40-140			V-06
2,6-Dinitrotoluene	38.4	10	µg/L	50.0		76.9	40-140			
Di-n-octylphthalate	34.2	10	µg/L	50.0		68.3	40-140			
1,2-Diphenylhydrazine (as Azobenzene)	35.1	10	µg/L	50.0		70.2	40-140			
Fluoranthene	35.1	5.0	µg/L	50.0		70.2	40-140			
Fluorene	33.6	5.0	µg/L	50.0		67.1	40-140			

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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 B208332 - SW-846 3510C										
LCS (B208332-BS1)										
Prepared: 07/20/18 Analyzed: 07/21/18										
Hexachlorobenzene	37.0	10	µg/L	50.0		74.1	40-140			
Hexachlorobutadiene	23.2	10	µg/L	50.0		46.4	40-140			
Hexachloroethane	17.7	10	µg/L	50.0		35.3	* 40-140			L-04
Indeno(1,2,3-cd)pyrene	36.6	5.0	µg/L	50.0		73.2	40-140			
Isophorone	31.6	10	µg/L	50.0		63.2	40-140			
2-Methylnaphthalene	29.5	5.0	µg/L	50.0		59.0	40-140			
2-Methylphenol	21.2	10	µg/L	50.0		42.5	30-130			
3/4-Methylphenol	28.8	10	µg/L	50.0		57.7	30-130			
Naphthalene	24.3	5.0	µg/L	50.0		48.6	40-140			
Nitrobenzene	23.6	10	µg/L	50.0		47.2	40-140			
2-Nitrophenol	27.0	10	µg/L	50.0		54.1	30-130			
4-Nitrophenol	14.8	10	µg/L	50.0		29.6	15-140			†
Pentachlorophenol	30.0	10	µg/L	50.0		59.9	30-130			
Phenanthrene	35.0	5.0	µg/L	50.0		70.1	40-140			
Phenol	13.2	10	µg/L	50.0		26.4	15-140			†
Pyrene	34.2	5.0	µg/L	50.0		68.3	40-140			
Pyridine	9.18	5.0	µg/L	50.0		18.4	10-140			†
1,2,4-Trichlorobenzene	22.4	5.0	µg/L	50.0		44.9	40-140			
2,4,5-Trichlorophenol	31.8	10	µg/L	50.0		63.6	30-130			
2,4,6-Trichlorophenol	32.5	10	µg/L	50.0		65.1	30-130			
Surrogate: 2-Fluorophenol	62.5		µg/L	200		31.2	15-110			
Surrogate: Phenol-d6	56.7		µg/L	200		28.3	15-110			
Surrogate: Nitrobenzene-d5	50.1		µg/L	100		50.1	30-130			
Surrogate: 2-Fluorobiphenyl	67.2		µg/L	100		67.2	30-130			
Surrogate: 2,4,6-Tribromophenol	171		µg/L	200		85.4	15-110			
Surrogate: p-Terphenyl-d14	89.6		µg/L	100		89.6	30-130			
LCS Dup (B208332-BS1)										
Prepared: 07/20/18 Analyzed: 07/21/18										
Acenaphthene	32.3	5.0	µg/L	50.0		64.6	40-140	2.51	20	
Acenaphthylene	31.5	5.0	µg/L	50.0		63.0	40-140	1.60	20	
Acetophenone	27.9	10	µg/L	50.0		55.9	40-140	4.50	20	
Aniline	26.0	5.0	µg/L	50.0		52.1	40-140	6.42	20	
Anthracene	34.8	5.0	µg/L	50.0		69.6	40-140	0.773	20	
Benzo(a)anthracene	34.4	5.0	µg/L	50.0		68.8	40-140	1.67	20	
Benzo(a)pyrene	34.7	5.0	µg/L	50.0		69.3	40-140	1.12	20	
Benzo(b)fluoranthene	33.8	5.0	µg/L	50.0		67.6	40-140	2.57	20	
Benzo(g,h,i)perylene	36.2	5.0	µg/L	50.0		72.3	40-140	3.08	20	
Benzo(k)fluoranthene	34.2	5.0	µg/L	50.0		68.4	40-140	3.02	20	
Bis(2-chloroethoxy)methane	32.7	10	µg/L	50.0		65.3	40-140	0.923	20	
Bis(2-chloroethyl)ether	22.9	10	µg/L	50.0		45.8	40-140	0.348	20	
Bis(2-chloroisopropyl)ether	28.2	10	µg/L	50.0		56.4	40-140	4.64	20	
Bis(2-Ethylhexyl)phthalate	36.6	10	µg/L	50.0		73.2	40-140	1.30	20	
4-Bromophenylphenylether	35.2	10	µg/L	50.0		70.4	40-140	1.69	20	
Butylbenzylphthalate	35.0	10	µg/L	50.0		70.1	40-140	1.22	20	
4-Chloroaniline	33.5	10	µg/L	50.0		67.1	15-140	0.268	20	V-34 †
2-Chloronaphthalene	29.4	10	µg/L	50.0		58.8	40-140	2.17	20	
2-Chlorophenol	23.7	10	µg/L	50.0		47.4	30-130	3.43	20	
Chrysene	33.9	5.0	µg/L	50.0		67.8	40-140	1.26	20	
Dibenz(a,h)anthracene	36.3	5.0	µg/L	50.0		72.5	40-140	3.20	20	
Dibenzofuran	33.4	5.0	µg/L	50.0		66.9	40-140	0.239	20	
Di-n-butylphthalate	36.1	10	µg/L	50.0		72.2	40-140	1.65	20	
1,2-Dichlorobenzene	19.5	5.0	µg/L	50.0		39.0	* 40-140	5.42	20	L-04

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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 B208332 - SW-846 3510C										
LCS Dup (B208332-BSD1)										
Prepared: 07/20/18 Analyzed: 07/21/18										
1,3-Dichlorobenzene	18.0	5.0	µg/L	50.0		36.0	* 40-140	4.83	20	L-04
1,4-Dichlorobenzene	18.6	5.0	µg/L	50.0		37.3	* 40-140	4.89	20	L-04
3,3-Dichlorobenzidine	36.0	10	µg/L	50.0		72.0	40-140	1.79	20	
2,4-Dichlorophenol	29.1	10	µg/L	50.0		58.3	30-130	1.33	20	
Diethylphthalate	34.9	10	µg/L	50.0		69.8	40-140	1.94	20	
2,4-Dimethylphenol	27.5	10	µg/L	50.0		55.0	30-130	3.14	20	
Dimethylphthalate	36.0	10	µg/L	50.0		72.0	40-140	2.30	20	
2,4-Dinitrophenol	36.0	10	µg/L	50.0		72.0	15-140	7.20	20	†
2,4-Dinitrotoluene	39.1	10	µg/L	50.0		78.2	40-140	1.86	20	V-06
2,6-Dinitrotoluene	38.8	10	µg/L	50.0		77.7	40-140	1.06	20	
Di-n-octylphthalate	34.0	10	µg/L	50.0		68.0	40-140	0.499	20	
1,2-Diphenylhydrazine (as Azobenzene)	34.4	10	µg/L	50.0		68.8	40-140	1.90	20	
Fluoranthene	35.2	5.0	µg/L	50.0		70.4	40-140	0.256	20	
Fluorene	34.5	5.0	µg/L	50.0		69.1	40-140	2.88	20	
Hexachlorobenzene	36.4	10	µg/L	50.0		72.7	40-140	1.91	20	
Hexachlorobutadiene	23.1	10	µg/L	50.0		46.2	40-140	0.562	20	
Hexachloroethane	18.1	10	µg/L	50.0		36.2	* 40-140	2.57	20	L-04
Indeno(1,2,3-cd)pyrene	35.5	5.0	µg/L	50.0		71.0	40-140	3.02	20	
Isophorone	32.0	10	µg/L	50.0		64.1	40-140	1.38	20	
2-Methylnaphthalene	29.7	5.0	µg/L	50.0		59.4	40-140	0.710	20	
2-Methylphenol	21.8	10	µg/L	50.0		43.7	30-130	2.74	20	
3/4-Methylphenol	29.6	10	µg/L	50.0		59.2	30-130	2.67	20	
Naphthalene	24.9	5.0	µg/L	50.0		49.9	40-140	2.64	20	
Nitrobenzene	23.4	10	µg/L	50.0		46.8	40-140	0.893	20	
2-Nitrophenol	27.1	10	µg/L	50.0		54.2	30-130	0.185	20	
4-Nitrophenol	15.2	10	µg/L	50.0		30.5	15-140	3.00	20	†
Pentachlorophenol	30.7	10	µg/L	50.0		61.3	30-130	2.38	20	
Phenanthrene	34.7	5.0	µg/L	50.0		69.5	40-140	0.831	20	
Phenol	13.7	10	µg/L	50.0		27.3	15-140	3.65	20	†
Pyrene	33.3	5.0	µg/L	50.0		66.5	40-140	2.64	20	
Pyridine	10.4	5.0	µg/L	50.0		20.8	10-140	12.4	50	† ‡
1,2,4-Trichlorobenzene	23.0	5.0	µg/L	50.0		46.1	40-140	2.64	20	
2,4,5-Trichlorophenol	32.3	10	µg/L	50.0		64.6	30-130	1.44	20	
2,4,6-Trichlorophenol	33.1	10	µg/L	50.0		66.2	30-130	1.68	20	
Surrogate: 2-Fluorophenol	66.0		µg/L	200		33.0	15-110			
Surrogate: Phenol-d6	58.6		µg/L	200		29.3	15-110			
Surrogate: Nitrobenzene-d5	50.7		µg/L	100		50.7	30-130			
Surrogate: 2-Fluorobiphenyl	66.9		µg/L	100		66.9	30-130			
Surrogate: 2,4,6-Tribromophenol	168		µg/L	200		84.2	15-110			
Surrogate: p-Terphenyl-d14	85.5		µg/L	100		85.5	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 B208329 - SW-846 3510C										
Blank (B208329-BLK1)										
Prepared: 07/20/18 Analyzed: 07/23/18										
Aroclor-1016	ND	0.040	µg/L							
Aroclor-1016 [2C]	ND	0.040	µg/L							
Aroclor-1221	ND	0.040	µg/L							
Aroclor-1221 [2C]	ND	0.040	µg/L							
Aroclor-1232	ND	0.040	µg/L							
Aroclor-1232 [2C]	ND	0.040	µg/L							
Aroclor-1242	ND	0.040	µg/L							
Aroclor-1242 [2C]	ND	0.040	µg/L							
Aroclor-1248	ND	0.040	µg/L							
Aroclor-1248 [2C]	ND	0.040	µg/L							
Aroclor-1254	ND	0.040	µg/L							
Aroclor-1254 [2C]	ND	0.040	µg/L							
Aroclor-1260	ND	0.040	µg/L							
Aroclor-1260 [2C]	ND	0.040	µg/L							
Aroclor-1262	ND	0.040	µg/L							
Aroclor-1262 [2C]	ND	0.040	µg/L							
Aroclor-1268	ND	0.040	µg/L							
Aroclor-1268 [2C]	ND	0.040	µg/L							
Surrogate: Decachlorobiphenyl	1.15		µg/L	2.00		57.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.18		µg/L	2.00		58.9	30-150			
Surrogate: Tetrachloro-m-xylene	1.23		µg/L	2.00		61.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.22		µg/L	2.00		61.2	30-150			
LCS (B208329-BS1)										
Prepared: 07/20/18 Analyzed: 07/22/18										
Aroclor-1016	0.37	0.20	µg/L	0.500		73.2	40-140			
Aroclor-1016 [2C]	0.43	0.20	µg/L	0.500		85.5	40-140			
Aroclor-1260	0.34	0.20	µg/L	0.500		68.0	40-140			
Aroclor-1260 [2C]	0.34	0.20	µg/L	0.500		68.0	40-140			
Surrogate: Decachlorobiphenyl	0.939		µg/L	2.00		46.9	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.02		µg/L	2.00		50.8	30-150			
Surrogate: Tetrachloro-m-xylene	1.10		µg/L	2.00		55.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.13		µg/L	2.00		56.7	30-150			
LCS Dup (B208329-BSD1)										
Prepared: 07/20/18 Analyzed: 07/22/18										
Aroclor-1016	0.40	0.20	µg/L	0.500		79.6	40-140	8.39	20	
Aroclor-1016 [2C]	0.39	0.20	µg/L	0.500		78.6	40-140	8.42	20	
Aroclor-1260	0.41	0.20	µg/L	0.500		82.7	40-140	19.5	20	
Aroclor-1260 [2C]	0.41	0.20	µg/L	0.500		81.9	40-140	18.5	20	
Surrogate: Decachlorobiphenyl	1.21		µg/L	2.00		60.7	30-150			
Surrogate: Decachlorobiphenyl [2C]	1.31		µg/L	2.00		65.3	30-150			
Surrogate: Tetrachloro-m-xylene	1.30		µg/L	2.00		65.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.33		µg/L	2.00		66.7	30-150			

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B208330 - SW-846 3510C
Blank (B208330-BLK1)

Prepared: 07/20/18 Analyzed: 07/23/18

C9-C18 Aliphatics	ND	100	µg/L							
C19-C36 Aliphatics	ND	100	µg/L							
Unadjusted C11-C22 Aromatics	ND	100	µg/L							
C11-C22 Aromatics	ND	100	µg/L							
Acenaphthene	ND	2.0	µg/L							
Acenaphthylene	ND	2.0	µg/L							
Anthracene	ND	2.0	µg/L							
Benzo(a)anthracene	ND	2.0	µg/L							
Benzo(a)pyrene	ND	2.0	µg/L							
Benzo(b)fluoranthene	ND	2.0	µg/L							
Benzo(g,h,i)perylene	ND	2.0	µg/L							
Benzo(k)fluoranthene	ND	2.0	µg/L							
Chrysene	ND	2.0	µg/L							
Dibenz(a,h)anthracene	ND	2.0	µg/L							
Fluoranthene	ND	2.0	µg/L							
Fluorene	ND	2.0	µg/L							
Indeno(1,2,3-cd)pyrene	ND	2.0	µg/L							
2-Methylnaphthalene	ND	2.0	µg/L							
Naphthalene	ND	2.0	µg/L							
Phenanthrene	ND	2.0	µg/L							
Pyrene	ND	2.0	µg/L							
n-Decane	ND	2.0	µg/L							
n-Docosane	ND	2.0	µg/L							
n-Dodecane	ND	2.0	µg/L							
n-Eicosane	ND	2.0	µg/L							
n-Hexacosane	ND	2.0	µg/L							
n-Hexadecane	ND	2.0	µg/L							
n-Hexatriacontane	ND	2.0	µg/L							
n-Nonadecane	ND	2.0	µg/L							
n-Nonane	ND	2.0	µg/L							
n-Octacosane	ND	2.0	µg/L							
n-Octadecane	ND	2.0	µg/L							
n-Tetracosane	ND	2.0	µg/L							
n-Tetradecane	ND	2.0	µg/L							
n-Triacontane	ND	2.0	µg/L							
Naphthalene-aliphatic fraction	ND	2.0	µg/L							
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L							
Surrogate: Chlorooctadecane (COD)	78.3		µg/L	100		78.3	40-140			
Surrogate: o-Terphenyl (OTP)	78.5		µg/L	100		78.5	40-140			
Surrogate: 2-Bromonaphthalene	87.5		µg/L	100		87.5	40-140			
Surrogate: 2-Fluorobiphenyl	88.5		µg/L	100		88.5	40-140			

LCS (B208330-BS1)

Prepared: 07/20/18 Analyzed: 07/23/18

C9-C18 Aliphatics	427	100	µg/L	600		71.2	0-200			
C19-C36 Aliphatics	708	100	µg/L	800		88.6	0-200			
Acenaphthene	68.4	2.0	µg/L	100		68.4	40-140			
Acenaphthylene	65.4	2.0	µg/L	100		65.4	40-140			
Anthracene	73.9	2.0	µg/L	100		73.9	40-140			
Benzo(a)anthracene	75.8	2.0	µg/L	100		75.8	40-140			
Benzo(a)pyrene	74.3	2.0	µg/L	100		74.3	40-140			
Benzo(b)fluoranthene	75.8	2.0	µg/L	100		75.8	40-140			
Benzo(g,h,i)perylene	75.6	2.0	µg/L	100		75.6	40-140			

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B208330 - SW-846 3510C
LCS (B208330-BS1)

Prepared: 07/20/18 Analyzed: 07/23/18

Benzo(k)fluoranthene	74.9	2.0	µg/L	100		74.9	40-140			
Chrysene	75.8	2.0	µg/L	100		75.8	40-140			
Dibenz(a,h)anthracene	78.2	2.0	µg/L	100		78.2	40-140			
Fluoranthene	75.2	2.0	µg/L	100		75.2	40-140			
Fluorene	71.7	2.0	µg/L	100		71.7	40-140			
Indeno(1,2,3-cd)pyrene	71.0	2.0	µg/L	100		71.0	40-140			
2-Methylnaphthalene	63.1	2.0	µg/L	100		63.1	40-140			
Naphthalene	57.6	2.0	µg/L	100		57.6	40-140			
Phenanthrene	76.4	2.0	µg/L	100		76.4	40-140			
Pyrene	77.1	2.0	µg/L	100		77.1	40-140			
n-Decane	43.0	2.0	µg/L	100		43.0	40-140			
n-Docosane	83.2	2.0	µg/L	100		83.2	40-140			
n-Dodecane	57.8	2.0	µg/L	100		57.8	40-140			
n-Eicosane	85.9	2.0	µg/L	100		85.9	40-140			
n-Hexacosane	80.9	2.0	µg/L	100		80.9	40-140			
n-Hexadecane	80.7	2.0	µg/L	100		80.7	40-140			
n-Hexatriacontane	75.5	2.0	µg/L	100		75.5	40-140			
n-Nonadecane	82.9	2.0	µg/L	100		82.9	40-140			
n-Nonane	32.6	2.0	µg/L	100		32.6	30-140			
n-Octacosane	77.7	2.0	µg/L	100		77.7	40-140			
n-Octadecane	85.0	2.0	µg/L	100		85.0	40-140			
n-Tetracosane	82.5	2.0	µg/L	100		82.5	40-140			
n-Tetradecane	71.7	2.0	µg/L	100		71.7	40-140			
n-Triacontane	77.2	2.0	µg/L	100		77.2	40-140			
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	78.2		µg/L	100		78.2	40-140			
Surrogate: o-Terphenyl (OTP)	77.7		µg/L	100		77.7	40-140			
Surrogate: 2-Bromonaphthalene	91.8		µg/L	100		91.8	40-140			
Surrogate: 2-Fluorobiphenyl	89.1		µg/L	100		89.1	40-140			

LCS Dup (B208330-BS1)

Prepared: 07/20/18 Analyzed: 07/23/18

C9-C18 Aliphatics	434	100	µg/L	600		72.3	0-200	1.53		
C19-C36 Aliphatics	705	100	µg/L	800		88.1	0-200	0.470		
Acenaphthene	69.2	2.0	µg/L	100		69.2	40-140	1.15	25	
Acenaphthylene	66.2	2.0	µg/L	100		66.2	40-140	1.23	25	
Anthracene	74.6	2.0	µg/L	100		74.6	40-140	0.894	25	
Benzo(a)anthracene	76.1	2.0	µg/L	100		76.1	40-140	0.403	25	
Benzo(a)pyrene	74.4	2.0	µg/L	100		74.4	40-140	0.124	25	
Benzo(b)fluoranthene	75.9	2.0	µg/L	100		75.9	40-140	0.0396	25	
Benzo(g,h,i)perylene	75.9	2.0	µg/L	100		75.9	40-140	0.388	25	
Benzo(k)fluoranthene	75.3	2.0	µg/L	100		75.3	40-140	0.581	25	
Chrysene	76.0	2.0	µg/L	100		76.0	40-140	0.361	25	
Dibenz(a,h)anthracene	78.2	2.0	µg/L	100		78.2	40-140	0.0486	25	
Fluoranthene	75.6	2.0	µg/L	100		75.6	40-140	0.589	25	
Fluorene	70.5	2.0	µg/L	100		70.5	40-140	1.68	25	
Indeno(1,2,3-cd)pyrene	70.8	2.0	µg/L	100		70.8	40-140	0.186	25	
2-Methylnaphthalene	63.8	2.0	µg/L	100		63.8	40-140	1.25	25	
Naphthalene	58.0	2.0	µg/L	100		58.0	40-140	0.647	25	
Phenanthrene	77.2	2.0	µg/L	100		77.2	40-140	0.995	25	
Pyrene	77.6	2.0	µg/L	100		77.6	40-140	0.654	25	
n-Decane	43.5	2.0	µg/L	100		43.5	40-140	1.10	25	

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - EPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B208330 - SW-846 3510C
LCS Dup (B208330-BSD1)

Prepared: 07/20/18 Analyzed: 07/23/18

n-Docosane	82.7	2.0	µg/L	100		82.7	40-140	0.607	25	
n-Dodecane	58.2	2.0	µg/L	100		58.2	40-140	0.576	25	
n-Eicosane	82.8	2.0	µg/L	100		82.8	40-140	3.64	25	
n-Hexacosane	81.2	2.0	µg/L	100		81.2	40-140	0.479	25	
n-Hexadecane	80.1	2.0	µg/L	100		80.1	40-140	0.791	25	
n-Hexatriacontane	76.4	2.0	µg/L	100		76.4	40-140	1.20	25	
n-Nonadecane	82.0	2.0	µg/L	100		82.0	40-140	1.06	25	
n-Nonane	33.0	2.0	µg/L	100		33.0	30-140	1.27	25	
n-Octacosane	78.4	2.0	µg/L	100		78.4	40-140	0.936	25	
n-Octadecane	84.1	2.0	µg/L	100		84.1	40-140	1.06	25	
n-Tetracosane	82.3	2.0	µg/L	100		82.3	40-140	0.247	25	
n-Tetradecane	71.5	2.0	µg/L	100		71.5	40-140	0.310	25	
n-Triacontane	78.8	2.0	µg/L	100		78.8	40-140	2.02	25	
Naphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
2-Methylnaphthalene-aliphatic fraction	ND	2.0	µg/L	100			0-5			
Surrogate: Chlorooctadecane (COD)	76.9		µg/L	100		76.9	40-140			
Surrogate: o-Terphenyl (OTP)	78.4		µg/L	100		78.4	40-140			
Surrogate: 2-Bromonaphthalene	82.1		µg/L	100		82.1	40-140			
Surrogate: 2-Fluorobiphenyl	84.0		µg/L	100		84.0	40-140			

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B208360 - MA VPH
Blank (B208360-BLK1)

Prepared & Analyzed: 07/20/18

Unadjusted C5-C8 Aliphatics	ND	100	µg/L							
C5-C8 Aliphatics	ND	100	µg/L							
Unadjusted C9-C12 Aliphatics	ND	100	µg/L							
C9-C12 Aliphatics	ND	100	µg/L							
C9-C10 Aromatics	ND	100	µg/L							
Benzene	ND	1.0	µg/L							
Butylcyclohexane	ND	1.0	µg/L							
Decane	ND	1.0	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
2-Methylpentane	ND	1.0	µg/L							
Naphthalene	ND	5.0	µg/L							
Nonane	ND	1.0	µg/L							
Pentane	ND	1.0	µg/L							
Toluene	ND	1.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
2,2,4-Trimethylpentane	ND	1.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 2,5-Dibromotoluene (FID)	40.8		µg/L	40.0		102	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	38.9		µg/L	40.0		97.2	70-130			

LCS (B208360-BS1)

Prepared & Analyzed: 07/20/18

Benzene	52.7	1.0	µg/L	50.0		105	70-130			
Butylcyclohexane	56.8	1.0	µg/L	50.0		114	70-130			
Decane	45.1	1.0	µg/L	50.0		90.2	70-130			
Ethylbenzene	53.7	1.0	µg/L	50.0		107	70-130			
Methyl tert-Butyl Ether (MTBE)	51.8	1.0	µg/L	50.0		104	70-130			
2-Methylpentane	50.2	1.0	µg/L	50.0		100	70-130			
Naphthalene	50.4	5.0	µg/L	50.0		101	70-130			
Nonane	55.7	1.0	µg/L	50.0		111	30-130			
Pentane	44.2	1.0	µg/L	50.0		88.4	70-130			
Toluene	53.2	1.0	µg/L	50.0		106	70-130			
1,2,4-Trimethylbenzene	54.2	1.0	µg/L	50.0		108	70-130			
2,2,4-Trimethylpentane	48.6	1.0	µg/L	50.0		97.3	70-130			
m+p Xylene	108	2.0	µg/L	100		108	70-130			
o-Xylene	53.6	1.0	µg/L	50.0		107	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	39.8		µg/L	40.0		99.5	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	38.1		µg/L	40.0		95.2	70-130			

LCS Dup (B208360-BSD1)

Prepared & Analyzed: 07/20/18

Benzene	52.8	1.0	µg/L	50.0		106	70-130	0.0190	25	
Butylcyclohexane	55.7	1.0	µg/L	50.0		111	70-130	1.83	25	
Decane	44.6	1.0	µg/L	50.0		89.2	70-130	1.04	25	
Ethylbenzene	53.6	1.0	µg/L	50.0		107	70-130	0.179	25	
Methyl tert-Butyl Ether (MTBE)	51.3	1.0	µg/L	50.0		103	70-130	0.961	25	
2-Methylpentane	50.0	1.0	µg/L	50.0		100	70-130	0.321	25	
Naphthalene	50.4	5.0	µg/L	50.0		101	70-130	0.0873	25	
Nonane	55.0	1.0	µg/L	50.0		110	30-130	1.22	25	
Pentane	44.5	1.0	µg/L	50.0		89.1	70-130	0.807	25	
Toluene	53.2	1.0	µg/L	50.0		106	70-130	0.139	25	
1,2,4-Trimethylbenzene	53.6	1.0	µg/L	50.0		107	70-130	1.11	25	

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B208360 - MA VPH
LCS Dup (B208360-BSD1)

Prepared & Analyzed: 07/20/18

2,2,4-Trimethylpentane	49.2	1.0	µg/L	50.0		98.3	70-130	1.05	25	
m+p Xylene	108	2.0	µg/L	100		108	70-130	0.668	25	
o-Xylene	53.3	1.0	µg/L	50.0		107	70-130	0.642	25	
Surrogate: 2,5-Dibromotoluene (FID)	40.8		µg/L	40.0		102	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	38.8		µg/L	40.0		97.0	70-130			

Batch B208443 - MA VPH
Blank (B208443-BLK1)

Prepared & Analyzed: 07/23/18

Unadjusted C5-C8 Aliphatics	ND	100	µg/L							
C5-C8 Aliphatics	ND	100	µg/L							
Unadjusted C9-C12 Aliphatics	ND	100	µg/L							
C9-C12 Aliphatics	ND	100	µg/L							
C9-C10 Aromatics	ND	100	µg/L							
Benzene	ND	1.0	µg/L							
Butylcyclohexane	ND	1.0	µg/L							
Decane	ND	1.0	µg/L							
Ethylbenzene	ND	1.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	1.0	µg/L							
2-Methylpentane	ND	1.0	µg/L							
Naphthalene	ND	5.0	µg/L							
Nonane	ND	1.0	µg/L							
Pentane	ND	1.0	µg/L							
Toluene	ND	1.0	µg/L							
1,2,4-Trimethylbenzene	ND	1.0	µg/L							
2,2,4-Trimethylpentane	ND	1.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	1.0	µg/L							
Surrogate: 2,5-Dibromotoluene (FID)	40.5		µg/L	40.0		101	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	37.8		µg/L	40.0		94.6	70-130			

LCS (B208443-BS1)

Prepared & Analyzed: 07/23/18

Benzene	52.0	1.0	µg/L	50.0		104	70-130			
Butylcyclohexane	58.2	1.0	µg/L	50.0		116	70-130			
Decane	46.9	1.0	µg/L	50.0		93.9	70-130			
Ethylbenzene	53.6	1.0	µg/L	50.0		107	70-130			
Methyl tert-Butyl Ether (MTBE)	49.3	1.0	µg/L	50.0		98.7	70-130			
2-Methylpentane	50.7	1.0	µg/L	50.0		101	70-130			
Naphthalene	49.9	5.0	µg/L	50.0		99.9	70-130			
Nonane	57.1	1.0	µg/L	50.0		114	30-130			
Pentane	44.8	1.0	µg/L	50.0		89.6	70-130			
Toluene	52.7	1.0	µg/L	50.0		105	70-130			
1,2,4-Trimethylbenzene	53.8	1.0	µg/L	50.0		108	70-130			
2,2,4-Trimethylpentane	50.7	1.0	µg/L	50.0		101	70-130			
m+p Xylene	108	2.0	µg/L	100		108	70-130			
o-Xylene	52.9	1.0	µg/L	50.0		106	70-130			
Surrogate: 2,5-Dibromotoluene (FID)	42.1		µg/L	40.0		105	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	39.5		µg/L	40.0		98.8	70-130			

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QUALITY CONTROL
Petroleum Hydrocarbons Analyses - VPH - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B208443 - MA VPH										
LCS Dup (B208443-BSD1)										
Prepared & Analyzed: 07/23/18										
Benzene	56.3	1.0	µg/L	50.0		113	70-130	8.07	25	
Butylcyclohexane	59.1	1.0	µg/L	50.0		118	70-130	1.51	25	
Decane	47.4	1.0	µg/L	50.0		94.7	70-130	0.937	25	
Ethylbenzene	57.7	1.0	µg/L	50.0		115	70-130	7.49	25	
Methyl tert-Butyl Ether (MTBE)	53.8	1.0	µg/L	50.0		108	70-130	8.59	25	
2-Methylpentane	55.8	1.0	µg/L	50.0		112	70-130	9.53	25	
Naphthalene	52.3	5.0	µg/L	50.0		105	70-130	4.73	25	
Nonane	58.0	1.0	µg/L	50.0		116	30-130	1.47	25	
Pentane	48.9	1.0	µg/L	50.0		97.8	70-130	8.71	25	
Toluene	57.0	1.0	µg/L	50.0		114	70-130	7.82	25	
1,2,4-Trimethylbenzene	57.9	1.0	µg/L	50.0		116	70-130	7.49	25	
2,2,4-Trimethylpentane	55.3	1.0	µg/L	50.0		111	70-130	8.53	25	
m+p Xylene	116	2.0	µg/L	100		116	70-130	7.78	25	
o-Xylene	57.1	1.0	µg/L	50.0		114	70-130	7.79	25	
Surrogate: 2,5-Dibromotoluene (FID)	40.4		µg/L	40.0		101	70-130			
Surrogate: 2,5-Dibromotoluene (PID)	38.7		µg/L	40.0		96.8	70-130			

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QUALITY CONTROL
Metals Analyses (Dissolved) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B208362 - SW-846 3005A Dissolved
Blank (B208362-BLK1)

Prepared: 07/20/18 Analyzed: 07/23/18

Arsenic	ND	0.40	µg/L							
Barium	ND	10	µg/L							
Cadmium	ND	0.50	µg/L							
Chromium	ND	1.0	µg/L							
Lead	ND	1.0	µg/L							
Selenium	ND	5.0	µg/L							
Silver	ND	0.50	µg/L							

LCS (B208362-BS1)

Prepared: 07/20/18 Analyzed: 07/23/18

Arsenic	518	4.0	µg/L	500		104	80-120			
Barium	517	100	µg/L	500		103	80-120			
Cadmium	532	5.0	µg/L	500		106	80-120			
Chromium	511	10	µg/L	500		102	80-120			
Lead	523	10	µg/L	500		105	80-120			
Selenium	517	50	µg/L	500		103	80-120			
Silver	508	5.0	µg/L	500		102	80-120			

LCS Dup (B208362-BSD1)

Prepared: 07/20/18 Analyzed: 07/23/18

Arsenic	523	4.0	µg/L	500		105	80-120	0.917	20	
Barium	522	100	µg/L	500		104	80-120	0.935	20	
Cadmium	540	5.0	µg/L	500		108	80-120	1.57	20	
Chromium	515	10	µg/L	500		103	80-120	0.866	20	
Lead	533	10	µg/L	500		107	80-120	1.97	20	
Selenium	524	50	µg/L	500		105	80-120	1.35	20	
Silver	512	5.0	µg/L	500		102	80-120	0.856	20	

Batch B208447 - SW-846 7470A Dissolved
Blank (B208447-BLK1)

Prepared & Analyzed: 07/23/18

Mercury	ND	0.00010	mg/L							
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LCS (B208447-BS1)

Prepared & Analyzed: 07/23/18

Mercury	0.00185	0.00010	mg/L	0.00200		92.4	80-120			
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LCS Dup (B208447-BSD1)

Prepared & Analyzed: 07/23/18

Mercury	0.00183	0.00010	mg/L	0.00200		91.3	80-120	1.15	20	
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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

SW-846 8082A

LCS

Lab Sample ID: B208329-BS1 Date(s) Analyzed: 07/22/2018 07/22/2018

Instrument ID (1): ECD 9 Instrument ID (2): ECD 9

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.37	
	2	0.000	0.000	0.000	0.43	15.0
Aroclor-1260	1	0.000	0.000	0.000	0.34	
	2	0.000	0.000	0.000	0.34	0.0

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**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES***SW-846 8082A***LCS Dup**

Lab Sample ID: B208329-BSD1 Date(s) Analyzed: 07/22/2018 07/22/2018
Instrument ID (1): ECD 9 Instrument ID (2): ECD 9
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.40	
	2	0.000	0.000	0.000	0.39	2.5
Aroclor-1260	1	0.000	0.000	0.000	0.41	
	2	0.000	0.000	0.000	0.41	0.0

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.
DL-15	Sample required a dilution due to low internal standard recovery of the lesser diluted digestion, reporting limit is elevated.
L-04	Laboratory fortified blank/laboratory control sample recovery and duplicate recovery are outside of control limits. Reported value for this compound is likely to be biased on the low side.
L-14	Compound classified by MA CAM as difficult with acceptable recoveries of 40-160%. Recovery does not meet 70-130% criteria but does meet difficult compound criteria.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
RL-14	Elevated reporting limit due to foaming sample matrix. MA CAM reporting limit not met.
V-05	Continuing calibration did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.
V-16	Response factor is less than method specified minimum acceptable value. Reduced precision and accuracy may be associated with reported result.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>MADEP-EPH-04-1.1 in Water</i>	
C9-C18 Aliphatics	CT,NC,ME,NH-P
C19-C36 Aliphatics	CT,NC,ME,NH-P
Unadjusted C11-C22 Aromatics	CT,NC,ME,NH-P
C11-C22 Aromatics	CT,NC,ME,NH-P
Acenaphthene	CT,NC,ME,NH-P
Acenaphthylene	CT,NC,ME,NH-P
Anthracene	CT,NC,ME,NH-P
Benzo(a)anthracene	CT,NC,ME,NH-P
Benzo(a)pyrene	CT,NC,ME,NH-P
Benzo(b)fluoranthene	CT,NC,ME,NH-P
Benzo(g,h,i)perylene	CT,NC,ME,NH-P
Benzo(k)fluoranthene	CT,NC,ME,NH-P
Chrysene	CT,NC,ME,NH-P
Dibenz(a,h)anthracene	CT,NC,ME,NH-P
Fluoranthene	CT,NC,ME,NH-P
Fluorene	CT,NC,ME
Indeno(1,2,3-cd)pyrene	CT,NC,ME,NH-P
2-Methylnaphthalene	CT,NC
Naphthalene	CT,NC,ME,NH-P
Phenanthrene	CT,NC,ME,NH-P
Pyrene	CT,NC,ME,NH-P
<i>MADEP-VPH-Feb 2018 Rev 2.1 in Water</i>	
Unadjusted C5-C8 Aliphatics	CT,NC,ME,NH-P
C5-C8 Aliphatics	CT,NC,ME,NH-P
Unadjusted C9-C12 Aliphatics	CT,NC,ME,NH-P
C9-C12 Aliphatics	CT,NC,ME,NH-P
C9-C10 Aromatics	CT,NC,ME,NH-P
Benzene	CT,NC,ME,NH-P
Ethylbenzene	CT,NC,ME,NH-P
Methyl tert-Butyl Ether (MTBE)	CT,NC,ME,NH-P
Naphthalene	CT,NC,ME,NH-P
Toluene	CT,NC,ME,NH-P
m+p Xylene	CT,NC,ME,NH-P
o-Xylene	CT,NC,ME,NH-P
<i>SW-846 6020A-B in Water</i>	
Arsenic	CT,NH,NY,NC,ME,VA
Barium	MA,NY,CT,NC,NH,ME,VA
Cadmium	CT,NH,NY,NC,ME,VA
Chromium	CT,NH,NY,NC,ME,VA
Lead	CT,NH,NY,NC,ME,VA
Selenium	CT,NH,NY,NC,ME,VA
Silver	CT,NC,NH,NY,ME,VA
<i>SW-846 7470A in Water</i>	
Mercury	CT,NH,NY,NC,ME,VA
<i>SW-846 8082A in Water</i>	

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8082A in Water</i>	
Aroclor-1016	CT,NH,NY,NC,ME,VA
Aroclor-1016 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1221	CT,NH,NY,NC,ME,VA
Aroclor-1221 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1232	CT,NH,NY,NC,ME,VA
Aroclor-1232 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1242	CT,NH,NY,NC,ME,VA
Aroclor-1242 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1248	CT,NH,NY,NC,ME,VA
Aroclor-1248 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1254	CT,NH,NY,NC,ME,VA
Aroclor-1254 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1260	CT,NH,NY,NC,ME,VA
Aroclor-1260 [2C]	CT,NH,NY,NC,ME,VA
Aroclor-1262	NH,NY,NC,ME,VA
Aroclor-1262 [2C]	NH,NY,NC,ME,VA
Aroclor-1268	NH,NY,NC,ME,VA
Aroclor-1268 [2C]	NH,NY,NC,ME,VA
<i>SW-846 8260C in Water</i>	
Acetone	CT,NH,NY,ME
tert-Amyl Methyl Ether (TAME)	NH,NY,ME
Benzene	CT,NH,NY,ME
Bromobenzene	ME
Bromochloromethane	NH,NY,ME
Bromodichloromethane	CT,NH,NY,ME
Bromoform	CT,NH,NY,ME
Bromomethane	CT,NH,NY,ME
2-Butanone (MEK)	CT,NH,NY,ME
n-Butylbenzene	NY,ME
sec-Butylbenzene	NY,ME
tert-Butylbenzene	NY,ME
tert-Butyl Ethyl Ether (TBEE)	NH,NY,ME
Carbon Disulfide	CT,NH,NY,ME
Carbon Tetrachloride	CT,NH,NY,ME
Chlorobenzene	CT,NH,NY,ME
Chlorodibromomethane	CT,NH,NY,ME
Chloroethane	CT,NH,NY,ME
Chloroform	CT,NH,NY,ME
Chloromethane	CT,NH,NY,ME
2-Chlorotoluene	NY,ME
4-Chlorotoluene	NY,ME
1,2-Dibromo-3-chloropropane (DBCP)	NY
1,2-Dibromoethane (EDB)	NY
Dibromomethane	NH,NY,ME
1,2-Dichlorobenzene	CT,NY,ME
1,3-Dichlorobenzene	CT,NH,NY,ME

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8260C in Water</i>	
1,4-Dichlorobenzene	CT,NH,NY,ME
Dichlorodifluoromethane (Freon 12)	NH,NY,ME
1,1-Dichloroethane	CT,NH,NY,ME
1,2-Dichloroethane	CT,NH,NY,ME
1,1-Dichloroethylene	CT,NH,NY,ME
cis-1,2-Dichloroethylene	NY,ME
trans-1,2-Dichloroethylene	CT,NH,NY,ME
1,2-Dichloropropane	CT,NH,NY,ME
1,3-Dichloropropane	NY,ME
2,2-Dichloropropane	NH,NY,ME
1,1-Dichloropropene	NH,NY,ME
cis-1,3-Dichloropropene	CT,NH,NY,ME
trans-1,3-Dichloropropene	CT,NH,NY,ME
Diisopropyl Ether (DIPE)	NH,NY,ME
Ethylbenzene	CT,NH,NY,ME
Hexachlorobutadiene	CT,NH,NY,ME
2-Hexanone (MBK)	CT,NH,NY,ME
Isopropylbenzene (Cumene)	NY,ME
p-Isopropyltoluene (p-Cymene)	CT,NH,NY,ME
Methyl tert-Butyl Ether (MTBE)	CT,NH,NY,ME
Methylene Chloride	CT,NH,NY,ME
4-Methyl-2-pentanone (MIBK)	CT,NH,NY,ME
Naphthalene	NH,NY,ME
n-Propylbenzene	CT,NH,NY,ME
Styrene	CT,NH,NY,ME
1,1,1,2-Tetrachloroethane	CT,NH,NY,ME
1,1,2,2-Tetrachloroethane	CT,NH,NY,ME
Tetrachloroethylene	CT,NH,NY,ME
Toluene	CT,NH,NY,ME
1,2,3-Trichlorobenzene	NH,NY,ME
1,2,4-Trichlorobenzene	CT,NH,NY,ME
1,1,1-Trichloroethane	CT,NH,NY,ME
1,1,2-Trichloroethane	CT,NH,NY,ME
Trichloroethylene	CT,NH,NY,ME
Trichlorofluoromethane (Freon 11)	CT,NH,NY,ME
1,2,3-Trichloropropane	NH,NY,ME
1,2,4-Trimethylbenzene	NY,ME
1,3,5-Trimethylbenzene	NY,ME
Vinyl Chloride	CT,NH,NY,ME
m+p Xylene	CT,NH,NY,ME
o-Xylene	CT,NH,NY,ME
<i>SW-846 8270D in Water</i>	
Acenaphthene	CT,NY,NH
Acenaphthylene	CT,NY,NH
Acetophenone	NY
Aniline	CT,NY

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Water</i>	
Anthracene	CT,NY,NH
Benzo(a)anthracene	CT,NY,NH
Benzo(a)pyrene	CT,NY,NH
Benzo(b)fluoranthene	CT,NY,NH
Benzo(g,h,i)perylene	CT,NY,NH
Benzo(k)fluoranthene	CT,NY,NH
Bis(2-chloroethoxy)methane	CT,NY,NH
Bis(2-chloroethyl)ether	CT,NY,NH
Bis(2-chloroisopropyl)ether	CT,NY,NH
Bis(2-Ethylhexyl)phthalate	CT,NY,NH
4-Bromophenylphenylether	CT,NY,NH
Butylbenzylphthalate	CT,NY,NH
4-Chloroaniline	CT,NY,NH
2-Chloronaphthalene	CT,NY,NH
2-Chlorophenol	CT,NY,NH
Chrysene	CT,NY,NH
Dibenz(a,h)anthracene	CT,NY,NH
Dibenzofuran	CT,NY,NH
Di-n-butylphthalate	CT,NY,NH
1,2-Dichlorobenzene	CT,NY,NH
1,3-Dichlorobenzene	CT,NY,NH
1,4-Dichlorobenzene	CT,NY,NH
3,3-Dichlorobenzidine	CT,NY,NH
2,4-Dichlorophenol	CT,NY,NH
Diethylphthalate	CT,NY,NH
2,4-Dimethylphenol	CT,NY,NH
Dimethylphthalate	CT,NY,NH
2,4-Dinitrophenol	CT,NY,NH
2,4-Dinitrotoluene	CT,NY,NH
2,6-Dinitrotoluene	CT,NY,NH
Di-n-octylphthalate	CT,NY,NH
1,2-Diphenylhydrazine (as Azobenzene)	NY
Fluoranthene	CT,NY,NH
Fluorene	NY,NH
Hexachlorobenzene	CT,NY,NH
Hexachlorobutadiene	CT,NY,NH
Hexachloroethane	CT,NY,NH
Indeno(1,2,3-cd)pyrene	CT,NY,NH
Isophorone	CT,NY,NH
2-Methylnaphthalene	CT,NY,NH
2-Methylphenol	CT,NY,NH
3/4-Methylphenol	CT,NY,NH
Naphthalene	CT,NY,NH
Nitrobenzene	CT,NY,NH
2-Nitrophenol	CT,NY,NH
4-Nitrophenol	CT,NY,NH
Pentachlorophenol	CT,NY,NH

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
<i>SW-846 8270D in Water</i>	
Phenanthrene	CT,NY,NH
Phenol	CT,NY,NH
Pyrene	CT,NY,NH
1,2,4-Trichlorobenzene	CT,NY,NH
2,4,5-Trichlorophenol	CT,NY,NH
2,4,6-Trichlorophenol	CT,NY,NH

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

Code	Description	Number	Expires
AIHA	AIHA-LAP, LLC - ISO17025:2005	100033	03/1/2020
MA	Massachusetts DEP	M-MA100	06/30/2019
CT	Connecticut Department of Public Health	PH-0567	09/30/2019
NY	New York State Department of Health	10899 NELAP	04/1/2019
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2019
RI	Rhode Island Department of Health	LAO00112	12/30/2018
NC	North Carolina Div. of Water Quality	652	12/31/2018
NJ	New Jersey DEP	MA007 NELAP	06/30/2019
FL	Florida Department of Health	E871027 NELAP	06/30/2019
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2019
ME	State of Maine	2011028	06/9/2019
VA	Commonwealth of Virginia	460217	12/14/2018
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2018
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2019
NC-DW	North Carolina Department of Health	25703	07/31/2019


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 BEC

Received By SE Date 7/19/18 Time 1920

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 # 8 Actual Temp - 2.4, 2.6, 3.2

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? T Who was notified? Ray, Eric

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? F On COC? F

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

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.	<u>32</u>	1 Liter Plastic		16 oz Amb.	
HCL-	<u>30</u>	500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic	<u>6</u>	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			

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:

MADEP MCP Analytical Method Report Certification Form

Laboratory Name: Con-Test Analytical Laboratory	Project #: 18G0762
Project Location: 20 Inner Belt Rd., Somerville, MA	RTN:

This Form provides certifications for the following data set: [list Laboratory Sample ID Number(s)]
18G0762-01 thru 18G0762-06

Matrices: Water

CAM Protocol (check all that below)

8260 VOC CAM II A (X)	7470/7471 Hg CAM IIIB (X)	MassDEP VPH CAM IV A (X)	8082 PCB CAM V A (X)	9014 Total Cyanide/PAC CAM VI A ()	6860 Perchlorate CAM VIII B ()
8270 SVOC CAM II B (X)	7010 Metals CAM III C ()	MassDEP VPH CAM IV C ()	8081 Pesticides CAM V B ()	7196 Hex Cr CAM VI B ()	MassDEP APH CAM IX A ()
6010 Metals CAM III A ()	6020 Metals CAM III D (X)	MassDEP EPH CAM IV A (X)	8151 Herbicides CAM V C ()	8330 Explosives CAM VIII A ()	TO-15 VOC CAM IX B ()

Affirmative response to Questions A through F is required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding times?	☒ Yes ☐ No ¹
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	☒ Yes ☐ No ¹
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	☒ Yes ☐ No ¹
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data?	☒ Yes ☐ No ¹
E a	VPH, EPH, and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications).	☒ Yes ☐ No ¹
E b	APH and TO-15 Methods only: Was the complete analyte list reported for each method?	☐ Yes ☐ No ¹
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all No responses to Questions A through E)?	☒ Yes ☐ No ¹

A response to questions G, H and I below is required for "Presumptive Certainty" status

G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	☐ Yes ☒ No ¹
----------	---	--

Data User Note: Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WSC-07-350.

H	Were all QC performance standards specified in the CAM protocol(s) achieved?	☐ Yes ☒ No ¹
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s)?	☐ Yes ☒ No ¹

¹ All Negative responses must be addressed in an attached Environmental Laboratory case narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, accurate and complete.

Signature: Tod E. Kopyscinski

Position: Laboratory Director

Printed Name: Tod E. Kopyscinski

Date: 07/24/18

July 15, 2020

Mike Toomy
Boston Environmental Corp. - Brockton, MA
338 Howard Street
Brockton, MA 02302

Project Location: 20 Inner Belt Rd., Somerville, MA
Client Job Number:
Project Number: BEC20138
Laboratory Work Order Number: 20G0240

Enclosed are results of analyses for samples received by the laboratory on July 7, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Kerry K. McGee". The signature is written in a cursive, flowing style.

Kerry K. McGee
Project Manager

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

Boston Environmental Corp. - Brockton, MA
338 Howard Street
Brockton, MA 02302
ATTN: Mike Toomy

REPORT DATE: 7/15/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: BEC20138

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20G0240

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

PROJECT LOCATION: 20 Inner Belt Rd., Somerville, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Inner Belt Road (BEC-5)	20G0240-01	Ground Water		608.3	
				624.1	
				625.1	
				EPA 200.7	
				EPA 245.1	
				SM21-22 4500 H B	

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.

REVISED REPORT - 7/15/2020 - Sample i.d. for sample 20G0240-01 edited per client's request/COC.

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608.3**Qualifications:****R-06**

Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.

Analyte & Samples(s) Qualified:**Endosulfan Sulfate**

20G0240-01[Inner Belt Road (BEC-5)], B261582-MS1, B261582-MSD1

Endosulfan Sulfate [2C]

20G0240-01[Inner Belt Road (BEC-5)], B261582-MS1, B261582-MSD1

624.1**Qualifications:****DL-01**

Elevated reporting limits for all volatile compounds due to foaming sample matrix.

Analyte & Samples(s) Qualified:

20G0240-01[Inner Belt Road (BEC-5)]

625.1**Qualifications:****RL-08**

Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.

Analyte & Samples(s) Qualified:

20G0240-01[Inner Belt Road (BEC-5)]

V-04

Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.

Analyte & Samples(s) Qualified:**2,4-Dinitrophenol**

20G0240-01[Inner Belt Road (BEC-5)], B261495-BLK1, B261495-BS1, B261495-BSD1, S050162-CCV1, S050182-CCV1

Benzidine

20G0240-01[Inner Belt Road (BEC-5)], B261495-BLK1, B261495-BS1, B261495-BSD1, S050162-CCV1, S050182-CCV1

V-05

Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.

Analyte & Samples(s) Qualified:**Benzidine**

20G0240-01[Inner Belt Road (BEC-5)], B261495-BLK1, B261495-BS1, B261495-BSD1, S050162-CCV1, S050182-CCV1

V-34

Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

Analyte & Samples(s) Qualified:**Hexachlorocyclopentadiene**

B261495-BLK1, B261495-BS1, B261495-BSD1, S050162-CCV1

SM21-22 4500 H B**Qualifications:****H-05**

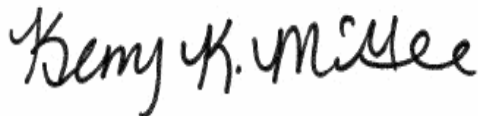
Holding time was exceeded. pH analysis should be performed immediately at time of sampling. Nominal 15 minute holding time was exceeded.

Analyte & Samples(s) Qualified:**pH**

20G0240-01[Inner Belt Road (BEC-5)], B261461-DUP1

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.

A handwritten signature in black ink, reading "Kerry K. McGee". The signature is written in a cursive, flowing style.

Kerry K. McGee
Project Manager

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 20G0240

Date Received: 7/7/2020

Field Sample #: Inner Belt Road (BEC-5)

Sampled: 7/7/2020 09:30

Sample ID: 20G0240-01

Sample Matrix: Ground Water

Sample Flags: DL-01

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acrolein	<390	400	390	µg/L	100		624.1	7/8/20	7/8/20 15:51	MFF
Acrylonitrile	<52	100	52	µg/L	100		624.1	7/8/20	7/8/20 15:51	MFF
Benzene	<18.0	100	18.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
Bromodichloromethane	<16.0	200	16.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
Bromoform	<46.0	200	46.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
Bromomethane	<138	200	138	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
Carbon Tetrachloride	<11.0	200	11.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
Chlorobenzene	<15.0	200	15.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
Chlorodibromomethane	<21.0	200	21.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
Chloroethane	<36.0	200	36.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
2-Chloroethyl Vinyl Ether	<220	400	220	µg/L	100		624.1	7/8/20	7/8/20 16:35	EEH
Chloroform	<17.0	200	17.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
Chloromethane	<45.0	200	45.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
1,2-Dichlorobenzene	<16.0	200	16.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
1,3-Dichlorobenzene	<12.0	200	12.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
1,4-Dichlorobenzene	<13.0	200	13.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
1,2-Dichloroethane	<41.0	200	41.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
1,1-Dichloroethane	<16.0	200	16.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
1,1-Dichloroethylene	<32.0	200	32.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
trans-1,2-Dichloroethylene	<31.0	200	31.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
1,2-Dichloropropane	<20.0	200	20.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
cis-1,3-Dichloropropene	<13.0	200	13.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
trans-1,3-Dichloropropene	<23.0	200	23.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
Ethylbenzene	<13.0	200	13.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
Methyl tert-Butyl Ether (MTBE)	<25.0	200	25.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
Methylene Chloride	<34.0	500	34.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
1,1,2,2-Tetrachloroethane	<22.0	200	22.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
Tetrachloroethylene	<18.0	200	18.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
Toluene	<14.0	100	14.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
1,1,1-Trichloroethane	<20.0	200	20.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
1,1,2-Trichloroethane	<16.0	200	16.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
Trichloroethylene	<24.0	200	24.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
Trichlorofluoromethane (Freon 11)	<33.0	200	33.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
Vinyl Chloride	<45.0	200	45.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
m+p Xylene	<30.0	200	30.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF
o-Xylene	<17.0	100	17.0	µg/L	100		624.1	7/8/20	7/8/20 16:17	MFF

Surrogates	% Recovery	Recovery Limits	Flag/Qual
1,2-Dichloroethane-d4	94.2	70-130	7/8/20 16:17
1,2-Dichloroethane-d4	92.5	70-130	7/8/20 15:51
1,2-Dichloroethane-d4	108	70-130	7/8/20 16:35
Toluene-d8	100	70-130	7/8/20 15:51
Toluene-d8	98.6	70-130	7/8/20 16:35
Toluene-d8	98.6	70-130	7/8/20 16:17
4-Bromofluorobenzene	98.3	70-130	7/8/20 16:17
4-Bromofluorobenzene	98.9	70-130	7/8/20 16:35

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

Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 20G0240

Date Received: 7/7/2020

Field Sample #: Inner Belt Road (BEC-5)

Sampled: 7/7/2020 09:30

Sample ID: 20G0240-01

Sample Matrix: Ground Water

Sample Flags: DL-01

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
4-Bromofluorobenzene	100		70-130				7/8/20 15:51			

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 20G0240

Date Received: 7/7/2020

Field Sample #: Inner Belt Road (BEC-5)

Sampled: 7/7/2020 09:30

Sample ID: 20G0240-01

Sample Matrix: Ground Water

Sample Flags: RL-08

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	<1.16	25.0	1.16	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Acenaphthylene	<1.16	25.0	1.16	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Anthracene	<1.01	25.0	1.01	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Benzidine	<82.0	100	82.0	µg/L	5	V-04, V-05	625.1	7/8/20	7/10/20 18:16	IMR
Benzo(a)anthracene	<1.26	25.0	1.26	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Benzo(a)pyrene	<1.48	25.0	1.48	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Benzo(b)fluoranthene	<1.26	25.0	1.26	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Benzo(g,h,i)perylene	<1.98	25.0	1.98	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Benzo(k)fluoranthene	<1.39	25.0	1.39	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
4-Bromophenylphenylether	<1.48	50.0	1.48	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Butylbenzylphthalate	<1.48	50.0	1.48	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
4-Chloro-3-methylphenol	<2.40	50.0	2.40	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Bis(2-chloroethoxy)methane	<2.36	50.0	2.36	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Bis(2-chloroethyl)ether	<2.56	50.0	2.56	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Bis(2-chloroisopropyl)ether	<3.64	50.0	3.64	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
2-Chloronaphthalene	<2.27	50.0	2.27	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
2-Chlorophenol	<1.88	50.0	1.88	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
4-Chlorophenylphenylether	<1.57	50.0	1.57	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Chrysene	<1.08	25.0	1.08	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Dibenz(a,h)anthracene	<2.28	25.0	2.28	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Di-n-butylphthalate	<2.29	50.0	2.29	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
1,3-Dichlorobenzene	<2.32	25.0	2.32	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
1,4-Dichlorobenzene	<1.92	25.0	1.92	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
1,2-Dichlorobenzene	<2.30	25.0	2.30	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
3,3-Dichlorobenzidine	<1.80	50.0	1.80	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
2,4-Dichlorophenol	<1.50	50.0	1.50	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Diethylphthalate	<1.12	50.0	1.12	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
2,4-Dimethylphenol	<3.98	50.0	3.98	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Dimethylphthalate	<1.54	50.0	1.54	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
4,6-Dinitro-2-methylphenol	<9.75	50.0	9.75	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
2,4-Dinitrophenol	<8.15	50.0	8.15	µg/L	5	V-04	625.1	7/8/20	7/10/20 18:16	IMR
2,4-Dinitrotoluene	<1.64	50.0	1.64	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
2,6-Dinitrotoluene	<1.73	50.0	1.73	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Di-n-octylphthalate	<2.61	50.0	2.61	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
1,2-Diphenylhydrazine/Azobenzene	<1.88	50.0	1.88	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Bis(2-Ethylhexyl)phthalate	<2.60	50.0	2.60	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Fluoranthene	<1.48	25.0	1.48	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Fluorene	<1.22	25.0	1.22	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Hexachlorobenzene	<2.16	50.0	2.16	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Hexachlorobutadiene	<2.96	50.0	2.96	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Hexachlorocyclopentadiene	<24.0	50.0	24.0	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Hexachloroethane	<2.64	50.0	2.64	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Indeno(1,2,3-cd)pyrene	<2.57	25.0	2.57	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Isophorone	<1.50	50.0	1.50	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR

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Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 20G0240

Date Received: 7/7/2020

Field Sample #: Inner Belt Road (BEC-5)

Sampled: 7/7/2020 09:30

Sample ID: 20G0240-01

Sample Matrix: Ground Water

Sample Flags: RL-08

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Naphthalene	<2.21	25.0	2.21	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Nitrobenzene	<2.05	50.0	2.05	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
2-Nitrophenol	<2.08	50.0	2.08	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
4-Nitrophenol	<3.14	50.0	3.14	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
N-Nitrosodimethylamine	<9.15	50.0	9.15	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
N-Nitrosodiphenylamine/Diphenylamine	<1.47	50.0	1.47	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
N-Nitrosodi-n-propylamine	<2.59	50.0	2.59	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Pentachlorophenol	<1.66	50.0	1.66	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
2-Methylnaphthalene	<1.33	25.0	1.33	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Phenanthrene	<1.44	25.0	1.44	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
2-Methylphenol	<2.28	50.0	2.28	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Phenol	<0.990	50.0	0.990	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
3/4-Methylphenol	<1.02	100	1.02	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Pyrene	<1.28	25.0	1.28	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
1,2,4-Trichlorobenzene	<2.79	25.0	2.79	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
2,4,6-Trichlorophenol	<1.66	50.0	1.66	µg/L	5		625.1	7/8/20	7/10/20 18:16	IMR
Surrogates	% Recovery	Recovery Limits		Flag/Qual						
2-Fluorophenol	32.7	15-110				7/10/20 18:16				
Phenol-d6	22.0	15-110				7/10/20 18:16				
Nitrobenzene-d5	76.0	30-130				7/10/20 18:16				
2-Fluorobiphenyl	77.8	30-130				7/10/20 18:16				
2,4,6-Tribromophenol	81.4	15-110				7/10/20 18:16				
p-Terphenyl-d14	80.8	30-130				7/10/20 18:16				

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Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 20G0240

Date Received: 7/7/2020

Field Sample #: Inner Belt Road (BEC-5)

Sampled: 7/7/2020 09:30

Sample ID: 20G0240-01

Sample Matrix: Ground Water

Organochloride Pesticides by GC/ECD

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Aldrin [1]	<0.0060	0.014	0.0060	µg/L	1		608.3	7/9/20	7/12/20 2:50	TG
alpha-BHC [1]	<0.015	0.071	0.015	µg/L	1		608.3	7/9/20	7/12/20 2:50	TG
beta-BHC [1]	<0.016	0.071	0.016	µg/L	1		608.3	7/9/20	7/12/20 2:50	TG
delta-BHC [1]	<0.036	0.071	0.036	µg/L	1		608.3	7/9/20	7/12/20 2:50	TG
gamma-BHC (Lindane) [1]	<0.0032	0.014	0.0032	µg/L	1		608.3	7/9/20	7/12/20 2:50	TG
Chlordane [1]	<0.083	0.14	0.083	µg/L	1		608.3	7/9/20	7/12/20 2:50	TG
4,4'-DDD [1]	<0.0031	0.014	0.0031	µg/L	1		608.3	7/9/20	7/12/20 2:50	TG
4,4'-DDE [1]	<0.0034	0.014	0.0034	µg/L	1		608.3	7/9/20	7/12/20 2:50	TG
4,4'-DDT [1]	<0.0054	0.014	0.0054	µg/L	1		608.3	7/9/20	7/12/20 2:50	TG
Dieldrin [1]	<0.00085	0.0014	0.00085	µg/L	1		608.3	7/9/20	7/12/20 2:50	TG
Endosulfan I [1]	<0.014	0.071	0.014	µg/L	1		608.3	7/9/20	7/12/20 2:50	TG
Endosulfan II [1]	<0.011	0.071	0.011	µg/L	1		608.3	7/9/20	7/12/20 2:50	TG
Endosulfan sulfate [1]	<0.026	0.071	0.026	µg/L	1	R-06	608.3	7/9/20	7/12/20 2:50	TG
Endrin [1]	<0.0086	0.071	0.0086	µg/L	1		608.3	7/9/20	7/12/20 2:50	TG
Endrin aldehyde [1]	<0.031	0.071	0.031	µg/L	1		608.3	7/9/20	7/12/20 1:02	TG
Endrin ketone [1]	<0.014	0.071	0.014	µg/L	1		608.3	7/9/20	7/12/20 2:50	TG
Heptachlor [1]	<0.0069	0.014	0.0069	µg/L	1		608.3	7/9/20	7/12/20 2:50	TG
Heptachlor epoxide [1]	<0.0033	0.014	0.0033	µg/L	1		608.3	7/9/20	7/12/20 2:50	TG
Methoxychlor [1]	<0.065	0.29	0.065	µg/L	1		608.3	7/9/20	7/12/20 2:50	TG
Toxaphene [1]	<0.60	0.71	0.60	µg/L	1		608.3	7/9/20	7/12/20 2:50	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual
Decachlorobiphenyl [1]	56.6	30-150	
Decachlorobiphenyl [2]	71.3	30-150	
Tetrachloro-m-xylene [1]	65.1	30-150	
Tetrachloro-m-xylene [2]	70.8	30-150	

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Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 20G0240

Date Received: 7/7/2020

Field Sample #: Inner Belt Road (BEC-5)

Sampled: 7/7/2020 09:30

Sample ID: 20G0240-01

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]	<0.0731	0.143	0.0731	µg/L	1		608.3	7/9/20	7/10/20 12:08	TG
Aroclor-1221 [1]	<0.106	0.143	0.106	µg/L	1		608.3	7/9/20	7/10/20 12:08	TG
Aroclor-1232 [1]	<0.0741	0.143	0.0741	µg/L	1		608.3	7/9/20	7/10/20 12:08	TG
Aroclor-1242 [1]	<0.0773	0.143	0.0773	µg/L	1		608.3	7/9/20	7/10/20 12:08	TG
Aroclor-1248 [1]	<0.0586	0.143	0.0586	µg/L	1		608.3	7/9/20	7/10/20 12:08	TG
Aroclor-1254 [1]	<0.105	0.143	0.105	µg/L	1		608.3	7/9/20	7/10/20 12:08	TG
Aroclor-1260 [1]	<0.0526	0.143	0.0526	µg/L	1		608.3	7/9/20	7/10/20 12:08	TG
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
Decachlorobiphenyl [1]	84.0		30-150				7/10/20 12:08			
Decachlorobiphenyl [2]	97.1		30-150				7/10/20 12:08			
Tetrachloro-m-xylene [1]	73.4		30-150				7/10/20 12:08			
Tetrachloro-m-xylene [2]	79.9		30-150				7/10/20 12:08			

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Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 20G0240

Date Received: 7/7/2020

Field Sample #: Inner Belt Road (BEC-5)

Sampled: 7/7/2020 09:30

Sample ID: 20G0240-01

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	0.050	0.017	mg/L	1		EPA 200.7	7/9/20	7/10/20 18:58	TBC
Arsenic	0.025	0.010	0.0089	mg/L	1		EPA 200.7	7/9/20	7/10/20 18:58	TBC
Cadmium	ND	0.0040	0.0015	mg/L	1		EPA 200.7	7/9/20	7/10/20 18:58	TBC
Chromium	ND	0.010	0.0036	mg/L	1		EPA 200.7	7/9/20	7/10/20 18:58	TBC
Copper	ND	0.010	0.0087	mg/L	1		EPA 200.7	7/9/20	7/10/20 18:58	TBC
Lead	ND	0.010	0.0065	mg/L	1		EPA 200.7	7/9/20	7/10/20 14:59	TBC
Mercury	ND	0.00010	0.000034	mg/L	1		EPA 245.1	7/10/20	7/10/20 14:39	AJL
Nickel	ND	0.010	0.0049	mg/L	1		EPA 200.7	7/9/20	7/10/20 18:58	TBC
Selenium	ND	0.050	0.025	mg/L	1		EPA 200.7	7/9/20	7/10/20 18:58	TBC
Silver	0.0083	0.010	0.0065	mg/L	1	J	EPA 200.7	7/9/20	7/13/20 10:41	TBC
Zinc	0.29	0.010	0.0045	mg/L	1		EPA 200.7	7/9/20	7/10/20 18:58	TBC

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Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 20G0240

Date Received: 7/7/2020

Field Sample #: Inner Belt Road (BEC-5)

Sampled: 7/7/2020 09:30

Sample ID: 20G0240-01

Sample Matrix: Ground Water

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

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
pH @18.5°C	6.8		pH Units	1	H-05	SM21-22 4500 H B	7/7/20	7/7/20 23:00	AWA

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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
20G0240-01 [Inner Belt Road (BEC-5)]	B261580	140	2.00	07/09/20

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20G0240-01 [Inner Belt Road (BEC-5)]	B261582	140	2.00	07/09/20

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20G0240-01 [Inner Belt Road (BEC-5)]	B261484	0.05	5.00	07/08/20

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20G0240-01 [Inner Belt Road (BEC-5)]	B261487	0.05	5.00	07/08/20

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20G0240-01 [Inner Belt Road (BEC-5)]	B261495	1000	1.00	07/08/20

Prep Method: EPA 200.7 Analytical Method: EPA 200.7

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20G0240-01 [Inner Belt Road (BEC-5)]	B261628	50.0	50.0	07/09/20

Prep Method: EPA 245.1 Analytical Method: EPA 245.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20G0240-01 [Inner Belt Road (BEC-5)]	B261681	6.00	6.00	07/10/20

SM21-22 4500 H B

Lab Number [Field ID]	Batch	Initial [mL]	Date
20G0240-01 [Inner Belt Road (BEC-5)]	B261461	50.0	07/07/20

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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 B261484 - SW-846 5030B										
Blank (B261484-BLK1)				Prepared & Analyzed: 07/08/20						
2-Chloroethyl Vinyl Ether	ND	10	µg/L							
Surrogate: 1,2-Dichloroethane-d4	27.2		µg/L	25.0		109	70-130			
Surrogate: Toluene-d8	24.7		µg/L	25.0		98.7	70-130			
Surrogate: 4-Bromofluorobenzene	24.6		µg/L	25.0		98.5	70-130			
LCS (B261484-BS1)				Prepared & Analyzed: 07/08/20						
2-Chloroethyl Vinyl Ether	173	10	µg/L	200		86.4	10-225			
Surrogate: 1,2-Dichloroethane-d4	27.2		µg/L	25.0		109	70-130			
Surrogate: Toluene-d8	24.9		µg/L	25.0		99.6	70-130			
Surrogate: 4-Bromofluorobenzene	24.8		µg/L	25.0		99.3	70-130			
Batch B261487 - SW-846 5030B										
Blank (B261487-BLK1)				Prepared & Analyzed: 07/08/20						
Acrolein	ND	10	µg/L							
Acrylonitrile	ND	5.0	µg/L							
Benzene	ND	1.00	µg/L							
Bromodichloromethane	ND	2.00	µg/L							
Bromoform	ND	2.00	µg/L							
Bromomethane	ND	2.00	µg/L							
Carbon Tetrachloride	ND	2.00	µg/L							
Chlorobenzene	ND	2.00	µg/L							
Chlorodibromomethane	ND	2.00	µg/L							
Chloroethane	ND	2.00	µg/L							
Chloroform	ND	2.00	µg/L							
Chloromethane	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							
1,1-Dichloroethane	ND	2.00	µg/L							
1,1-Dichloroethylene	ND	2.00	µg/L							
trans-1,2-Dichloroethylene	ND	2.00	µg/L							
1,2-Dichloropropane	ND	2.00	µg/L							
cis-1,3-Dichloropropene	ND	2.00	µg/L							
trans-1,3-Dichloropropene	ND	2.00	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							
1,1,2,2-Tetrachloroethane	ND	2.00	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							
Trichlorofluoromethane (Freon 11)	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	23.7		µg/L	25.0		94.7	70-130			
Surrogate: Toluene-d8	24.9		µg/L	25.0		99.7	70-130			
Surrogate: 4-Bromofluorobenzene	24.6		µg/L	25.0		98.6	70-130			

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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 B261487 - SW-846 5030B										
LCS (B261487-BS1)				Prepared & Analyzed: 07/08/20						
Acrolein	204	10	µg/L	200		102	60-140			
Acrylonitrile	16.8	5.0	µg/L	20.0		83.8	60-140			
Benzene	18	1.00	µg/L	20.0		91.4	65-135			
Bromodichloromethane	19	2.00	µg/L	20.0		96.7	65-135			
Bromoform	21	2.00	µg/L	20.0		105	70-130			
Bromomethane	14	2.00	µg/L	20.0		69.6	15-185			
Carbon Tetrachloride	18	2.00	µg/L	20.0		92.2	70-130			
Chlorobenzene	21	2.00	µg/L	20.0		104	65-135			
Chlorodibromomethane	20	2.00	µg/L	20.0		97.6	70-135			
Chloroethane	19	2.00	µg/L	20.0		96.2	40-160			
Chloroform	18	2.00	µg/L	20.0		90.1	70-135			
Chloromethane	21	2.00	µg/L	20.0		105	20-205			
1,2-Dichlorobenzene	20	2.00	µg/L	20.0		102	65-135			
1,3-Dichlorobenzene	21	2.00	µg/L	20.0		106	70-130			
1,4-Dichlorobenzene	19	2.00	µg/L	20.0		97.0	65-135			
1,2-Dichloroethane	18	2.00	µg/L	20.0		89.9	70-130			
1,1-Dichloroethane	18	2.00	µg/L	20.0		88.6	70-130			
1,1-Dichloroethylene	18	2.00	µg/L	20.0		90.6	50-150			
trans-1,2-Dichloroethylene	17	2.00	µg/L	20.0		86.0	70-130			
1,2-Dichloropropane	18	2.00	µg/L	20.0		92.0	35-165			
cis-1,3-Dichloropropene	18	2.00	µg/L	20.0		89.0	25-175			
trans-1,3-Dichloropropene	18	2.00	µg/L	20.0		87.9	50-150			
Ethylbenzene	20	2.00	µg/L	20.0		98.8	60-140			
Methyl tert-Butyl Ether (MTBE)	16	2.00	µg/L	20.0		82.1	70-130			
Methylene Chloride	17	5.00	µg/L	20.0		86.0	60-140			
1,1,2,2-Tetrachloroethane	20	2.00	µg/L	20.0		101	60-140			
Tetrachloroethylene	21	2.00	µg/L	20.0		103	70-130			
Toluene	19	1.00	µg/L	20.0		96.0	70-130			
1,1,1-Trichloroethane	18	2.00	µg/L	20.0		90.4	70-130			
1,1,2-Trichloroethane	20	2.00	µg/L	20.0		99.9	70-130			
Trichloroethylene	19	2.00	µg/L	20.0		97.0	65-135			
Trichlorofluoromethane (Freon 11)	17	2.00	µg/L	20.0		87.2	50-150			
Vinyl Chloride	17	2.00	µg/L	20.0		84.6	5-195			
m+p Xylene	39	2.00	µg/L	40.0		98.1	70-130			
o-Xylene	20	1.00	µg/L	20.0		102	70-130			
Surrogate: 1,2-Dichloroethane-d4	23.2		µg/L	25.0		92.8	70-130			
Surrogate: Toluene-d8	25.3		µg/L	25.0		101	70-130			
Surrogate: 4-Bromofluorobenzene	25.7		µg/L	25.0		103	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 B261495 - SW-846 3510C										
Blank (B261495-BLK1)				Prepared: 07/08/20 Analyzed: 07/09/20						
Acenaphthene	ND	5.00	µg/L							
Acenaphthylene	ND	5.00	µg/L							
Anthracene	ND	5.00	µg/L							
Benzidine	ND	20.0	µg/L							V-04, V-05
Benzo(a)anthracene	ND	5.00	µg/L							
Benzo(a)pyrene	ND	5.00	µg/L							
Benzo(b)fluoranthene	ND	5.00	µg/L							
Benzo(g,h,i)perylene	ND	5.00	µg/L							
Benzo(k)fluoranthene	ND	5.00	µg/L							
4-Bromophenylphenylether	ND	10.0	µg/L							
Butylbenzylphthalate	ND	10.0	µg/L							
4-Chloro-3-methylphenol	ND	10.0	µg/L							
Bis(2-chloroethoxy)methane	ND	10.0	µg/L							
Bis(2-chloroethyl)ether	ND	10.0	µg/L							
Bis(2-chloroisopropyl)ether	ND	10.0	µg/L							
2-Chloronaphthalene	ND	10.0	µg/L							
2-Chlorophenol	ND	10.0	µg/L							
4-Chlorophenylphenylether	ND	10.0	µg/L							
Chrysene	ND	5.00	µg/L							
Dibenz(a,h)anthracene	ND	5.00	µg/L							
Di-n-butylphthalate	ND	10.0	µg/L							
1,3-Dichlorobenzene	ND	5.00	µg/L							
1,4-Dichlorobenzene	ND	5.00	µg/L							
1,2-Dichlorobenzene	ND	5.00	µg/L							
3,3-Dichlorobenzidine	ND	10.0	µg/L							
2,4-Dichlorophenol	ND	10.0	µg/L							
Diethylphthalate	ND	10.0	µg/L							
2,4-Dimethylphenol	ND	10.0	µg/L							
Dimethylphthalate	ND	10.0	µg/L							
4,6-Dinitro-2-methylphenol	ND	10.0	µg/L							
2,4-Dinitrophenol	ND	10.0	µg/L							V-04
2,4-Dinitrotoluene	ND	10.0	µg/L							
2,6-Dinitrotoluene	ND	10.0	µg/L							
Di-n-octylphthalate	ND	10.0	µg/L							
1,2-Diphenylhydrazine/Azobenzene	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							
Hexachlorobenzene	ND	10.0	µg/L							
Hexachlorobutadiene	ND	10.0	µg/L							
Hexachlorocyclopentadiene	ND	10.0	µg/L							V-34
Hexachloroethane	ND	10.0	µg/L							
Indeno(1,2,3-cd)pyrene	ND	5.00	µg/L							
Isophorone	ND	10.0	µg/L							
Naphthalene	ND	5.00	µg/L							
Nitrobenzene	ND	10.0	µg/L							
2-Nitrophenol	ND	10.0	µg/L							
4-Nitrophenol	ND	10.0	µg/L							
N-Nitrosodimethylamine	ND	10.0	µg/L							
N-Nitrosodiphenylamine/Diphenylamine	ND	10.0	µg/L							
N-Nitrosodi-n-propylamine	ND	10.0	µg/L							
Pentachlorophenol	ND	10.0	µg/L							

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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
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Batch B261495 - SW-846 3510C
Blank (B261495-BLK1)

Prepared: 07/08/20 Analyzed: 07/09/20

2-Methylnaphthalene	ND	5.00	µg/L							
Phenanthrene	ND	5.00	µg/L							
2-Methylphenol	ND	10.0	µg/L							
Phenol	ND	10.0	µg/L							
3/4-Methylphenol	ND	20.0	µg/L							
Pyrene	ND	5.00	µg/L							
1,2,4-Trichlorobenzene	ND	5.00	µg/L							
2,4,6-Trichlorophenol	ND	10.0	µg/L							
Surrogate: 2-Fluorophenol	85.8		µg/L	200		42.9	15-110			
Surrogate: Phenol-d6	58.9		µg/L	200		29.5	15-110			
Surrogate: Nitrobenzene-d5	67.8		µg/L	100		67.8	30-130			
Surrogate: 2-Fluorobiphenyl	67.5		µg/L	100		67.5	30-130			
Surrogate: 2,4,6-Tribromophenol	154		µg/L	200		76.9	15-110			
Surrogate: p-Terphenyl-d14	80.9		µg/L	100		80.9	30-130			

LCS (B261495-BS1)

Prepared: 07/08/20 Analyzed: 07/09/20

Acenaphthene	35.6	5.00	µg/L	50.0		71.3	47-145			
Acenaphthylene	33.2	5.00	µg/L	50.0		66.5	33-145			
Anthracene	36.9	5.00	µg/L	50.0		73.9	27-133			
Benzidine	48.7	20.0	µg/L	50.0		97.4	40-140			V-04, V-05
Benzo(a)anthracene	37.6	5.00	µg/L	50.0		75.2	33-143			
Benzo(a)pyrene	37.6	5.00	µg/L	50.0		75.1	17-163			
Benzo(b)fluoranthene	37.1	5.00	µg/L	50.0		74.2	24-159			
Benzo(g,h,i)perylene	38.9	5.00	µg/L	50.0		77.8	10-219			
Benzo(k)fluoranthene	38.2	5.00	µg/L	50.0		76.4	11-162			
4-Bromophenylphenylether	38.1	10.0	µg/L	50.0		76.2	53-127			
Butylbenzylphthalate	41.8	10.0	µg/L	50.0		83.7	10-152			
4-Chloro-3-methylphenol	38.5	10.0	µg/L	50.0		77.1	22-147			
Bis(2-chloroethoxy)methane	38.0	10.0	µg/L	50.0		76.0	33-184			
Bis(2-chloroethyl)ether	38.9	10.0	µg/L	50.0		77.7	12-158			
Bis(2-chloroisopropyl)ether	43.8	10.0	µg/L	50.0		87.7	36-166			
2-Chloronaphthalene	30.4	10.0	µg/L	50.0		60.8	60-120			
2-Chlorophenol	35.6	10.0	µg/L	50.0		71.2	23-134			
4-Chlorophenylphenylether	37.6	10.0	µg/L	50.0		75.2	25-158			
Chrysene	37.9	5.00	µg/L	50.0		75.8	17-168			
Dibenz(a,h)anthracene	37.7	5.00	µg/L	50.0		75.4	10-227			
Di-n-butylphthalate	40.2	10.0	µg/L	50.0		80.4	10-120			
1,3-Dichlorobenzene	25.7	5.00	µg/L	50.0		51.4	10-172			
1,4-Dichlorobenzene	25.6	5.00	µg/L	50.0		51.2	20-124			
1,2-Dichlorobenzene	26.7	5.00	µg/L	50.0		53.3	32-129			
3,3-Dichlorobenzidine	41.5	10.0	µg/L	50.0		83.0	10-262			
2,4-Dichlorophenol	36.9	10.0	µg/L	50.0		73.7	39-135			
Diethylphthalate	39.2	10.0	µg/L	50.0		78.4	10-120			
2,4-Dimethylphenol	30.7	10.0	µg/L	50.0		61.3	32-120			
Dimethylphthalate	39.8	10.0	µg/L	50.0		79.6	10-120			
4,6-Dinitro-2-methylphenol	39.4	10.0	µg/L	50.0		78.8	10-181			
2,4-Dinitrophenol	42.1	10.0	µg/L	50.0		84.2	10-191			V-04
2,4-Dinitrotoluene	38.8	10.0	µg/L	50.0		77.7	39-139			
2,6-Dinitrotoluene	42.1	10.0	µg/L	50.0		84.1	50-158			
Di-n-octylphthalate	42.0	10.0	µg/L	50.0		84.0	4-146			
1,2-Diphenylhydrazine/Azobenzene	36.8	10.0	µg/L	50.0		73.6	40-140			
Bis(2-Ethylhexyl)phthalate	43.3	10.0	µg/L	50.0		86.6	8-158			

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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
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Batch B261495 - SW-846 3510C
LCS (B261495-BS1)

Prepared: 07/08/20 Analyzed: 07/09/20

Fluoranthene	38.8	5.00	µg/L	50.0		77.6	26-137			
Fluorene	36.4	5.00	µg/L	50.0		72.9	59-121			
Hexachlorobenzene	36.6	10.0	µg/L	50.0		73.3	10-152			
Hexachlorobutadiene	26.4	10.0	µg/L	50.0		52.7	24-120			
Hexachlorocyclopentadiene	23.6	10.0	µg/L	50.0		47.1	40-140			V-34
Hexachloroethane	24.8	10.0	µg/L	50.0		49.6	40-120			
Indeno(1,2,3-cd)pyrene	40.3	5.00	µg/L	50.0		80.6	10-171			
Isophorone	37.3	10.0	µg/L	50.0		74.7	21-196			
Naphthalene	32.2	5.00	µg/L	50.0		64.5	21-133			
Nitrobenzene	35.8	10.0	µg/L	50.0		71.6	35-180			
2-Nitrophenol	39.2	10.0	µg/L	50.0		78.5	29-182			
4-Nitrophenol	22.9	10.0	µg/L	50.0		45.8	10-132			
N-Nitrosodimethylamine	26.0	10.0	µg/L	50.0		52.0	40-140			
N-Nitrosodiphenylamine/Diphenylamine	39.7	10.0	µg/L	50.0		79.4	40-140			
N-Nitrosodi-n-propylamine	39.9	10.0	µg/L	50.0		79.9	10-230			
Pentachlorophenol	32.9	10.0	µg/L	50.0		65.8	14-176			
2-Methylnaphthalene	37.5	5.00	µg/L	50.0		75.0	40-140			
Phenanthrene	37.6	5.00	µg/L	50.0		75.1	54-120			
2-Methylphenol	34.3	10.0	µg/L	50.0		68.5	40-140			
Phenol	17.3	10.0	µg/L	50.0		34.7	5-120			
3/4-Methylphenol	31.5	20.0	µg/L	50.0		63.0	40-140			
Pyrene	38.9	5.00	µg/L	50.0		77.9	52-120			
1,2,4-Trichlorobenzene	28.0	5.00	µg/L	50.0		56.1	44-142			
2,4,6-Trichlorophenol	39.0	10.0	µg/L	50.0		78.1	37-144			
Surrogate: 2-Fluorophenol	99.6		µg/L	200		49.8	15-110			
Surrogate: Phenol-d6	71.8		µg/L	200		35.9	15-110			
Surrogate: Nitrobenzene-d5	79.1		µg/L	100		79.1	30-130			
Surrogate: 2-Fluorobiphenyl	77.5		µg/L	100		77.5	30-130			
Surrogate: 2,4,6-Tribromophenol	176		µg/L	200		87.8	15-110			
Surrogate: p-Terphenyl-d14	85.7		µg/L	100		85.7	30-130			

LCS Dup (B261495-BSD1)

Prepared: 07/08/20 Analyzed: 07/09/20

Acenaphthene	36.1	5.00	µg/L	50.0		72.3	47-145	1.37	48	
Acenaphthylene	33.5	5.00	µg/L	50.0		66.9	33-145	0.630	74	
Anthracene	39.1	5.00	µg/L	50.0		78.2	27-133	5.68	66	
Benzidine	47.7	20.0	µg/L	50.0		95.4	40-140	2.12	30	V-04, V-05
Benzo(a)anthracene	39.6	5.00	µg/L	50.0		79.1	33-143	5.00	53	
Benzo(a)pyrene	38.9	5.00	µg/L	50.0		77.7	17-163	3.38	72	
Benzo(b)fluoranthene	38.6	5.00	µg/L	50.0		77.2	24-159	3.96	71	
Benzo(g,h,i)perylene	41.1	5.00	µg/L	50.0		82.2	10-219	5.43	97	
Benzo(k)fluoranthene	40.0	5.00	µg/L	50.0		80.0	11-162	4.55	63	
4-Bromophenylphenylether	39.0	10.0	µg/L	50.0		77.9	53-127	2.23	43	
Butylbenzylphthalate	43.4	10.0	µg/L	50.0		86.8	10-152	3.68	60	
4-Chloro-3-methylphenol	37.8	10.0	µg/L	50.0		75.5	22-147	2.02	73	
Bis(2-chloroethoxy)methane	38.3	10.0	µg/L	50.0		76.7	33-184	0.943	54	
Bis(2-chloroethyl)ether	37.3	10.0	µg/L	50.0		74.5	12-158	4.20	108	
Bis(2-chloroisopropyl)ether	42.0	10.0	µg/L	50.0		83.9	36-166	4.36	76	
2-Chloronaphthalene	30.7	10.0	µg/L	50.0		61.4	60-120	1.01	24	
2-Chlorophenol	33.4	10.0	µg/L	50.0		66.9	23-134	6.20	61	
4-Chlorophenylphenylether	37.4	10.0	µg/L	50.0		74.8	25-158	0.587	61	
Chrysene	39.7	5.00	µg/L	50.0		79.5	17-168	4.74	87	
Dibenz(a,h)anthracene	39.6	5.00	µg/L	50.0		79.1	10-227	4.76	126	

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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 B261495 - SW-846 3510C										
LCS Dup (B261495-BSD1)					Prepared: 07/08/20 Analyzed: 07/09/20					
Di-n-butylphthalate	41.8	10.0	µg/L	50.0		83.6	10-120	3.93	47	
1,3-Dichlorobenzene	24.5	5.00	µg/L	50.0		49.0	10-172	4.70	30	
1,4-Dichlorobenzene	24.4	5.00	µg/L	50.0		48.8	20-124	4.84	30	
1,2-Dichlorobenzene	25.3	5.00	µg/L	50.0		50.7	32-129	5.12	30	
3,3-Dichlorobenzidine	44.0	10.0	µg/L	50.0		87.9	10-262	5.69	108	
2,4-Dichlorophenol	37.3	10.0	µg/L	50.0		74.6	39-135	1.13	50	
Diethylphthalate	39.4	10.0	µg/L	50.0		78.7	10-120	0.484	100	
2,4-Dimethylphenol	31.0	10.0	µg/L	50.0		62.0	32-120	1.07	58	
Dimethylphthalate	40.2	10.0	µg/L	50.0		80.5	10-120	1.15	183	
4,6-Dinitro-2-methylphenol	42.2	10.0	µg/L	50.0		84.3	10-181	6.77	203	
2,4-Dinitrophenol	43.9	10.0	µg/L	50.0		87.9	10-191	4.32	132	V-04
2,4-Dinitrotoluene	40.6	10.0	µg/L	50.0		81.1	39-139	4.33	42	
2,6-Dinitrotoluene	42.7	10.0	µg/L	50.0		85.4	50-158	1.46	48	
Di-n-octylphthalate	43.4	10.0	µg/L	50.0		86.7	4-146	3.19	69	
1,2-Diphenylhydrazine/Azobenzene	37.9	10.0	µg/L	50.0		75.8	40-140	3.05	30	
Bis(2-Ethylhexyl)phthalate	44.7	10.0	µg/L	50.0		89.4	8-158	3.18	82	
Fluoranthene	39.8	5.00	µg/L	50.0		79.5	26-137	2.44	66	
Fluorene	36.6	5.00	µg/L	50.0		73.2	59-121	0.493	38	
Hexachlorobenzene	37.8	10.0	µg/L	50.0		75.6	10-152	3.09	55	
Hexachlorobutadiene	25.3	10.0	µg/L	50.0		50.7	24-120	4.02	62	
Hexachlorocyclopentadiene	23.0	10.0	µg/L	50.0		46.0	40-140	2.45	30	V-34
Hexachloroethane	23.5	10.0	µg/L	50.0		47.0	40-120	5.47	52	
Indeno(1,2,3-cd)pyrene	42.2	5.00	µg/L	50.0		84.4	10-171	4.63	99	
Isophorone	37.8	10.0	µg/L	50.0		75.7	21-196	1.30	93	
Naphthalene	32.0	5.00	µg/L	50.0		64.0	21-133	0.685	65	
Nitrobenzene	36.2	10.0	µg/L	50.0		72.4	35-180	1.08	62	
2-Nitrophenol	40.2	10.0	µg/L	50.0		80.4	29-182	2.37	55	
4-Nitrophenol	23.0	10.0	µg/L	50.0		46.1	10-132	0.740	131	
N-Nitrosodimethylamine	23.9	10.0	µg/L	50.0		47.7	40-140	8.58	30	
N-Nitrosodiphenylamine/Diphenylamine	40.6	10.0	µg/L	50.0		81.3	40-140	2.39	30	
N-Nitrosodi-n-propylamine	38.3	10.0	µg/L	50.0		76.5	10-230	4.25	87	
Pentachlorophenol	33.4	10.0	µg/L	50.0		66.9	14-176	1.63	86	
2-Methylnaphthalene	37.2	5.00	µg/L	50.0		74.5	40-140	0.776	30	
Phenanthrene	39.0	5.00	µg/L	50.0		78.0	54-120	3.81	39	
2-Methylphenol	32.7	10.0	µg/L	50.0		65.4	40-140	4.72	30	
Phenol	16.2	10.0	µg/L	50.0		32.5	5-120	6.49	64	
3/4-Methylphenol	29.7	20.0	µg/L	50.0		59.3	40-140	6.05	30	
Pyrene	40.4	5.00	µg/L	50.0		80.8	52-120	3.71	49	
1,2,4-Trichlorobenzene	27.9	5.00	µg/L	50.0		55.8	44-142	0.536	50	
2,4,6-Trichlorophenol	38.3	10.0	µg/L	50.0		76.7	37-144	1.86	58	
Surrogate: 2-Fluorophenol	91.8		µg/L	200		45.9	15-110			
Surrogate: Phenol-d6	65.2		µg/L	200		32.6	15-110			
Surrogate: Nitrobenzene-d5	79.2		µg/L	100		79.2	30-130			
Surrogate: 2-Fluorobiphenyl	77.8		µg/L	100		77.8	30-130			
Surrogate: 2,4,6-Tribromophenol	176		µg/L	200		87.8	15-110			
Surrogate: p-Terphenyl-d14	87.3		µg/L	100		87.3	30-130			

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QUALITY CONTROL
Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B261582 - SW-846 3510C										
Blank (B261582-BLK1)				Prepared: 07/09/20 Analyzed: 07/11/20						
Aldrin	ND	0.014	µg/L							
Aldrin [2C]	ND	0.014	µg/L							
alpha-BHC	ND	0.069	µg/L							
alpha-BHC [2C]	ND	0.069	µg/L							
beta-BHC	ND	0.069	µg/L							
beta-BHC [2C]	ND	0.069	µg/L							
delta-BHC	ND	0.069	µg/L							
delta-BHC [2C]	ND	0.069	µg/L							
gamma-BHC (Lindane)	ND	0.014	µg/L							
gamma-BHC (Lindane) [2C]	ND	0.014	µg/L							
Chlordane	ND	0.14	µg/L							
Chlordane [2C]	ND	0.14	µg/L							
4,4'-DDD	ND	0.014	µg/L							
4,4'-DDD [2C]	ND	0.014	µg/L							
4,4'-DDE	ND	0.014	µg/L							
4,4'-DDE [2C]	ND	0.014	µg/L							
4,4'-DDT	ND	0.014	µg/L							
4,4'-DDT [2C]	ND	0.014	µg/L							
Dieldrin	ND	0.0014	µg/L							
Dieldrin [2C]	ND	0.0014	µg/L							
Endosulfan I	ND	0.069	µg/L							
Endosulfan I [2C]	ND	0.069	µg/L							
Endosulfan II	ND	0.069	µg/L							
Endosulfan II [2C]	ND	0.069	µg/L							
Endosulfan Sulfate	ND	0.069	µg/L							
Endosulfan Sulfate [2C]	ND	0.069	µg/L							
Endrin	ND	0.069	µg/L							
Endrin [2C]	ND	0.069	µg/L							
Endrin Aldehyde	ND	0.069	µg/L							
Endrin Aldehyde [2C]	ND	0.069	µg/L							
Endrin Ketone	ND	0.069	µg/L							
Endrin Ketone [2C]	ND	0.069	µg/L							
Heptachlor	ND	0.014	µg/L							
Heptachlor [2C]	ND	0.014	µg/L							
Heptachlor Epoxide	ND	0.014	µg/L							
Heptachlor Epoxide [2C]	ND	0.014	µg/L							
Methoxychlor	ND	0.28	µg/L							
Methoxychlor [2C]	ND	0.28	µg/L							
Toxaphene	ND	0.69	µg/L							
Toxaphene [2C]	ND	0.69	µg/L							
Surrogate: Decachlorobiphenyl	2.04		µg/L	2.76		74.0	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.58		µg/L	2.76		93.6	30-150			
Surrogate: Tetrachloro-m-xylene	1.92		µg/L	2.76		69.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	2.01		µg/L	2.76		72.7	30-150			

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QUALITY CONTROL
Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B261582 - SW-846 3510C
LCS (B261582-BS1)

Prepared: 07/09/20 Analyzed: 07/11/20

Aldrin	1.2	0.014	µg/L	1.38		89.6	42-140			
Aldrin [2C]	1.3	0.014	µg/L	1.38		94.4	42-140			
alpha-BHC	1.3	0.069	µg/L	1.38		94.0	37-140			
alpha-BHC [2C]	1.4	0.069	µg/L	1.38		104	37-140			
beta-BHC	1.4	0.069	µg/L	1.38		99.6	17-147			
beta-BHC [2C]	1.4	0.069	µg/L	1.38		103	17-147			
delta-BHC	0.94	0.069	µg/L	1.38		68.2	19-140			
delta-BHC [2C]	1.2	0.069	µg/L	1.38		85.4	19-140			
gamma-BHC (Lindane)	1.3	0.014	µg/L	1.38		94.3	32-140			
gamma-BHC (Lindane) [2C]	1.4	0.014	µg/L	1.38		99.9	32-140			
4,4'-DDD	1.4	0.014	µg/L	1.38		104	31-141			
4,4'-DDD [2C]	1.5	0.014	µg/L	1.38		109	31-141			
4,4'-DDE	1.3	0.014	µg/L	1.38		94.8	30-145			
4,4'-DDE [2C]	1.5	0.014	µg/L	1.38		107	30-145			
4,4'-DDT	1.5	0.014	µg/L	1.38		112	25-160			
4,4'-DDT [2C]	1.5	0.014	µg/L	1.38		112	25-160			
Dieldrin	1.4	0.0014	µg/L	1.38		100	36-146			
Dieldrin [2C]	1.4	0.0014	µg/L	1.38		104	36-146			
Endosulfan I	1.3	0.069	µg/L	1.38		96.0	45-153			
Endosulfan I [2C]	1.5	0.069	µg/L	1.38		108	45-153			
Endosulfan II	1.5	0.069	µg/L	1.38		105	10-202			
Endosulfan II [2C]	1.5	0.069	µg/L	1.38		109	10-202			
Endosulfan Sulfate	1.3	0.069	µg/L	1.38		96.8	26-144			
Endosulfan Sulfate [2C]	1.4	0.069	µg/L	1.38		102	26-144			
Endrin	1.4	0.069	µg/L	1.38		104	30-147			
Endrin [2C]	1.5	0.069	µg/L	1.38		112	30-147			
Endrin Aldehyde	1.4	0.069	µg/L	1.38		99.9	40-140			
Endrin Aldehyde [2C]	1.5	0.069	µg/L	1.38		109	40-140			
Endrin Ketone	1.5	0.069	µg/L	1.38		106	40-140			
Endrin Ketone [2C]	1.6	0.069	µg/L	1.38		114	40-140			
Heptachlor	0.79	0.014	µg/L	1.38		57.0	34-140			
Heptachlor [2C]	1.4	0.014	µg/L	1.38		100	34-140			
Heptachlor Epoxide	1.3	0.014	µg/L	1.38		96.8	37-142			
Heptachlor Epoxide [2C]	1.4	0.014	µg/L	1.38		105	37-142			
Methoxychlor	1.6	0.28	µg/L	1.38		117	40-140			
Methoxychlor [2C]	1.8	0.28	µg/L	1.38		128	40-140			
Surrogate: Decachlorobiphenyl	2.39		µg/L	2.76		86.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.72		µg/L	2.76		98.8	30-150			
Surrogate: Tetrachloro-m-xylene	2.17		µg/L	2.76		78.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	2.30		µg/L	2.76		83.2	30-150			

LCS Dup (B261582-BS1)

Prepared: 07/09/20 Analyzed: 07/11/20

Aldrin	1.2	0.014	µg/L	1.38		86.3	42-140	3.71		
Aldrin [2C]	1.3	0.014	µg/L	1.38		91.1	42-140	3.60		
alpha-BHC	1.2	0.069	µg/L	1.38		90.4	37-140	4.00		
alpha-BHC [2C]	1.4	0.069	µg/L	1.38		101	37-140	3.01		
beta-BHC	1.3	0.069	µg/L	1.38		95.0	17-147	4.77		
beta-BHC [2C]	1.4	0.069	µg/L	1.38		98.7	17-147	4.64		
delta-BHC	0.92	0.069	µg/L	1.38		66.8	19-140	2.05		
delta-BHC [2C]	1.2	0.069	µg/L	1.38		83.5	19-140	2.24		
gamma-BHC (Lindane)	1.3	0.014	µg/L	1.38		91.4	32-140	3.11		
gamma-BHC (Lindane) [2C]	1.3	0.014	µg/L	1.38		96.8	32-140	3.10		

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QUALITY CONTROL
Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B261582 - SW-846 3510C
LCS Dup (B261582-BS1)

Prepared: 07/09/20 Analyzed: 07/11/20

4,4'-DDD	1.4	0.014	µg/L	1.38		99.5	31-141	4.02		
4,4'-DDD [2C]	1.4	0.014	µg/L	1.38		105	31-141	4.05		
4,4'-DDE	1.2	0.014	µg/L	1.38		90.6	30-145	4.54		
4,4'-DDE [2C]	1.4	0.014	µg/L	1.38		102	30-145	4.86		
4,4'-DDT	1.5	0.014	µg/L	1.38		107	25-160	3.87		
4,4'-DDT [2C]	1.5	0.014	µg/L	1.38		108	25-160	3.55		
Dieldrin	1.3	0.0014	µg/L	1.38		95.6	36-146	4.95		
Dieldrin [2C]	1.4	0.0014	µg/L	1.38		100	36-146	4.04		
Endosulfan I	1.3	0.069	µg/L	1.38		92.6	45-153	3.56		
Endosulfan I [2C]	1.4	0.069	µg/L	1.38		104	45-153	3.91		
Endosulfan II	1.4	0.069	µg/L	1.38		101	10-202	3.99		
Endosulfan II [2C]	1.4	0.069	µg/L	1.38		105	10-202	4.13		
Endosulfan Sulfate	1.4	0.069	µg/L	1.38		99.2	26-144	2.49		
Endosulfan Sulfate [2C]	1.4	0.069	µg/L	1.38		105	26-144	2.60		
Endrin	1.4	0.069	µg/L	1.38		100	30-147	3.81		
Endrin [2C]	1.5	0.069	µg/L	1.38		107	30-147	3.94		
Endrin Aldehyde	1.3	0.069	µg/L	1.38		96.7	40-140	3.34		
Endrin Aldehyde [2C]	1.5	0.069	µg/L	1.38		107	40-140	2.06		
Endrin Ketone	1.4	0.069	µg/L	1.38		103	40-140	2.98		
Endrin Ketone [2C]	1.5	0.069	µg/L	1.38		110	40-140	2.96		
Heptachlor	0.76	0.014	µg/L	1.38		55.3	34-140	3.01		
Heptachlor [2C]	1.3	0.014	µg/L	1.38		97.4	34-140	3.10		
Heptachlor Epoxide	1.3	0.014	µg/L	1.38		92.9	37-142	4.12		
Heptachlor Epoxide [2C]	1.4	0.014	µg/L	1.38		101	37-142	3.62		
Methoxychlor	1.5	0.28	µg/L	1.38		112	40-140	3.70		
Methoxychlor [2C]	1.6	0.28	µg/L	1.38		118	40-140	7.80		
Surrogate: Decachlorobiphenyl	2.32		µg/L	2.76		84.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.62		µg/L	2.76		94.9	30-150			
Surrogate: Tetrachloro-m-xylene	2.09		µg/L	2.76		75.8	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	2.20		µg/L	2.76		79.9	30-150			

Matrix Spike (B261582-MS1)
Source: 20G0240-01

Prepared: 07/09/20 Analyzed: 07/12/20

Aldrin	0.91	0.014	µg/L	1.38	ND	65.9	42-140			
Aldrin [2C]	1.0	0.014	µg/L	1.38	ND	74.9	42-140			
alpha-BHC	0.79	0.069	µg/L	1.38	ND	57.5	37-140			
alpha-BHC [2C]	0.92	0.069	µg/L	1.38	ND	67.0	37-140			
beta-BHC	0.90	0.069	µg/L	1.38	ND	65.6	17-147			
beta-BHC [2C]	1.0	0.069	µg/L	1.38	ND	72.9	17-147			
delta-BHC	0.77	0.069	µg/L	1.38	ND	55.5	19-140			
delta-BHC [2C]	0.91	0.069	µg/L	1.38	ND	66.0	19-140			
gamma-BHC (Lindane)	0.85	0.014	µg/L	1.38	ND	61.7	32-140			
gamma-BHC (Lindane) [2C]	0.94	0.014	µg/L	1.38	ND	68.4	32-140			
4,4'-DDD	1.0	0.014	µg/L	1.38	ND	74.1	31-141			
4,4'-DDD [2C]	1.2	0.014	µg/L	1.38	ND	83.4	31-141			
4,4'-DDE	0.99	0.014	µg/L	1.38	ND	72.0	30-145			
4,4'-DDE [2C]	1.1	0.014	µg/L	1.38	ND	81.8	30-145			
4,4'-DDT	1.1	0.014	µg/L	1.38	ND	76.4	25-160			
4,4'-DDT [2C]	1.2	0.014	µg/L	1.38	ND	86.7	25-160			
Dieldrin	1.1	0.0014	µg/L	1.38	ND	76.6	36-146			
Dieldrin [2C]	1.2	0.0014	µg/L	1.38	ND	83.4	36-146			
Endosulfan I	1.0	0.069	µg/L	1.38	ND	73.6	45-153			
Endosulfan I [2C]	1.2	0.069	µg/L	1.38	ND	87.3	45-153			

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QUALITY CONTROL
Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B261582 - SW-846 3510C										
Matrix Spike (B261582-MS1)	Source: 20G0240-01			Prepared: 07/09/20 Analyzed: 07/12/20						
Endosulfan II	1.0	0.069	µg/L	1.38	ND	75.1	10-202			
Endosulfan II [2C]	1.2	0.069	µg/L	1.38	ND	85.7	10-202			
Endosulfan Sulfate	1.1	0.069	µg/L	1.38	ND	77.2	26-144			R-06
Endosulfan Sulfate [2C]	1.1	0.069	µg/L	1.38	ND	82.6	26-144			R-06
Endrin	1.1	0.069	µg/L	1.38	ND	79.4	30-147			
Endrin [2C]	1.2	0.069	µg/L	1.38	ND	89.3	30-147			
Endrin Aldehyde	0.88	0.069	µg/L	1.38	ND	64.0	0-200			
Endrin Aldehyde [2C]	0.99	0.069	µg/L	1.38	ND	71.8	0-200			
Endrin Ketone	1.1	0.069	µg/L	1.38	ND	82.8	0-200			
Endrin Ketone [2C]	1.3	0.069	µg/L	1.38	ND	91.2	0-200			
Heptachlor	0.75	0.014	µg/L	1.38	ND	54.0	34-140			
Heptachlor [2C]	1.1	0.014	µg/L	1.38	ND	80.1	34-140			
Heptachlor Epoxide	1.0	0.014	µg/L	1.38	ND	72.9	37-142			
Heptachlor Epoxide [2C]	1.2	0.014	µg/L	1.38	ND	84.0	37-142			
Methoxychlor	1.3	0.28	µg/L	1.38	ND	95.3	0-200			
Methoxychlor [2C]	1.5	0.28	µg/L	1.38	ND	106	0-200			
Surrogate: Decachlorobiphenyl	1.75		µg/L	2.76		63.5	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.32		µg/L	2.76		84.0	30-150			
Surrogate: Tetrachloro-m-xylene	1.92		µg/L	2.76		69.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	2.12		µg/L	2.76		77.0	30-150			
Matrix Spike Dup (B261582-MSD1)	Source: 20G0240-01			Prepared: 07/09/20 Analyzed: 07/12/20						
Aldrin	0.86	0.014	µg/L	1.38	ND	62.2	42-140	5.77	35	
Aldrin [2C]	0.97	0.014	µg/L	1.38	ND	70.6	42-140	5.91	35	
alpha-BHC	0.80	0.069	µg/L	1.38	ND	58.1	37-140	1.04	36	
alpha-BHC [2C]	0.94	0.069	µg/L	1.38	ND	67.8	37-140	1.28	36	
beta-BHC	0.89	0.069	µg/L	1.38	ND	64.2	17-147	2.16	44	
beta-BHC [2C]	0.98	0.069	µg/L	1.38	ND	71.3	17-147	2.33	44	
delta-BHC	0.50	0.069	µg/L	1.38	ND	36.1	19-140	42.3	52	
delta-BHC [2C]	0.59	0.069	µg/L	1.38	ND	42.6	19-140	43.0	52	
gamma-BHC (Lindane)	0.84	0.014	µg/L	1.38	ND	60.9	32-140	1.37	39	
gamma-BHC (Lindane) [2C]	0.93	0.014	µg/L	1.38	ND	67.4	32-140	1.57	39	
4,4'-DDD	0.90	0.014	µg/L	1.38	ND	65.5	31-141	12.3	39	
4,4'-DDD [2C]	1.0	0.014	µg/L	1.38	ND	73.9	31-141	12.1	39	
4,4'-DDE	0.94	0.014	µg/L	1.38	ND	68.2	30-145	5.37	35	
4,4'-DDE [2C]	1.1	0.014	µg/L	1.38	ND	76.7	30-145	6.48	35	
4,4'-DDT	0.96	0.014	µg/L	1.38	ND	69.3	25-160	9.75	42	
4,4'-DDT [2C]	1.1	0.014	µg/L	1.38	ND	78.4	25-160	10.0	42	
Dieldrin	0.97	0.0014	µg/L	1.38	ND	70.3	36-146	8.54	49	
Dieldrin [2C]	1.1	0.0014	µg/L	1.38	ND	76.5	36-146	8.64	49	
Endosulfan I	0.94	0.069	µg/L	1.38	ND	68.2	45-153	7.72	28	
Endosulfan I [2C]	1.1	0.069	µg/L	1.38	ND	79.7	45-153	9.10	28	
Endosulfan II	0.96	0.069	µg/L	1.38	ND	69.4	10-202	7.96	53	
Endosulfan II [2C]	1.1	0.069	µg/L	1.38	ND	78.4	10-202	8.94	53	
Endosulfan Sulfate	0.55	0.069	µg/L	1.38	ND	40.1	26-144	63.2 *	38	R-06
Endosulfan Sulfate [2C]	0.64	0.069	µg/L	1.38	ND	46.2	26-144	56.6 *	38	R-06
Endrin	1.0	0.069	µg/L	1.38	ND	74.3	30-147	6.64	48	
Endrin [2C]	1.2	0.069	µg/L	1.38	ND	83.6	30-147	6.63	48	
Endrin Aldehyde	0.87	0.069	µg/L	1.38	ND	62.8	0-200	1.82		
Endrin Aldehyde [2C]	0.97	0.069	µg/L	1.38	ND	70.6	0-200	1.74		
Endrin Ketone	1.1	0.069	µg/L	1.38	ND	76.5	0-200	7.98		
Endrin Ketone [2C]	1.1	0.069	µg/L	1.38	ND	82.2	0-200	10.4		

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QUALITY CONTROL
Organochloride Pesticides by GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B261582 - SW-846 3510C
Matrix Spike Dup (B261582-MSD1)
Source: 20G0240-01

Prepared: 07/09/20 Analyzed: 07/12/20

Heptachlor	0.72	0.014	µg/L	1.38	ND	52.4	34-140	3.07	43	
Heptachlor [2C]	1.1	0.014	µg/L	1.38	ND	78.2	34-140	2.42	43	
Heptachlor Epoxide	0.94	0.014	µg/L	1.38	ND	68.4	37-142	6.37	26	
Heptachlor Epoxide [2C]	1.1	0.014	µg/L	1.38	ND	78.3	37-142	7.02	26	
Methoxychlor	1.2	0.28	µg/L	1.38	ND	86.6	0-200	9.64		
Methoxychlor [2C]	1.3	0.28	µg/L	1.38	ND	95.9	0-200	9.77		
Surrogate: Decachlorobiphenyl	1.69		µg/L	2.76		61.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.07		µg/L	2.76		75.1	30-150			
Surrogate: Tetrachloro-m-xylene	1.84		µg/L	2.76		66.7	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	2.02		µg/L	2.76		73.3	30-150			

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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 B261580 - SW-846 3510C										
Blank (B261580-BLK1)										
Prepared: 07/09/20 Analyzed: 07/10/20										
Aroclor-1016	ND	0.138	µg/L							
Aroclor-1016 [2C]	ND	0.138	µg/L							
Aroclor-1221	ND	0.138	µg/L							
Aroclor-1221 [2C]	ND	0.138	µg/L							
Aroclor-1232	ND	0.138	µg/L							
Aroclor-1232 [2C]	ND	0.138	µg/L							
Aroclor-1242	ND	0.138	µg/L							
Aroclor-1242 [2C]	ND	0.138	µg/L							
Aroclor-1248	ND	0.138	µg/L							
Aroclor-1248 [2C]	ND	0.138	µg/L							
Aroclor-1254	ND	0.138	µg/L							
Aroclor-1254 [2C]	ND	0.138	µg/L							
Aroclor-1260	ND	0.138	µg/L							
Aroclor-1260 [2C]	ND	0.138	µg/L							
Surrogate: Decachlorobiphenyl	2.70		µg/L	2.76		97.8	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.71		µg/L	2.76		98.3	30-150			
Surrogate: Tetrachloro-m-xylene	1.92		µg/L	2.76		69.6	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	1.90		µg/L	2.76		69.0	30-150			
LCS (B261580-BS1)										
Prepared: 07/09/20 Analyzed: 07/10/20										
Aroclor-1016	1.69	0.138	µg/L	1.38		123	50-140			
Aroclor-1016 [2C]	1.71	0.138	µg/L	1.38		124	50-140			
Aroclor-1260	1.75	0.138	µg/L	1.38		127	8-140			
Aroclor-1260 [2C]	1.75	0.138	µg/L	1.38		127	8-140			
Surrogate: Decachlorobiphenyl	2.84		µg/L	2.76		103	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.87		µg/L	2.76		104	30-150			
Surrogate: Tetrachloro-m-xylene	2.30		µg/L	2.76		83.4	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	2.27		µg/L	2.76		82.4	30-150			
LCS Dup (B261580-BSD1)										
Prepared: 07/09/20 Analyzed: 07/10/20										
Aroclor-1016	1.61	0.138	µg/L	1.38		116	50-140	5.29		
Aroclor-1016 [2C]	1.65	0.138	µg/L	1.38		119	50-140	3.74		
Aroclor-1260	1.68	0.138	µg/L	1.38		121	8-140	4.17		
Aroclor-1260 [2C]	1.70	0.138	µg/L	1.38		123	8-140	2.91		
Surrogate: Decachlorobiphenyl	2.73		µg/L	2.76		99.1	30-150			
Surrogate: Decachlorobiphenyl [2C]	2.81		µg/L	2.76		102	30-150			
Surrogate: Tetrachloro-m-xylene	2.18		µg/L	2.76		79.1	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	2.19		µg/L	2.76		79.5	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
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Batch B261628 - EPA 200.7
Blank (B261628-BLK1)

Prepared: 07/09/20 Analyzed: 07/10/20

Antimony	ND	0.050	mg/L							
Arsenic	ND	0.010	mg/L							
Cadmium	ND	0.0040	mg/L							
Chromium	ND	0.010	mg/L							
Copper	ND	0.010	mg/L							
Lead	ND	0.010	mg/L							
Nickel	ND	0.010	mg/L							
Selenium	ND	0.050	mg/L							
Silver	ND	0.010	mg/L							
Zinc	ND	0.010	mg/L							

LCS (B261628-BS1)

Prepared: 07/09/20 Analyzed: 07/10/20

Antimony	0.511	0.050	mg/L	0.500		102	85-115			
Arsenic	0.464	0.010	mg/L	0.500		92.8	85-115			
Cadmium	0.490	0.0040	mg/L	0.500		98.1	85-115			
Chromium	0.493	0.010	mg/L	0.500		98.6	85-115			
Copper	0.956	0.010	mg/L	1.00		95.6	85-115			
Lead	0.491	0.010	mg/L	0.500		98.3	85-115			
Nickel	0.508	0.010	mg/L	0.500		102	85-115			
Selenium	0.474	0.050	mg/L	0.500		94.9	85-115			
Silver	0.484	0.010	mg/L	0.500		96.9	85-115			
Zinc	0.979	0.010	mg/L	1.00		97.9	85-115			

LCS Dup (B261628-BSD1)

Prepared: 07/09/20 Analyzed: 07/10/20

Antimony	0.515	0.050	mg/L	0.500		103	85-115	0.762	20	
Arsenic	0.468	0.010	mg/L	0.500		93.5	85-115	0.742	20	
Cadmium	0.496	0.0040	mg/L	0.500		99.2	85-115	1.15	20	
Chromium	0.499	0.010	mg/L	0.500		99.8	85-115	1.12	20	
Copper	0.963	0.010	mg/L	1.00		96.3	85-115	0.773	20	
Lead	0.499	0.010	mg/L	0.500		99.9	85-115	1.61	20	
Nickel	0.515	0.010	mg/L	0.500		103	85-115	1.27	20	
Selenium	0.481	0.050	mg/L	0.500		96.2	85-115	1.37	20	
Silver	0.481	0.010	mg/L	0.500		96.2	85-115	0.689	20	
Zinc	0.983	0.010	mg/L	1.00		98.3	85-115	0.412	20	

Batch B261681 - EPA 245.1
Blank (B261681-BLK1)

Prepared & Analyzed: 07/10/20

Mercury	ND	0.00010	mg/L							
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LCS (B261681-BS1)

Prepared & Analyzed: 07/10/20

Mercury	0.00365	0.00010	mg/L	0.00400		91.1	85-115			
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39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332**QUALITY CONTROL****Metals Analyses (Total) - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B261681 - EPA 245.1**LCS Dup (B261681-BSD1)**

Prepared & Analyzed: 07/10/20

Mercury	0.00366	0.00010	mg/L	0.00400		91.4	85-115	0.332	20	
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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
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Batch B261461 - SM21-22 4500 H B
LCS (B261461-BS1)

Prepared & Analyzed: 07/07/20

pH	6.03		pH Units	6.00		101	90-110			
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Duplicate (B261461-DUP1)
Source: 20G0240-01

Prepared & Analyzed: 07/07/20

pH	6.8		pH Units		6.8			0.263	5.46	H-05
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BREAKDOWN REPORT

Lab Sample ID: S050206-PEM1 **Analyzed:** 07/11/2020

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	0.44
Endrin [1]	3.38

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	0.60
Endrin [2]	3.20

BREAKDOWN REPORT

Lab Sample ID: S050206-PEM2 **Analyzed:** 07/11/2020

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	0.45
Endrin [1]	2.34

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	0.57
Endrin [2]	2.20

BREAKDOWN REPORT

Lab Sample ID: S050206-PEM3 **Analyzed:** 07/12/2020

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	0.86
Endrin [1]	2.06

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BREAKDOWN REPORT

Lab Sample ID: S050206-PEM3 **Analyzed:** 07/12/2020

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	1.02
Endrin [2]	2.01

BREAKDOWN REPORT

Lab Sample ID: S050206-PEM4 **Analyzed:** 07/12/2020

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	0.94
Endrin [1]	1.67

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	1.12
Endrin [2]	1.64

BREAKDOWN REPORT

Lab Sample ID: S050206-PEM5 **Analyzed:** 07/12/2020

Column Number: 1

Analyte	% Breakdown
4,4'-DDT [1]	1.10
Endrin [1]	1.50

Column Number: 2

Analyte	% Breakdown
4,4'-DDT [2]	1.30
Endrin [2]	1.41

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS

608.3

Lab Sample ID: B261580-BS1 Date(s) Analyzed: 07/10/2020 07/10/2020

Instrument ID (1): ECD1 Instrument ID (2): ECD1

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.69	
	2	0.000	0.000	0.000	1.71	0.6
Aroclor-1260	1	0.000	0.000	0.000	1.75	
	2	0.000	0.000	0.000	1.75	2.8

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES****LCS Dup***608.3*

Lab Sample ID: B261580-BSD1 Date(s) Analyzed: 07/10/2020 07/10/2020
Instrument ID (1): ECD1 Instrument ID (2): ECD1
GC Column (1): ID: (mm) GC Column (2): ID: (mm)

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	1.61	
	2	0.000	0.000	0.000	1.65	3.1
Aroclor-1260	1	0.000	0.000	0.000	1.68	
	2	0.000	0.000	0.000	1.70	0.0

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

LCS

608.3

Lab Sample ID: B261582-BS1 Date(s) Analyzed: 07/11/2020 07/11/2020

Instrument ID (1): ECD2A Instrument ID (2): ECD2B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.065	0.000	0.000	1.4	
	2	6.950	0.000	0.000	1.5	6.9
4,4'-DDE	1	6.633	0.000	0.000	1.3	
	2	6.540	0.000	0.000	1.5	14.3
4,4'-DDT	1	7.275	0.000	0.000	1.5	
	2	7.180	0.000	0.000	1.5	0.0
Aldrin	1	5.987	0.000	0.000	1.2	
	2	5.822	0.000	0.000	1.3	8.0
alpha-BHC	1	5.306	0.000	0.000	1.3	
	2	5.179	0.000	0.000	1.4	7.4
beta-BHC	1	5.549	0.000	0.000	1.4	
	2	5.428	0.000	0.000	1.4	0.0
delta-BHC	1	5.660	0.000	0.000	0.94	
	2	5.593	0.000	0.000	1.2	24.3
Dieldrin	1	6.839	0.000	0.000	1.4	
	2	6.632	0.000	0.000	1.4	0.0
Endosulfan I	1	6.667	0.000	0.000	1.3	
	2	6.443	0.000	0.000	1.5	14.3
Endosulfan II	1	7.171	0.000	0.000	1.5	
	2	6.997	0.000	0.000	1.5	0.0
Endosulfan Sulfate	1	7.823	0.000	0.000	1.3	
	2	7.459	0.000	0.000	1.4	7.4
Endrin	1	7.006	0.000	0.000	1.4	
	2	6.841	0.000	0.000	1.5	6.9
Endrin Aldehyde	1	7.487	0.000	0.000	1.4	
	2	7.247	0.000	0.000	1.5	6.9
Endrin Ketone	1	8.027	0.000	0.000	1.5	
	2	7.855	0.000	0.000	1.6	6.5
gamma-BHC (Lindane)	1	5.496	0.000	0.000	1.3	
	2	5.374	0.000	0.000	1.4	7.4
Heptachlor	1	5.792	0.000	0.000	0.79	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

608.3

LCS

Lab Sample ID: B261582-BS1 Date(s) Analyzed: 07/11/2020 07/11/2020

Instrument ID (1): ECD2A Instrument ID (2): ECD2B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	5.629	0.000	0.000	1.4	55.7
Heptachlor Epoxide	1	6.393	0.000	0.000	1.3	
	2	6.185	0.000	0.000	1.4	7.4
Methoxychlor	1	7.658	0.000	0.000	1.6	
	2	7.719	0.000	0.000	1.8	11.8

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

608.3

LCS Dup

Lab Sample ID: B261582-BSD1 Date(s) Analyzed: 07/11/2020 07/11/2020

Instrument ID (1): ECD2A Instrument ID (2): ECD2B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.065	0.000	0.000	1.4	
	2	6.950	0.000	0.000	1.4	0.0
4,4'-DDE	1	6.633	0.000	0.000	1.2	
	2	6.539	0.000	0.000	1.4	7.4
4,4'-DDT	1	7.275	0.000	0.000	1.5	
	2	7.179	0.000	0.000	1.5	0.0
Aldrin	1	5.986	0.000	0.000	1.2	
	2	5.821	0.000	0.000	1.3	8.0
alpha-BHC	1	5.306	0.000	0.000	1.2	
	2	5.178	0.000	0.000	1.4	7.4
beta-BHC	1	5.549	0.000	0.000	1.3	
	2	5.427	0.000	0.000	1.4	7.4
delta-BHC	1	5.659	0.000	0.000	0.92	
	2	5.593	0.000	0.000	1.2	26.4
Dieldrin	1	6.839	0.000	0.000	1.3	
	2	6.631	0.000	0.000	1.4	7.4
Endosulfan I	1	6.667	0.000	0.000	1.3	
	2	6.442	0.000	0.000	1.4	7.4
Endosulfan II	1	7.172	0.000	0.000	1.4	
	2	6.996	0.000	0.000	1.4	0.0
Endosulfan Sulfate	1	7.822	0.000	0.000	1.4	
	2	7.458	0.000	0.000	1.4	0.0
Endrin	1	7.005	0.000	0.000	1.4	
	2	6.841	0.000	0.000	1.5	6.9
Endrin Aldehyde	1	7.487	0.000	0.000	1.3	
	2	7.247	0.000	0.000	1.5	14.3
Endrin Ketone	1	8.028	0.000	0.000	1.4	
	2	7.854	0.000	0.000	1.5	6.9
gamma-BHC (Lindane)	1	5.496	0.000	0.000	1.3	
	2	5.374	0.000	0.000	1.3	0.0
Heptachlor	1	5.791	0.000	0.000	0.76	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

608.3

LCS Dup

Lab Sample ID: B261582-BSD1 Date(s) Analyzed: 07/11/2020 07/11/2020

Instrument ID (1): ECD2A Instrument ID (2): ECD2B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	5.628	0.000	0.000	1.3	52.4
Heptachlor Epoxide	1	6.393	0.000	0.000	1.3	
	2	6.184	0.000	0.000	1.4	7.4
Methoxychlor	1	7.658	0.000	0.000	1.5	
	2	7.718	0.000	0.000	1.6	0.0

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

608.3

Matrix Spike

Lab Sample ID: B261582-MS1 Date(s) Analyzed: 07/12/2020 07/12/2020

Instrument ID (1): ECD2A Instrument ID (2): ECD2B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.064	0.000	0.000	1.0	
	2	6.949	0.000	0.000	1.2	18.2
4,4'-DDE	1	6.632	0.000	0.000	0.99	
	2	6.538	0.000	0.000	1.1	10.5
4,4'-DDT	1	7.273	0.000	0.000	1.1	
	2	7.178	0.000	0.000	1.2	8.7
Aldrin	1	5.985	0.000	0.000	0.91	
	2	5.820	0.000	0.000	1.0	9.4
alpha-BHC	1	5.305	0.000	0.000	0.79	
	2	5.177	0.000	0.000	0.92	15.2
beta-BHC	1	5.548	0.000	0.000	0.90	
	2	5.426	0.000	0.000	1.0	10.5
delta-BHC	1	5.658	0.000	0.000	0.77	
	2	5.592	0.000	0.000	0.91	16.7
Dieldrin	1	6.837	0.000	0.000	1.1	
	2	6.630	0.000	0.000	1.2	8.7
Endosulfan I	1	6.666	0.000	0.000	1.0	
	2	6.441	0.000	0.000	1.2	18.2
Endosulfan II	1	7.169	0.000	0.000	1.0	
	2	6.995	0.000	0.000	1.2	18.2
Endosulfan Sulfate	1	7.821	0.000	0.000	1.1	
	2	7.457	0.000	0.000	1.1	0.0
Endrin	1	7.004	0.000	0.000	1.1	
	2	6.839	0.000	0.000	1.2	8.7
Endrin Aldehyde	1	7.485	0.000	0.000	0.88	
	2	7.245	0.000	0.000	0.99	11.8
Endrin Ketone	1	8.026	0.000	0.000	1.1	
	2	7.853	0.000	0.000	1.3	16.7
gamma-BHC (Lindane)	1	5.494	0.000	0.000	0.85	
	2	5.372	0.000	0.000	0.94	10.1
Heptachlor	1	5.790	0.000	0.000	0.75	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

608.3

Matrix Spike

Lab Sample ID: B261582-MS1 Date(s) Analyzed: 07/12/2020 07/12/2020

Instrument ID (1): ECD2A Instrument ID (2): ECD2B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	5.627	0.000	0.000	1.1	37.8
Heptachlor Epoxide	1	6.392	0.000	0.000	1.0	
	2	6.183	0.000	0.000	1.2	18.2
Methoxychlor	1	7.657	0.000	0.000	1.3	
	2	7.717	0.000	0.000	1.5	14.3

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

608.3

Matrix Spike Dup

Lab Sample ID: B261582-MSD1 Date(s) Analyzed: 07/12/2020 07/12/2020

Instrument ID (1): ECD2A Instrument ID (2): ECD2B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
4,4'-DDD	1	7.064	0.000	0.000	0.90	
	2	6.949	0.000	0.000	1.0	10.5
4,4'-DDE	1	6.632	0.000	0.000	0.94	
	2	6.537	0.000	0.000	1.1	15.7
4,4'-DDT	1	7.274	0.000	0.000	0.96	
	2	7.178	0.000	0.000	1.1	13.6
Aldrin	1	5.985	0.000	0.000	0.86	
	2	5.820	0.000	0.000	0.97	12.0
alpha-BHC	1	5.305	0.000	0.000	0.80	
	2	5.177	0.000	0.000	0.94	16.1
beta-BHC	1	5.549	0.000	0.000	0.89	
	2	5.426	0.000	0.000	0.98	9.6
delta-BHC	1	5.658	0.000	0.000	0.50	
	2	5.592	0.000	0.000	0.59	16.5
Dieldrin	1	6.837	0.000	0.000	0.97	
	2	6.629	0.000	0.000	1.1	12.6
Endosulfan I	1	6.666	0.000	0.000	0.94	
	2	6.440	0.000	0.000	1.1	15.7
Endosulfan II	1	7.170	0.000	0.000	0.96	
	2	6.995	0.000	0.000	1.1	13.6
Endosulfan Sulfate	1	7.821	0.000	0.000	0.55	
	2	7.456	0.000	0.000	0.64	15.1
Endrin	1	7.005	0.000	0.000	1.0	
	2	6.839	0.000	0.000	1.2	18.2
Endrin Aldehyde	1	7.486	0.000	0.000	0.87	
	2	7.246	0.000	0.000	0.97	10.9
Endrin Ketone	1	8.027	0.000	0.000	1.1	
	2	7.852	0.000	0.000	1.1	0.0
gamma-BHC (Lindane)	1	5.495	0.000	0.000	0.84	
	2	5.372	0.000	0.000	0.93	10.2
Heptachlor	1	5.790	0.000	0.000	0.72	

IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

608.3

Matrix Spike Dup

Lab Sample ID: B261582-MSD1 Date(s) Analyzed: 07/12/2020 07/12/2020

Instrument ID (1): ECD2A Instrument ID (2): ECD2B

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
	2	5.627	0.000	0.000	1.1	41.8
Heptachlor Epoxide	1	6.392	0.000	0.000	0.94	
	2	6.183	0.000	0.000	1.1	15.7
Methoxychlor	1	7.657	0.000	0.000	1.2	
	2	7.716	0.000	0.000	1.3	8.0

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332**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.
DL-01	Elevated reporting limits for all volatile compounds due to foaming sample matrix.
H-05	Holding time was exceeded. pH analysis should be performed immediately at time of sampling. Nominal 15 minute holding time was exceeded.
J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
R-06	Matrix spike duplicate RPD is outside of control limits. Reduced precision is anticipated for reported result for this compound in this sample.
RL-08	Elevated reporting limit due to sample matrix interference. MA CAM reporting limit not met.
V-04	Initial calibration did not meet method specifications. Compound was calibrated using a response factor where %RSD is outside of method specified criteria. Reported result is estimated.
V-05	Continuing calibration verification (CCV) did not meet method specifications and was biased on the low side for this compound.
V-34	Initial calibration verification (ICV) did not meet method specifications and was biased on the low side for this compound. Reported result is estimated.

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
Aldrin	CT,MA,NH,NY,RI,NC,ME,VA
Aldrin [2C]	CT,MA,NH,NY,RI,NC,ME,VA
alpha-BHC	CT,MA,NH,NY,RI,NC,ME,VA
alpha-BHC [2C]	CT,MA,NH,NY,RI,NC,ME,VA
beta-BHC	CT,MA,NH,NY,RI,NC,ME,VA
beta-BHC [2C]	CT,MA,NH,NY,RI,NC,ME,VA
delta-BHC	CT,MA,NH,NY,RI,NC,ME,VA
delta-BHC [2C]	CT,MA,NH,NY,RI,NC,ME,VA
gamma-BHC (Lindane)	CT,MA,NH,NY,RI,NC,ME,VA
gamma-BHC (Lindane) [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1232 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Chlordane	CT,MA,NH,NY,RI,NC,ME,VA
Chlordane [2C]	CT,MA,NH,NY,RI,NC,ME,VA
4,4'-DDD	CT,MA,NH,NY,RI,NC,ME,VA
4,4'-DDD [2C]	CT,MA,NH,NY,RI,NC,ME,VA
4,4'-DDE	CT,MA,NH,NY,RI,NC,ME,VA
4,4'-DDE [2C]	CT,MA,NH,NY,RI,NC,ME,VA
4,4'-DDT	CT,MA,NH,NY,RI,NC,ME,VA
4,4'-DDT [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Dieldrin	CT,MA,NH,NY,RI,NC,ME,VA
Dieldrin [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
Endosulfan I	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1248	CT,MA,NH,NY,RI,NC,ME,VA
Endosulfan I [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Endosulfan II	CT,MA,NH,NY,RI,NC,ME,VA
Endosulfan II [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Endosulfan Sulfate	CT,MA,NH,NY,RI,NC,ME,VA
Endosulfan Sulfate [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Endrin	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1248 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Endrin [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Endrin Aldehyde	CT,MA,NH,NY,RI,NC,ME,VA
Endrin Aldehyde [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Heptachlor	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1254	CT,MA,NH,NY,RI,NC,ME,VA
Heptachlor [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Heptachlor Epoxide	CT,MA,NH,NY,RI,NC,ME,VA
Heptachlor Epoxide [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Methoxychlor	CT,NH,NY,RI,NC
Aroclor-1254 [2C]	CT,MA,NH,NY,RI,NC,ME,VA

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
608.3 in Water	
Methoxychlor [2C]	CT,NH,NY,RI,NC
Toxaphene	CT,MA,NH,NY,RI,NC,ME,VA
Toxaphene [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	
Acrolein	CT,NY,MA,NH,RI,NC,ME,VA
Acrolein	CT,MA,NH,NY,RI,NC,ME,VA
Acrylonitrile	CT,MA,NH,NY,RI,NC,ME,VA
Acrylonitrile	CT,NY,MA,NH,RI,NC,ME,VA
Benzene	CT,NY,MA,NH,RI,NC,ME,VA
Bromodichloromethane	CT,NY,MA,NH,RI,NC,ME,VA
Bromoform	CT,NY,MA,NH,RI,NC,ME,VA
Bromomethane	CT,NY,MA,NH,RI,NC,ME,VA
Carbon Tetrachloride	CT,NY,MA,NH,RI,NC,ME,VA
Chlorobenzene	CT,NY,MA,NH,RI,NC,ME,VA
Chlorodibromomethane	CT,NY,MA,NH,RI,NC,ME,VA
Chloroethane	CT,NY,MA,NH,RI,NC,ME,VA
2-Chloroethyl Vinyl Ether	CT,NY,MA,NH,RI,NC,ME,VA
2-Chloroethyl Vinyl Ether	CT,MA,NH,NY,RI,NC,ME,VA
Chloroform	CT,NY,MA,NH,RI,NC,ME,VA
Chloromethane	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
1,1-Dichloroethane	CT,NY,MA,NH,RI,NC,ME,VA
1,1-Dichloroethylene	CT,NY,MA,NH,RI,NC,ME,VA
trans-1,2-Dichloroethylene	CT,NY,MA,NH,RI,NC,ME,VA
1,2-Dichloropropane	CT,NY,MA,NH,RI,NC,ME,VA
cis-1,3-Dichloropropene	CT,NY,MA,NH,RI,NC,ME,VA
trans-1,3-Dichloropropene	CT,NY,MA,NH,RI,NC,ME,VA
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
1,1,2,2-Tetrachloroethane	CT,NY,MA,NH,RI,NC,ME,VA
Tetrachloroethylene	CT,NY,MA,NH,RI,NC,ME,VA
Toluene	CT,NY,MA,NH,RI,NC,ME,VA
1,2,4-Trichlorobenzene	MA,NC
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
Trichlorofluoromethane (Freon 11)	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

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
624.1 in Water	
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
Benzidine	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(a)anthracene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(a)pyrene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(b)fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(g,h,i)perylene	CT,MA,NH,NY,NC,RI,ME,VA
Benzo(k)fluoranthene	CT,MA,NH,NY,NC,RI,ME,VA
4-Bromophenylphenylether	CT,MA,NH,NY,NC,RI,ME,VA
Butylbenzylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
4-Chloro-3-methylphenol	CT,MA,NH,NY,NC,RI,VA
Bis(2-chloroethoxy)methane	CT,MA,NH,NY,NC,RI,ME,VA
Bis(2-chloroethyl)ether	CT,MA,NH,NY,NC,RI,ME,VA
Bis(2-chloroisopropyl)ether	CT,MA,NH,NY,NC,RI,ME,VA
2-Chloronaphthalene	CT,MA,NH,NY,NC,RI,ME,VA
2-Chlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
4-Chlorophenylphenylether	CT,MA,NH,NY,NC,RI,ME,VA
Chrysene	CT,MA,NH,NY,NC,RI,ME,VA
Dibenz(a,h)anthracene	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
3,3-Dichlorobenzidine	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dichlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
Diethylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dimethylphenol	CT,MA,NH,NY,NC,RI,ME,VA
Dimethylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
4,6-Dinitro-2-methylphenol	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dinitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
2,4-Dinitrotoluene	CT,MA,NH,NY,NC,RI,ME,VA
2,6-Dinitrotoluene	CT,MA,NH,NY,NC,RI,ME,VA
Di-n-octylphthalate	CT,MA,NH,NY,NC,RI,ME,VA
1,2-Diphenylhydrazine/Azobenzene	NC
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
Hexachlorobenzene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorobutadiene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachlorocyclopentadiene	CT,MA,NH,NY,NC,RI,ME,VA
Hexachloroethane	CT,MA,NH,NY,NC,RI,ME,VA
Indeno(1,2,3-cd)pyrene	CT,MA,NH,NY,NC,RI,ME,VA
Isophorone	CT,MA,NH,NY,NC,RI,ME,VA

CERTIFICATIONS
Certified Analyses included in this Report

Analyte	Certifications
625.1 in Water	
Naphthalene	CT,MA,NH,NY,NC,RI,ME,VA
Nitrobenzene	CT,MA,NH,NY,NC,RI,ME,VA
2-Nitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
4-Nitrophenol	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodimethylamine	CT,MA,NH,NY,NC,RI,ME,VA
N-Nitrosodi-n-propylamine	CT,MA,NH,NY,NC,RI,ME,VA
Pentachlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
2-Methylnaphthalene	NC
Phenanthrene	CT,MA,NH,NY,NC,RI,ME,VA
2-Methylphenol	NY,NC
Phenol	CT,MA,NH,NY,NC,RI,ME,VA
3/4-Methylphenol	NY,NC
Pyrene	CT,MA,NH,NY,NC,RI,ME,VA
1,2,4-Trichlorobenzene	CT,MA,NH,NY,NC,RI,ME,VA
2,4,6-Trichlorophenol	CT,MA,NH,NY,NC,RI,ME,VA
2-Fluorophenol	NC
EPA 200.7 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
SM21-22 4500 H B in Water	
pH	CT,MA,RI

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

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	06/30/2021
CT	Connecticut Department of Public 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	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2021
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	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2020
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2021

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 Boston Environmental

Received By GA

Date 7/7/20

Time 1410

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 - 2.0
By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? N/A Were Samples Tampled with? N/A

Was COC Relinquished? F 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 Client T Analysis T Sampler Name T

pertinent Information? 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? Mandi

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? F On COC? F

Do all samples have the proper pH? _____ Acid T Base _____

Vials	#	Containers:	#	#	#	#
Unp-	3	1 Liter Amb.	2	1 Liter Plastic		16 oz Amb.
HCL-	3	500 mL Amb.		500 mL Plastic		8oz Amb/Clear
Meoh-		250 mL Amb.		250 mL Plastic	2	4oz Amb/Clear
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear
DI-		Other Glass	4	Other Plastic		Encore
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:
Sulfuric-		Perchlorate		Ziplock		

Acetonitrile 3

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:

October 5, 2020

Rick Stromberg
Boston Environmental Corp. - Brockton, MA
203 Spark St.
Brockton, MA 02302

Project Location: 20 Inner Belt Rd, Somerville, MA
Client Job Number:
Project Number: [none]
Laboratory Work Order Number: 20I1179

Enclosed are results of analyses for samples received by the laboratory on September 23, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink, reading "Kerry K. McGee". The signature is written in a cursive, flowing style.

Kerry K. McGee
Project Manager

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

Boston Environmental Corp. - Brockton, MA
203 Spark St.
Brockton, MA 02302
ATTN: Rick Stromberg

REPORT DATE: 10/5/2020

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 2011179

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

PROJECT LOCATION: 20 Inner Belt Rd, Somerville, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
BEC -S	2011179-01	Ground Water		624.1	MA M-MA-086/CT PH-0574/NY11148
				EPA 1664B	
				EPA 200.7	
				EPA 200.8	
				EPA 300.0	
				EPA 504.1	
				SM19-22 4500 NH3 C	
				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

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:****DL-01**

Elevated reporting limits for all volatile compounds due to foaming sample matrix.

Analyte & Samples(s) Qualified:

2011179-01[BEC -S]

EPA 200.7**Qualifications:****MS-19**

Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.

Analyte & Samples(s) Qualified:**Iron**

2011179-01[BEC -S], B267222-MS1

SM21-22 2540D**Qualifications:****R-02**

Duplicate RPD is outside of control limits. Outlier can be attributed to sample non-homogeneity encountered during sample prep.

Analyte & Samples(s) Qualified:**Total Suspended Solids**

2011179-01[BEC -S], B267165-DUP2

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

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

Project Location: 20 Inner Belt Rd, Somerville, MA

Sample Description:

Work Order: 20I1179

Date Received: 9/23/2020

Field Sample #: BEC -S

Sampled: 9/23/2020 10:30

Sample ID: 20I1179-01

Sample Matrix: Ground Water

Sample Flags: DL-01

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
tert-Amyl Methyl Ether (TAME)	<7.00	25.0	7.00	µg/L	50		624.1	9/24/20	9/24/20 18:59	MFF
tert-Butyl Alcohol (TBA)	<208	1000	208	µg/L	50		624.1	9/24/20	9/24/20 18:59	MFF
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
1,2-Dichloroethane-d4	95.8		70-130				9/24/20 18:59			
Toluene-d8	99.2		70-130				9/24/20 18:59			
4-Bromofluorobenzene	100		70-130				9/24/20 18:59			

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

Project Location: 20 Inner Belt Rd, Somerville, MA

Sample Description:

Work Order: 20I1179

Date Received: 9/23/2020

Field Sample #: BEC -S

Sampled: 9/23/2020 10:30

Sample ID: 20I1179-01

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Copper	11	1.0	µg/L	1		EPA 200.8	9/24/20	9/25/20 10:16	QNW
Iron	77	0.050	mg/L	1	MS-19	EPA 200.7	9/24/20	9/25/20 13:21	MJH
Zinc	170	10	µg/L	1		EPA 200.8	9/24/20	9/25/20 10:16	QNW

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

Project Location: 20 Inner Belt Rd, Somerville, MA

Sample Description:

Work Order: 20I1179

Date Received: 9/23/2020

Field Sample #: BEC -S

Sampled: 9/23/2020 10:30

Sample ID: 20I1179-01

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	2000	50		mg/L	50		EPA 300.0	9/27/20	9/27/20 12:49	CB2
Chlorine, Residual	0.073	0.020		mg/L	1		SM21-22 4500 CL G	9/24/20	9/24/20 0:25	DJM
Hexavalent Chromium	ND	0.0040		mg/L	1		SM21-22 3500 Cr B	9/23/20	9/23/20 21:00	CB2
Total Suspended Solids	100	3.2		mg/L	1	R-02	SM21-22 2540D	9/24/20	9/25/20 12:47	LL
Silica Gel Treated HEM (SGT-HEM)	ND	1.4		mg/L	1		EPA 1664B	9/29/20	9/29/20 10:20	LL

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

Project Location: 20 Inner Belt Rd, Somerville, MA

Sample Description:

Work Order: 20I1179

Date Received: 9/23/2020

Field Sample #: BEC -S

Sampled: 9/23/2020 10:30

Sample ID: 20I1179-01

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) (2)	ND	0.020	0.012	µg/L	1		EPA 504.1	10/5/20	10/5/20 12:41	PJG
Surrogates	% Recovery		Recovery Limits		Flag/Qual					
1,3-Dibromopropane (2)	106		70-130				10/5/20 12:41			

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

Project Location: 20 Inner Belt Rd, Somerville, MA

Sample Description:

Work Order: 20I1179

Date Received: 9/23/2020

Field Sample #: BEC -S

Sampled: 9/23/2020 10:30

Sample ID: 20I1179-01

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	25.6	0.75	0.24	mg/L	10		SM19-22 4500 NH3 C		9/28/20 21:32	AAL
Cyanide	ND	0.005	0.001	mg/L	1		SM21-22 4500 CN E		9/29/20 10:54	AAL

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Sample Extraction Data**Prep Method: SW-846 5030B Analytical Method: 624.1**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20I1179-01 [BEC -S]	B267177	0.1	5.00	09/24/20

EPA 1664B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20I1179-01 [BEC -S]	B267487	1000		09/29/20

Prep Method: EPA 200.7 Analytical Method: EPA 200.7

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20I1179-01 [BEC -S]	B267222	50.0	50.0	09/24/20

Prep Method: EPA 200.8 Analytical Method: EPA 200.8

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20I1179-01 [BEC -S]	B267223	50.0	50.0	09/24/20

Prep Method: EPA 300.0 Analytical Method: EPA 300.0

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20I1179-01 [BEC -S]	B267351	10.0	10.0	09/27/20

Prep Method: EPA 504 water Analytical Method: EPA 504.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20I1179-01 [BEC -S]	B267937	35.2	35.0	10/05/20

SM21-22 2540D

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20I1179-01 [BEC -S]	B267165	155		09/24/20

SM21-22 3500 Cr B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20I1179-01 [BEC -S]	B267149	50.0	50.0	09/23/20

SM21-22 4500 CL G

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20I1179-01 [BEC -S]	B267155	100	100	09/24/20

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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
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Batch B267177 - SW-846 5030B
Blank (B267177-BLK1)

Prepared & Analyzed: 09/24/20

tert-Amyl Methyl Ether (TAME)	ND	0.500	µg/L							
tert-Butyl Alcohol (TBA)	ND	20.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	23.8		µg/L	25.0		95.4	70-130			
Surrogate: Toluene-d8	25.1		µg/L	25.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	25.1		µg/L	25.0		100	70-130			

LCS (B267177-BS1)

Prepared & Analyzed: 09/24/20

tert-Amyl Methyl Ether (TAME)	20	0.500	µg/L	20.0		97.6	70-130			
tert-Butyl Alcohol (TBA)	170	20.0	µg/L	200		84.6	40-160			†
Surrogate: 1,2-Dichloroethane-d4	23.5		µg/L	25.0		93.9	70-130			
Surrogate: Toluene-d8	25.2		µg/L	25.0		101	70-130			
Surrogate: 4-Bromofluorobenzene	25.8		µg/L	25.0		103	70-130			

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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 B267222 - EPA 200.7										
Blank (B267222-BLK1)				Prepared: 09/24/20 Analyzed: 09/25/20						
Iron	ND	0.050	mg/L							
LCS (B267222-BS1)				Prepared: 09/24/20 Analyzed: 09/25/20						
Iron	4.30	0.050	mg/L	4.00		108	85-115			
LCS Dup (B267222-BSD1)				Prepared: 09/24/20 Analyzed: 09/25/20						
Iron	4.27	0.050	mg/L	4.00		107	85-115	0.799	20	
Duplicate (B267222-DUP1)				Source: 2011179-01		Prepared: 09/24/20 Analyzed: 09/25/20				
Iron	78.2	0.050	mg/L		76.9			1.66	20	
Matrix Spike (B267222-MS1)				Source: 2011179-01		Prepared: 09/24/20 Analyzed: 09/25/20				
Iron	82.5	0.050	mg/L	4.00	76.9	141	* 70-130			MS-19
Batch B267223 - EPA 200.8										
Blank (B267223-BLK1)				Prepared: 09/24/20 Analyzed: 09/25/20						
Copper	ND	1.0	µg/L							
Zinc	ND	10	µg/L							
LCS (B267223-BS1)				Prepared: 09/24/20 Analyzed: 09/25/20						
Copper	1010	10	µg/L	1000		101	85-115			
Zinc	1020	100	µg/L	1000		102	85-115			
LCS Dup (B267223-BSD1)				Prepared: 09/24/20 Analyzed: 09/25/20						
Copper	985	10	µg/L	1000		98.5	85-115	1.96	20	
Zinc	1010	100	µg/L	1000		101	85-115	1.28	20	
Duplicate (B267223-DUP1)				Source: 2011179-01		Prepared: 09/24/20 Analyzed: 09/25/20				
Copper	10.9	1.0	µg/L		11.2			2.44	20	
Zinc	179	10	µg/L		175			2.14	20	
Matrix Spike (B267223-MS1)				Source: 2011179-01		Prepared: 09/24/20 Analyzed: 09/25/20				
Copper	968	10	µg/L	1000	11.2	95.7	70-130			
Zinc	1190	100	µg/L	1000	175	101	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 B267149 - SM21-22 3500 Cr B										
Blank (B267149-BLK1)				Prepared & Analyzed: 09/23/20						
Hexavalent Chromium	ND	0.0040	mg/L							
LCS (B267149-BS1)				Prepared & Analyzed: 09/23/20						
Hexavalent Chromium	0.10	0.0040	mg/L	0.100		100	90-115			
LCS Dup (B267149-BSD1)				Prepared & Analyzed: 09/23/20						
Hexavalent Chromium	0.10	0.0040	mg/L	0.100		101	90-115	1.26	11	
Batch B267155 - SM21-22 4500 CL G										
Blank (B267155-BLK1)				Prepared & Analyzed: 09/24/20						
Chlorine, Residual	ND	0.020	mg/L							
LCS (B267155-BS1)				Prepared & Analyzed: 09/24/20						
Chlorine, Residual	0.66	0.020	mg/L	0.641		103	85.3-130			
LCS Dup (B267155-BSD1)				Prepared & Analyzed: 09/24/20						
Chlorine, Residual	0.68	0.020	mg/L	0.641		106	85.3-130	3.52	13.6	
Batch B267165 - SM21-22 2540D										
Blank (B267165-BLK1)				Prepared: 09/24/20 Analyzed: 09/25/20						
Total Suspended Solids	ND	2.5	mg/L							
LCS (B267165-BS1)				Prepared: 09/24/20 Analyzed: 09/25/20						
Total Suspended Solids	210	10	mg/L	200		105	57.4-123			
Duplicate (B267165-DUP2)				Prepared: 09/24/20 Analyzed: 09/25/20						
Total Suspended Solids	110	3.2	mg/L		100			12.6 *	5	R-02
Batch B267351 - EPA 300.0										
Blank (B267351-BLK1)				Prepared & Analyzed: 09/27/20						
Chloride	ND	1.0	mg/L							
LCS (B267351-BS1)				Prepared & Analyzed: 09/27/20						
Chloride	10		mg/L	10.0		104	90-110			
LCS Dup (B267351-BSD1)				Prepared & Analyzed: 09/27/20						
Chloride	10		mg/L	10.0		103	90-110	0.403	20	

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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
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Batch B267487 - EPA 1664B
Blank (B267487-BLK1)

Prepared & Analyzed: 09/29/20

Silica Gel Treated HEM (SGT-HEM)	ND	1.4	mg/L
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LCS (B267487-BS1)

Prepared & Analyzed: 09/29/20

Silica Gel Treated HEM (SGT-HEM)	10		mg/L	10.0	100	64-132
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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
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Batch B267937 - EPA 504 water
Blank (B267937-BLK1)

Prepared & Analyzed: 10/05/20

1,2-Dibromoethane (EDB) [2C]	ND	0.021	µg/L							
Surrogate: 1,3-Dibromopropane [2C]	1.05		µg/L	1.03		102	70-130			

LCS (B267937-BS1)

Prepared & Analyzed: 10/05/20

1,2-Dibromoethane (EDB) [2C]	0.222	0.021	µg/L	0.258		86.0	70-130			
Surrogate: 1,3-Dibromopropane [2C]	1.04		µg/L	1.03		101	70-130			

LCS Dup (B267937-BSD1)

Prepared & Analyzed: 10/05/20

1,2-Dibromoethane (EDB) [2C]	0.232	0.021	µg/L	0.259		89.6	70-130	4.42		
Surrogate: 1,3-Dibromopropane [2C]	1.13		µg/L	1.04		109	70-130			

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES***EPA 504.1***LCS**Lab Sample ID: B267937-BS1 Date(s) Analyzed: 10/05/2020 10/05/2020

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		
	2	3.226	0.000	0.000	0.222	19.5

**IDENTIFICATION SUMMARY
FOR SINGLE COMPONENT ANALYTES***EPA 504.1***LCS Dup**Lab Sample ID: B267937-BSD1 Date(s) Analyzed: 10/05/2020 10/05/2020

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		
	2	3.225	0.000	0.000	0.232	22.2

39 Spruce Street * East Longmeadow, MA 01028 * FAX 413/525-6405 * TEL. 413/525-2332**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.
DL-01	Elevated reporting limits for all volatile compounds due to foaming sample matrix.
MS-19	Sample to spike ratio is greater than or equal to 4:1. Spiked amount is not representative of the native amount in the sample. Appropriate or meaningful recoveries cannot be calculated.
R-02	Duplicate RPD is outside of control limits. Outlier can be attributed to sample non-homogeneity encountered during sample prep.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
624.1 in Water	
tert-Amyl Methyl Ether (TAME)	MA
tert-Butyl Alcohol (TBA)	NY,MA
EPA 200.7 in Water	
Iron	CT,MA,NH,NY,RI,NC,ME,VA
EPA 200.8 in Water	
Copper	CT,MA,NH,NY,RI,NC,ME,VA
Zinc	CT,MA,NH,NY,RI,NC,ME,VA
EPA 300.0 in Water	
Chloride	NC,NY,MA,VA,ME,NH,CT,RI
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	
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 CNE 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	06/30/2021
CT	Connecticut Department of Public 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	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2021
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2021
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021

2011179



Phone: 413-525-2332
Fax: 413-525-6405

Email: info@contestlabs.com

Company Name: KCM
Address: Boston Environmental Corp
338 Howard Street, Brockton, MA
Phone: 508-897-8008

Project Name: 20 Inner Belt Road
Project Location: Somerville, MA

Project Number: XXXX
Project Manager: MICK, MFG, B4

Con-Test Quote Name/Number: XXXX

Invoice Recipient: XXXX

Sampled By: BIC

http://www.contestlabs.com

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

7-Day	☐	10-Day	☐	Field Filtered	☒
PFAS 10-Day (std)	☐	Due Date: 5-24	☐	Lab to Filter	☐
1-Day	☐	3-Day	☐	Field Filtered	☐
2-Day	☐	4-Day	☐	Lab to Filter	☐

Format: PDF EXCEL

Other: CLP Link Data Pkg Required:

Email To: XXXX

Fax To #: XXXX

ANALYSIS REQUESTED

504-ED309	VOCs (TBA+TAKC)	CRV	CHLORIDE	TRC	Total Cr, Fe, Zn	Cyanide (Sm9500)	ammonia	ISS	TPH 1664
-----------	-----------------	-----	----------	-----	------------------	------------------	---------	-----	----------

Preservation Code

0000000000

Total Number Of:

VIALS 6

GLASS 7

PLASTIC 7

BACTERIA 7

ENCORE 7

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)

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

MA MCP Required

MCP Certification Form Required

CT RCP Required

RCP Certification Form Required

MA State DW Required

MA State DW Required

MA State DW Required

MA State DW Required

MA State DW Required

MA State DW Required

MA State DW Required

MA State DW Required

MA State DW Required

MA State DW Required

MA State DW Required

MA State DW Required

MA State DW Required

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.

Comments:

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 Boston Environmental

Received By [Signature] Date 9/13/10 Time 1600

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 # 4 Actual Temp - 3.1
By Blank # _____ Actual Temp - _____

Was Custody Seal Intact? NA Were Samples Tampered with? NA

Was COC Relinquished? F 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 Client T Analysis T Sampler Name T
pertinent Information? Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

Are there Lab to Filters? F

Are there Rushes? F

Are there Short Holds? T

Is there enough Volume? T

Is there Headspace where applicable? T

Proper Media/Containers Used? T

Were trip blanks received? F

Do all samples have the proper pH? _____

Who was notified? _____

Who was notified? _____

Who was notified? CASSIC

MS/MSD? F

Is splitting samples required? F

On COC? F

Acid T Base T

Vials	#	Containers:	#		#		#
Unp-	<u>8</u>	1 Liter Amb.	<u>2</u>	1 Liter Plastic	<u>1</u>	16 oz Amb.	
HCL-	<u>3</u>	500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic	<u>6</u>	4oz Amb/Clear	
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-	<u>3</u>	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:

October 16, 2020

Kim Gravelle
Lockwood Remediation Technologies, LLC
89 Crawford Street
Leominster, MA 01453

Project Location: 20 Inner Belt Rd., Somerville, MA
Client Job Number:
Project Number: 2-1947
Laboratory Work Order Number: 20J0549

Enclosed are results of analyses for samples received by the laboratory on October 9, 2020. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads "Kerry K. McGee". The signature is written in a cursive, flowing style.

Kerry K. McGee
Project Manager

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

Lockwood Remediation Technologies, LLC
89 Crawford Street
Leominster, MA 01453
ATTN: Kim Gravelle

REPORT DATE: 10/16/2020

PURCHASE ORDER NUMBER: 2-1947

PROJECT NUMBER: 2-1947

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 20J0549

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

PROJECT LOCATION: 20 Inner Belt Rd., Somerville, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Receiving Water	20J0549-01	Ground Water		EPA 200.7 EPA 200.8 EPA 245.1 EPA 350.1 SM21-22 2540D SM21-22 3500 Cr B SM21-22 4500 H B Tri Chrome Calc.	

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.

SM21-22 4500 H B

Qualifications:

H-05

Holding time was exceeded. pH analysis should be performed immediately at time of sampling. Nominal 15 minute holding time was exceeded.

Analyte & Samples(s) Qualified:

pH

20J0549-01[Receiving Water], B268593-DUP1

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.

A handwritten signature in black ink, appearing to read "Lisa A. Worthington", is written over a light gray rectangular background.

Lisa A. Worthington
Technical Representative

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

Project Location: 20 Inner Belt Rd., Somerville, MA Sample Description:

Work Order: 20J0549

Date Received: 10/9/2020

Field Sample #: Receiving Water

Sampled: 10/9/2020 07:00

Sample ID: 20J0549-01

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		µg/L	1		EPA 200.8	10/10/20	10/11/20 16:59	MJH
Arsenic	5.2	0.80		µg/L	1		EPA 200.8	10/10/20	10/11/20 16:59	MJH
Cadmium	ND	0.20		µg/L	1		EPA 200.8	10/10/20	10/11/20 16:59	MJH
Chromium	2.9	1.0		µg/L	1		EPA 200.8	10/10/20	10/11/20 16:59	MJH
Chromium, Trivalent	0.0029			mg/L	1		Tri Chrome Calc.	10/10/20	10/11/20 16:59	MJH
Copper	10	1.0		µg/L	1		EPA 200.8	10/10/20	10/11/20 16:59	MJH
Iron	1.4	0.050		mg/L	1		EPA 200.7	10/10/20	10/12/20 15:00	MJH
Lead	3.4	0.50		µg/L	1		EPA 200.8	10/10/20	10/11/20 16:59	MJH
Mercury	ND	0.00010		mg/L	1		EPA 245.1	10/12/20	10/13/20 11:43	CJV
Nickel	ND	5.0		µg/L	1		EPA 200.8	10/10/20	10/11/20 16:59	MJH
Selenium	18	5.0	1.6	µg/L	1		EPA 200.8	10/10/20	10/11/20 16:59	MJH
Silver	ND	0.20		µg/L	1		EPA 200.8	10/10/20	10/11/20 16:59	MJH
Zinc	13	10		µg/L	1		EPA 200.8	10/10/20	10/11/20 16:59	MJH
Hardness	530	1.4		mg/L	1		EPA 200.7	10/10/20	10/12/20 15:00	MJH

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

Project Location: 20 Inner Belt Rd., Somerville, MA

Sample Description:

Work Order: 20J0549

Date Received: 10/9/2020

Field Sample #: Receiving Water

Sampled: 10/9/2020 07:00

Sample ID: 20J0549-01

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	ND	0.10	0.045	mg/L	1		EPA 350.1	10/10/20	10/13/20 11:16	MMH
Hexavalent Chromium	ND	0.0040		mg/L	1		SM21-22 3500 Cr B	10/9/20	10/9/20 21:15	CB2
pH @9.6°C	7.1			pH Units	1	H-05	SM21-22 4500 H B	10/13/20	10/13/20 15:40	CB2
Total Suspended Solids	10	2.0		mg/L	1		SM21-22 2540D	10/12/20	10/12/20 13:50	LL

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

Sample Extraction Data**Prep Method: EPA 200.7 Analytical Method: EPA 200.7**

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20J0549-01 [Receiving Water]	B268386	50.0	50.0	10/10/20
20J0549-01 [Receiving Water]	B268386	50.0		10/10/20

Prep Method: EPA 200.8 Analytical Method: EPA 200.8

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20J0549-01 [Receiving Water]	B268387	50.0	50.0	10/10/20

Prep Method: EPA 245.1 Analytical Method: EPA 245.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20J0549-01 [Receiving Water]	B268458	6.00	6.00	10/12/20

EPA 350.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20J0549-01 [Receiving Water]	B268381	50.0	50.0	10/10/20

SM21-22 2540D

Lab Number [Field ID]	Batch	Initial [mL]		Date
20J0549-01 [Receiving Water]	B268447	250		10/12/20

SM21-22 3500 Cr B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
20J0549-01 [Receiving Water]	B268378	50.0	50.0	10/09/20

SM21-22 4500 H B

Lab Number [Field ID]	Batch	Initial [mL]		Date
20J0549-01 [Receiving Water]	B268593	50.0		10/13/20

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

Lab Number [Field ID]	Batch	Initial [mL]		Date
20J0549-01 [Receiving Water]	B268387	50.0		10/10/20

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

QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B268386 - EPA 200.7										
Blank (B268386-BLK1)				Prepared: 10/10/20 Analyzed: 10/12/20						
Iron	ND	0.050	mg/L							
Hardness	ND	1.4	mg/L							
LCS (B268386-BS1)				Prepared: 10/10/20 Analyzed: 10/12/20						
Iron	3.58	0.050	mg/L	4.00		89.5	85-115			
Hardness	24	1.4	mg/L	26.4		89.5	85-115			
LCS Dup (B268386-BSD1)				Prepared: 10/10/20 Analyzed: 10/12/20						
Iron	4.12	0.050	mg/L	4.00		103	85-115	14.1	20	
Hardness	27	1.4	mg/L	26.4		102	85-115	13.1	20	
Batch B268387 - EPA 200.8										
Blank (B268387-BLK1)				Prepared: 10/10/20 Analyzed: 10/11/20						
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							
LCS (B268387-BS1)				Prepared: 10/10/20 Analyzed: 10/11/20						
Antimony	450	10	µg/L	500		90.0	85-115			
Arsenic	458	8.0	µg/L	500		91.7	85-115			
Cadmium	465	2.0	µg/L	500		93.0	85-115			
Chromium	456	10	µg/L	500		91.2	85-115			
Copper	899	10	µg/L	1000		89.9	85-115			
Lead	458	5.0	µg/L	500		91.6	85-115			
Nickel	472	50	µg/L	500		94.3	85-115			
Selenium	458	50	µg/L	500		91.5	85-115			
Silver	456	2.0	µg/L	500		91.2	85-115			
Zinc	965	100	µg/L	1000		96.5	85-115			
LCS Dup (B268387-BSD1)				Prepared: 10/10/20 Analyzed: 10/11/20						
Antimony	496	10	µg/L	500		99.1	85-115	9.63	20	
Arsenic	511	8.0	µg/L	500		102	85-115	10.8	20	
Cadmium	513	2.0	µg/L	500		103	85-115	9.74	20	
Chromium	505	10	µg/L	500		101	85-115	10.1	20	
Copper	988	10	µg/L	1000		98.8	85-115	9.42	20	
Lead	507	5.0	µg/L	500		101	85-115	10.2	20	
Nickel	512	50	µg/L	500		102	85-115	8.25	20	
Selenium	513	50	µg/L	500		103	85-115	11.4	20	
Silver	499	2.0	µg/L	500		99.8	85-115	8.99	20	
Zinc	1060	100	µg/L	1000		106	85-115	9.08	20	

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

QUALITY CONTROL
Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B268458 - EPA 245.1
Blank (B268458-BLK1)

Prepared: 10/12/20 Analyzed: 10/13/20

Mercury	ND	0.00010	mg/L							
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LCS (B268458-BS1)

Prepared: 10/12/20 Analyzed: 10/13/20

Mercury	0.00394	0.00010	mg/L	0.00400		98.4	85-115			
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LCS Dup (B268458-BSD1)

Prepared: 10/12/20 Analyzed: 10/13/20

Mercury	0.00402	0.00010	mg/L	0.00400		101	85-115	2.19	20	
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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 B268378 - SM21-22 3500 Cr B										
Blank (B268378-BLK1)				Prepared & Analyzed: 10/09/20						
Hexavalent Chromium	ND	0.0040	mg/L							
LCS (B268378-BS1)				Prepared & Analyzed: 10/09/20						
Hexavalent Chromium	0.10	0.0040	mg/L	0.100		101	90-115			
LCS Dup (B268378-BSD1)				Prepared & Analyzed: 10/09/20						
Hexavalent Chromium	0.10	0.0040	mg/L	0.100		101	90-115	0.00	11	
Batch B268381 - EPA 350.1										
Blank (B268381-BLK1)				Prepared: 10/10/20 Analyzed: 10/13/20						
Ammonia as N	ND	0.10	mg/L							
LCS (B268381-BS1)				Prepared: 10/10/20 Analyzed: 10/13/20						
Ammonia as N	2.2	0.10	mg/L	2.00		108	90-110			
LCS Dup (B268381-BSD1)				Prepared: 10/10/20 Analyzed: 10/13/20						
Ammonia as N	2.1	0.10	mg/L	2.00		104	90-110	3.36	20	
Batch B268447 - SM21-22 2540D										
Blank (B268447-BLK1)				Prepared & Analyzed: 10/12/20						
Total Suspended Solids	ND	2.5	mg/L							
LCS (B268447-BS1)				Prepared & Analyzed: 10/12/20						
Total Suspended Solids	174	10	mg/L	200		87.0	57.4-123			
Batch B268593 - SM21-22 4500 H B										
LCS (B268593-BS1)				Prepared & Analyzed: 10/13/20						
pH	6.03		pH Units	6.00		100	90-110			
Duplicate (B268593-DUP1)				Prepared & Analyzed: 10/13/20						
pH	7.2		pH Units		7.1			0.154	5.46	H-05

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

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.
H-05	Holding time was exceeded. pH analysis should be performed immediately at time of sampling. Nominal 15 minute holding time was exceeded.

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
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 350.1 in Water	
Ammonia as N	NC,NY,MA,NH,RI,ME,VA
SM21-22 2540D in Water	
Total Suspended Solids	CT,MA,NH,NY,RI,NC,ME,VA
SM21-22 3500 Cr B in Water	
Hexavalent Chromium	NY,CT,NH,RI,ME,VA,NC
SM21-22 4500 H B in Water	
pH	CT,MA,RI

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	06/30/2021
CT	Connecticut Department of Public 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	06/30/2021
FL	Florida Department of Health	E871027 NELAP	06/30/2021
VT	Vermont Department of Health Lead Laboratory	LL015036	07/30/2021
ME	State of Maine	2011028	06/9/2021
VA	Commonwealth of Virginia	460217	12/14/2020
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2021
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2021
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021

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 LRT
Received By [Signature] Date 10/9/20 Time 1810
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 # 4 Actual Temp - 4.6
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? F
Did COC include all Client T Analysis T Sampler Name T
pertinent Information? 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? Cassie
Is there enough Volume? T
Is there Headspace where applicable? n/a MS/MSD? F
Proper Media/Containers Used? T Is splitting samples required? F
Were trip blanks received? F On COC? F
Do all samples have the proper pH? _____ Acid T Base n/a

Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic	<u>2</u>	16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic	<u>1</u>	8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic	<u>4</u>	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:

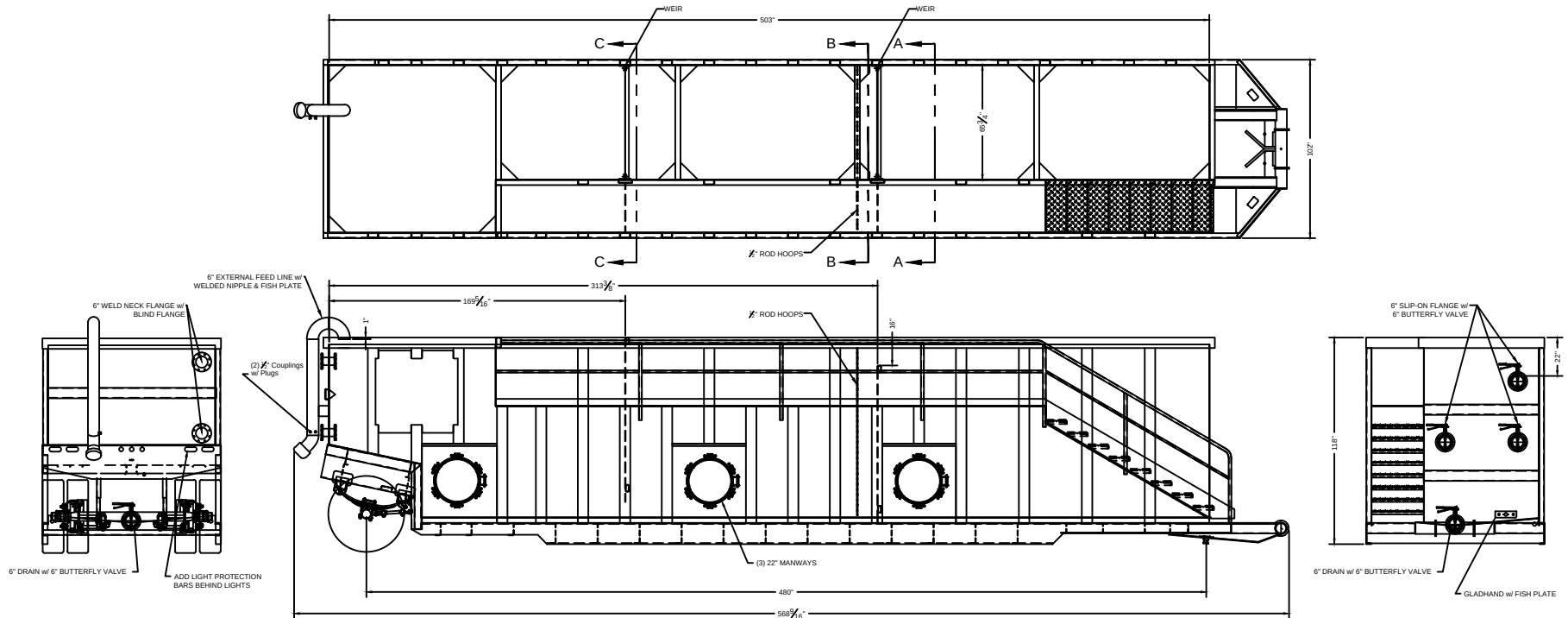
pH fast hold.

The logo features the letters 'LRT' in a large, light green, 3D block font. A thick, light purple swoosh curves around the letters from the bottom left to the top right. Below the letters, the text 'Lockwood Remediation Technologies LLC' is written in a smaller, grey, sans-serif font. To the right of the text is a small, realistic globe of the Earth.

Appendix C

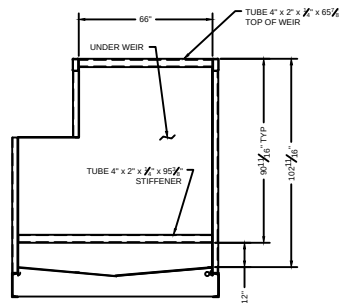
Cutsheets

Lockwood Remediation
Technologies LLC

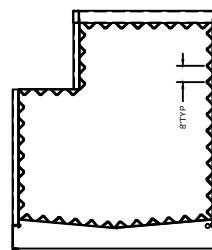


STANDARD SPECIFICATION

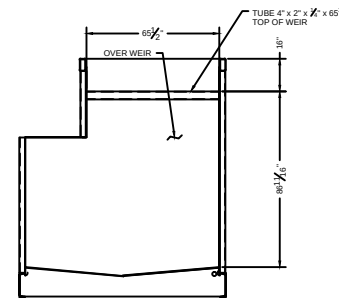
CAPACITY: 18,480 GALLONS (440 BBL)
 SIDE SHEETS: 1/4" A36 PLATE
 FRONT SHEET: 1/4" A36 PLATE
 REAR SHEET: 1/4" A36 PLATE
 FLOOR: 1/4" A36 PLATE
 MAIN FLOOR RAILS: 12" x 20.7# STRUCTURAL CHANNEL
 FLOOR CROSSMEMBERS: 1/4" A36 PLATE
 SIDE STAKES: ONE PIECE 3/16" A36 PLATE
 SUSPENSION: 3 LEAF SPRING, 22,500 LBS. CAPACITY
 AXLE: 77.5" TRACK, 22,500 LBS. CAPACITY
 TIRES: 11R22.5 RADIAL
 WHEELS: 8.25 x 22.5 STEEL
 MANWAYS: 3 - 22" DIA. CURB SIDE
 VALVES: 3 - 6" BUTTERFLY VALVE (FRONT)
 1 - 6" DRAIN BUTTERFLY VALVE (FRONT)
 1 - 6" DRAIN BUTTERFLY VALVE (REAR)
 2 - 6" BLIND FLANGE CONNECTION (REAR)
 INLET PIPING: 1 - 6" PIPE SYSTEM (REAR)
 BLAST: (INTERIOR) SSPC-SP-10 (NEAR WHITE)
 (EXTERIOR) SSPC-SP-6 (COMMERCIAL BLAST)
 PAINT: (INTERIOR) EPOXYPHENOLIC 100% SOLID 20.0 MILS D.F.T.
 (EXTERIOR) FINISH COAT POLURETHANE 4.0 TO 5.0 D.F.T.



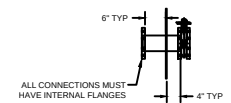
SECTION VIEW "C-C"



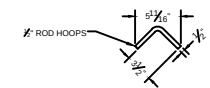
SECTION VIEW "B-B"



SECTION VIEW "A-A"



ALL CONNECTIONS MUST HAVE INTERNAL FLANGES



18,000 Gal. Weir Tank



Lockwood Remediation Technologies, LLC

89 Crawford Street
 Leominster, Massachusetts 01453
 O: 774-450-7177
 F: 888-835-0617

Electric Motor Driven

Submersible Pump

Models S3B1-E6 and S3B1

Size 3"



PUMP SPECIFICATIONS

Suction Head: Aluminum Alloy 356-T6 With Bonded Nitrile Lining;

Maximum Operating Pressure 50 psi (345 kPa).*

Impeller: Ductile Iron 65-45-12.

Seal Plate: Aluminum Alloy 356-T6 With Bonded Nitrile Lining.

Intermediate: Aluminum Alloy 356-T6.

Motor Housing: Aluminum Alloy 356-T6.

Motor Shaft: Stainless Steel 416.

Bearings: Upper, Open Single Row Ball Bearing.

Lower, Two Shield, Double Row Ball Bearing.

Shaft Sleeve: Stainless Steel 304.

Discharge Flange: Aluminum Alloy 356-T6.

Gaskets: Cork with Nitrile Binder (NC710).

O-Rings: Buna-N.

Wetted Hardware: Standard Plated Steel and Stainless Steel.

Strainer: Urethane Coated Steel. 51% Open Area,
0.375" (9.5 mm) Diameter Openings.

Hoisting Bail: Urethane Coated Steel.

Standard Equipment

NEMA Type 3R Rainproof Control Box. (See Section 130, Pages 80 and 85.)

Provides On-Off, Circuit Breaker and Motor Overload Protection.

Optional Equipment

Liquid Level Control: (See Sec. 130, Page 150.)

a. Turtle Type Pressure Activated Level Switch.

b. Float Activated Level Switch.

Staging Adapter Kit.

MOTOR/CABLE SPECIFICATIONS

Motor: Oil Filled Enclosure; 6.0 H.P.; 3450 R.P.M.

Single Phase: 230 Volt, 60 Hz, 34 Full Load AMPS, 7.2 kW (Max.)

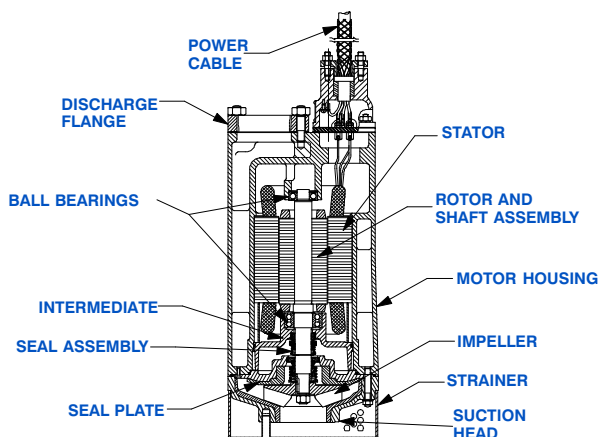
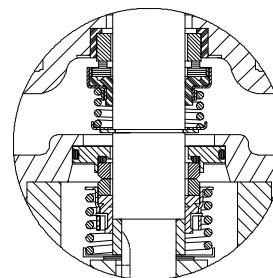
Three Phase: 200/230/460/575 Volt, 60 Hz, 26.5/23/11.5/9.2

Full Load AMPS, 6.8 kW (Max.)

Power Cable: 4 Wire; Type SO/SOW/SOOW; 10 AWG; 3 Power Conductors,
Plus 1 Ground. Nominal Length 50 Feet (15 m). Standard.
(Specify Alternate Length at Time of Order.)

Recommended Generator Size: 15 kW Across the Line Start.

*Consult Factory for Applications Exceeding Maximum
Pressure and/or Temperature Indicated.



SEAL SPECIFICATIONS

Tandem, Oil Lubricated.

Upper Seal: Type 21, Mechanical. Carbon Rotating Face.
Ni-Resist Stationary Face. Buna-N Elastomers.
Stainless Steel 18-8 Cage and Spring.

Lower Seal: Type 2, Mechanical. Tungsten Titanium
Carbide Rotating and Stationary Faces. Stainless
Steel 316 Stationary Seat. Fluorocarbon
Elastomers (DuPont Viton® or Equivalent). Stainless
Steel 303/304 Cage and Spring.

Maximum Temperature of Liquid Pumped, 122°F (50°C).*



GORMAN-RUPP PUMPS

www.grpumps.com

Specifications Subject to Change Without Notice

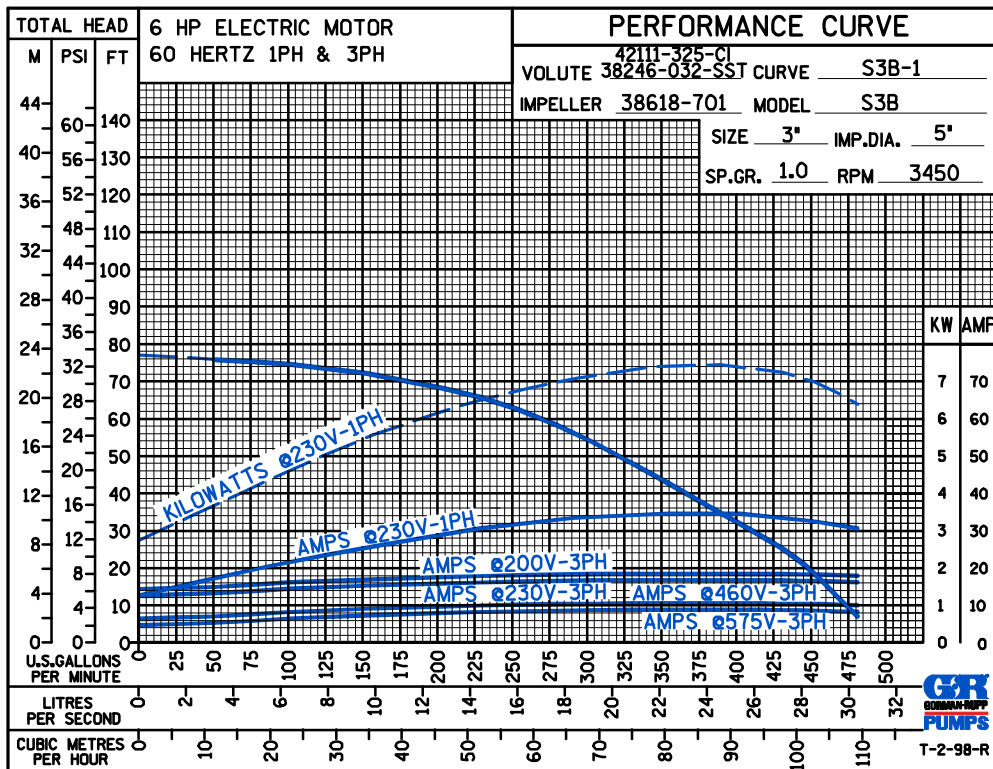
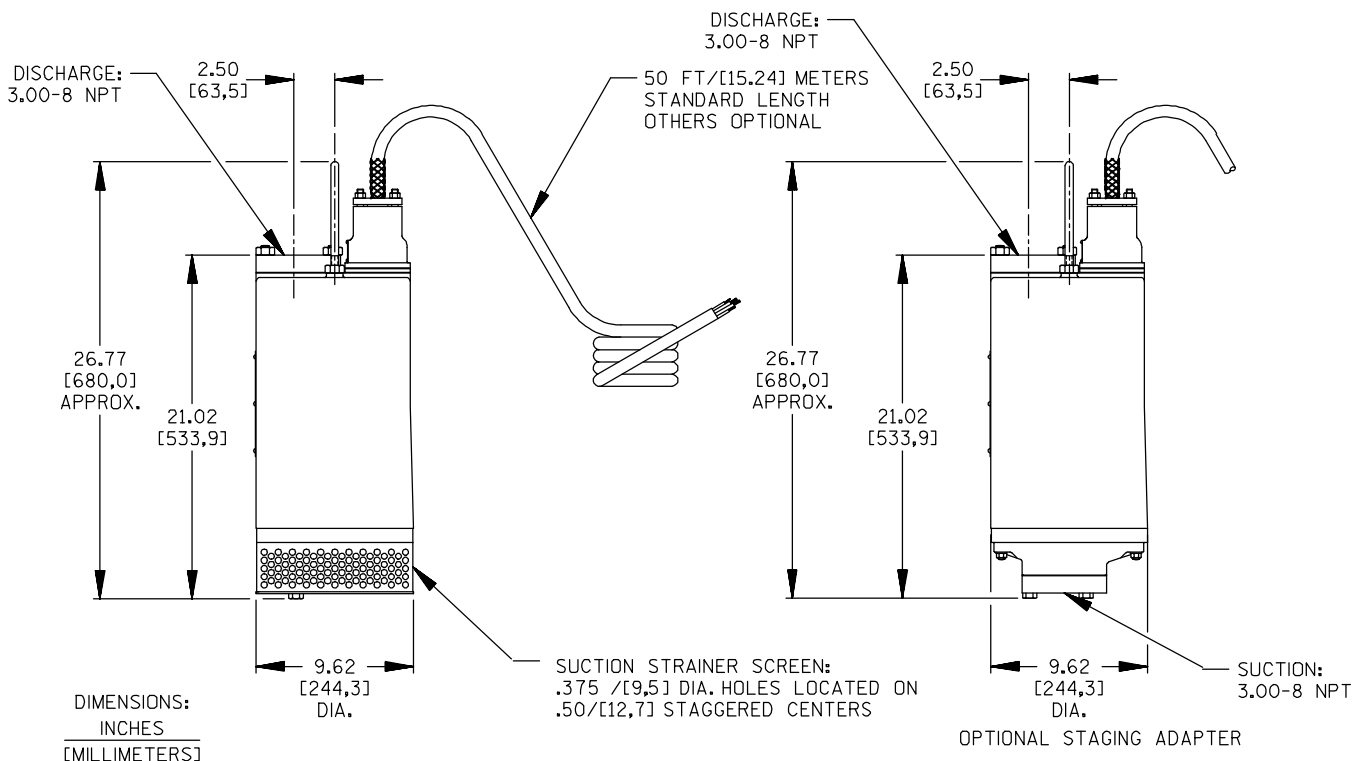
Printed in U.S.A.

Specification Data

SECTION 130, PAGE 660

APPROXIMATE
DIMENSIONS and WEIGHTS

NET WEIGHT: 145 LBS. (65,8 KG.)
SHIPPING WEIGHT: 155 LBS. (70,3 KG.)
EXPORT CRATE SIZE: 7.8 CU. FT. (0,22 CU. M.)



GORMAN-RUPP PUMPS

www.grpumps.com

Specifications Subject to Change Without Notice

Printed in U.S.A.

NOZZLE SCHEDULE

MARK	QTY	SIZE / RATING	DESCRIPTION
N1	1	2" 150# NPT	INLET
N2	1	2" 150# NPT	OUTLET
N3	2	1/2" 3000# NPT	PRESS GA
N4	1	1/2" 3000# NPT	VENT
N5	1	1/2" 3000# NPT	CLEAN DRAIN
N6	-	-	DIRTY DRAIN

VESSEL DESIGN CONDITIONS

CODE: BEST COMMERCIAL PRACTICE

M.A.W.P.: 150 PSI @ 250°F

M.D.M.T.: -20° F @ 150 PSI

M.A.E.P.: 15 PSI @ 250°F

CORROSION ALLOWANCE: NONE HYDROTEST PRESS: 195 PSI

STAMP: 'NC'

SERVICE: NON LETHAL

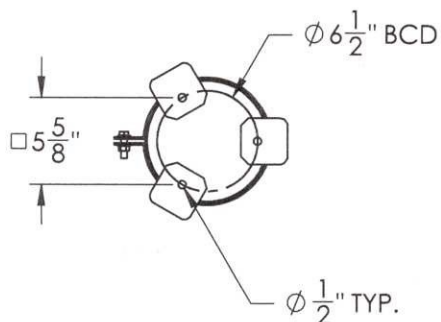
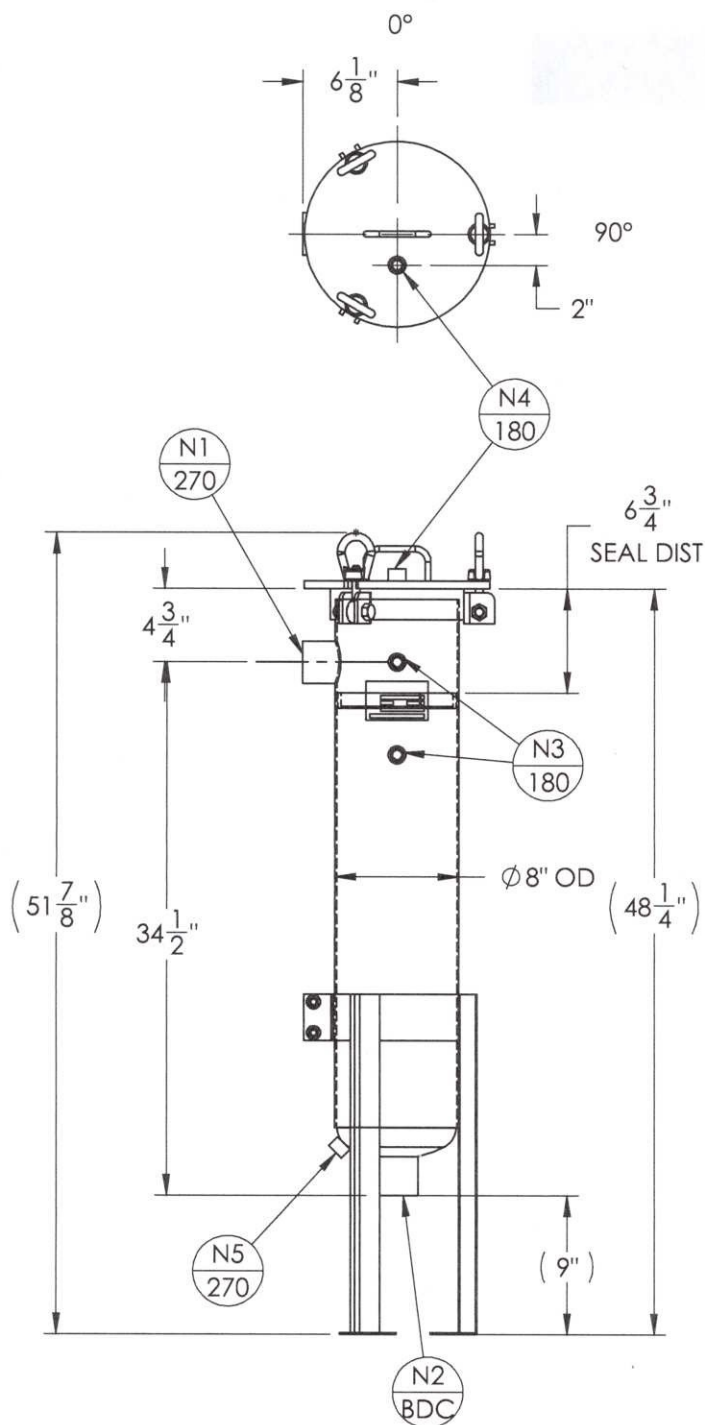
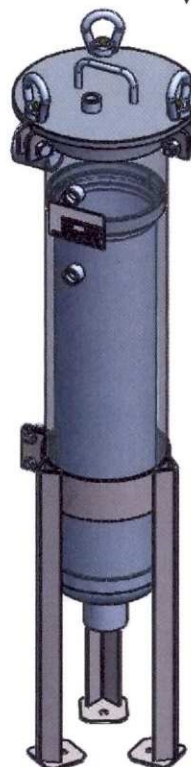
PWHT: N/A

RADIOGRAPHY: N/A

MATERIAL: SS 304/L

GASKET: BUNA-N

DRY WEIGHT: 77.62 #'s
 FLOODED WEIGHT: 140 #'s
 SHIPPING WEIGHT: 100 #'s
 VESSEL VOLUME: 1.0 C.F.



NOTES:

- VESSEL WILL HOUSE (QTY=1) DOUBLE LENGTH BASKET.

REV.	DATE	REVISION	DRAWN	APP'D
 89 Crawford Street Leominster, MA 01453 Tel: 774.450.7177 Fax: 888.835.0617				
LRT Provided Bag Filter Housing				
EQUIPMENT: BAG FILTER HOUSING (EB SERIES)				
MODEL NO: S4EB112-2P-SW				
CUSTOMER:				
PARENT: NONE	DRAWN: CR	DATE: JAN 13 2011	JOB No. V-	DWG. No. 001-0123
PAGE: 1 OF 4	CHK'D: JM	SCALE: NTS		REV. No. 0



Polyester Liquid Filter Bag



Features

- * Polyester liquid bag filter are available with a carbon steel ring, stainless steel ring or plastic flanges.
- * Heavy-duty handle eases installation and removal
- * Metal ring sewn into bag top for increased durability and positive sealing
- * Wide array of media fibers to meet needed temperature and micron specifications

Applications

Polyester liquid filter bags can be used in the filtering of a wide array of industrial and commercial process fluids

Sizes

Our liquid filter bags are available for all common liquid bag housings. Dimensions range from 4.12" diameter X 8" length thru 9" diameter X 32" length.

Micron Ratings

Available fibers range from 1 to 1500 microns

Options

- * Bag finish or covers for strict migration requirements.
- * Plastic top O.E.M. replacements
- * Multi-layered filtering capabilities for higher dirt holding capacities

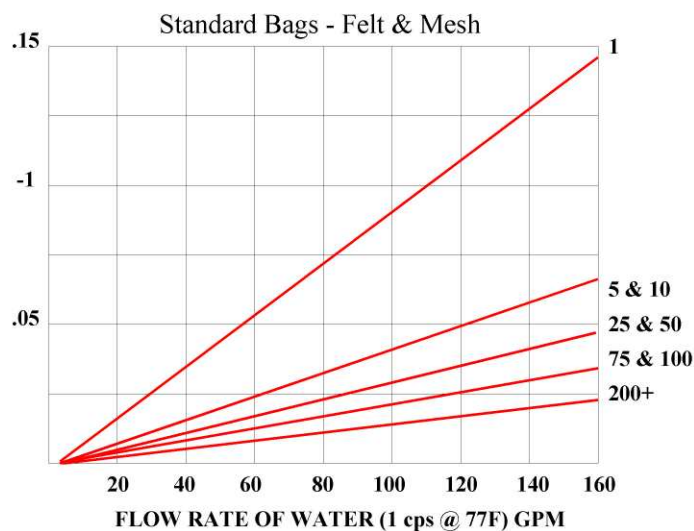
Optional Filter Media

Felt: Nomex, Polyester, Polypropylene

Monofilament: Nylon, Polyester, Polypropylene

Multifilament: Nylon, Polyester

Polypropylene: Oil Removal





89 Crawford Street
Leominster, Massachusetts 01453
Tel: 774.450.7177
Fax: 888.835.0617
www.lrt-llc.net

FILTRATION MEDIA :

8x30 RE-ACTIVATED CARBON

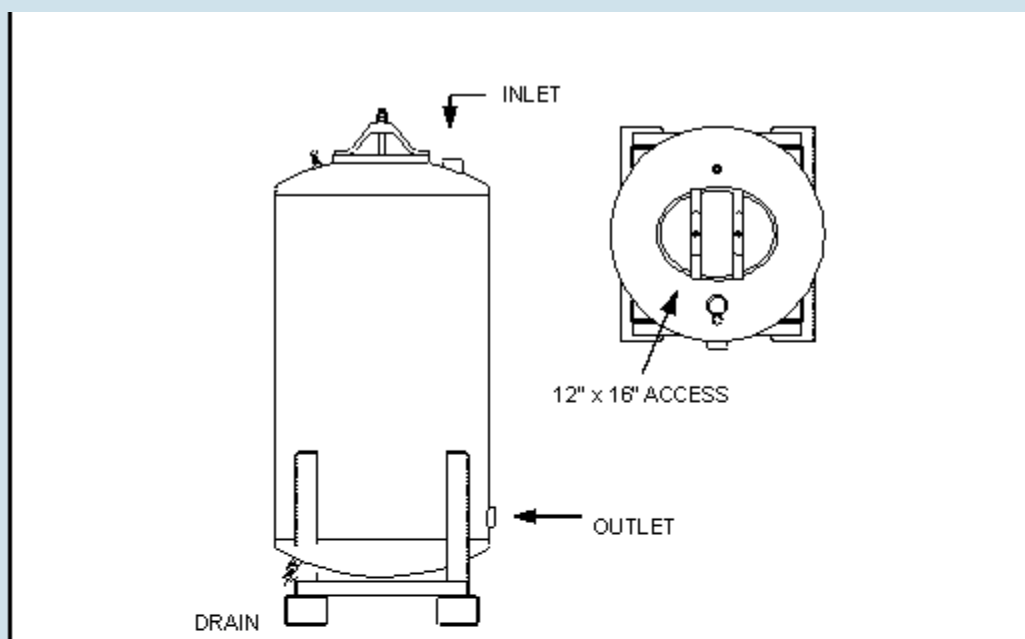
4x10 RE-ACTIVATED CARBON

GENERAL DESCRIPTION

Select Re-Activated carbon from domestic sources is quality screened during our purchasing process for activity, density and fines. The use of re-activated carbon is recommended as a lower cost alternative for most sites where drinking water quality is not necessary. In many cases our re-activated carbon meets and exceeds imported virgin carbon. In addition all carbon either sold by itself or installed in our filtration units traced by lot number to the installation or sale.

8x30 (Liquid Phase) Standard Specifications:	Standard	Value
Iodine Number	ASTM D-4607	800 Minimum
Moisture Content	ASTM D-2867	5% Maximum (as packed)
Particle Size	ASTM D-2862	8x30 US Mesh
Ash		10% Maximum
Total Surface Area (N2BET)		1050 Minimum
Pore Volume (cc/g)		0.75

4*10 (Vapor Phase) Standard Specifications:	Standard	Value
Carbon Tetrachloride Activity Level	ASTM D-3467	40 Minimum
Moisture Content	ASTM D-2867	5% Maximum (as packed)
Particle Size	ASTM D-2862	4x10 US Mesh
Ash		10% Maximum
Total Surface Area (N2BET)		1050 Minimum
Pore Volume (cc/g)		0.75



HPAF-2000 SPECIFICATIONS			
Overall Height	8'6"	Vessel/Internal Piping Materials	CS (SA-36) / SCH 40 PVC
Diameter	48"	Internal Coating	Polyamide Epoxy Resin
Inlet / Outlet (FNPT)	3"	External Coating	Epoxy Mastic
Drain / Vent (FNPT)	3/4" / 1/2"	Maximum Pressure / Temp	75 PSIG / 140° F
GAC Fill (lbs)	2,000	Cross Sectional Bed Area	12.5 FT ²
Shipping / Operational Weight (lbs)	1,295 / 3,295	Bed Depth/Volume	5.5 FT / 68.7 FT ³



89 Crawford Street
Leominster, Massachusetts 01453
Tel: 774.450.7177
Fax: 888.835.0617
www.lrt-llc.net

HPAF SERIES FILTERS MODEL HPAF-2000

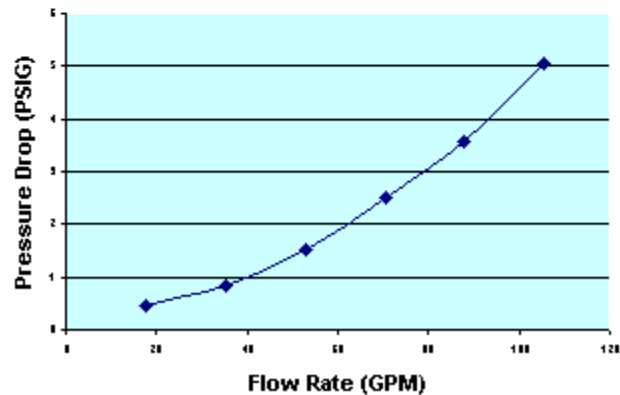
The HPAF-2000 filter is a media filter vessel designed to treat liquid streams. While the typical design application is a activated carbon adsorption unit, the filter can easily accommodate many medias. Some applications include:

- Dissolved Organic Removal (Activated Carbon)
- Suspended Solids Removal (Sand Filter)
- Dissolved Minerals (Softener Resin)
- Oil and Grease Removal (Organo-Clays)
- Dissolved and Precipitated Metals Removal
- Special Organics (Resin/Carbon Blend)
- Catalytic Reactor (Chlorine and Peroxide Removal)
- Bio-Remediation Contactor Unit

Picture
Not
Available

PRESSURE DROP GRAPH

(As Filled - 8"30 GAC)





**NSF/ANSI 44-61 CERTIFIED FOR
MATERIAL SAFETY**

RESINTECH CGS is a sodium form standard crosslinked gel strong acid cation resin. CGS is optimized for residential applications that require good regeneration efficiency and high capacity. *RESINTECH CGS* is intended for use in all residential and commercial softening applications that do not have significant amounts of chlorine in the feedwater. CGS is supplied in the sodium form.

FEATURES & BENEFITS

- **RESIDENTIAL SOFTENING APPLICATIONS**

Resin parameters are optimized for residential softeners

- **LOW COLOR THROW**

- **SUPERIOR PHYSICAL STABILITY**

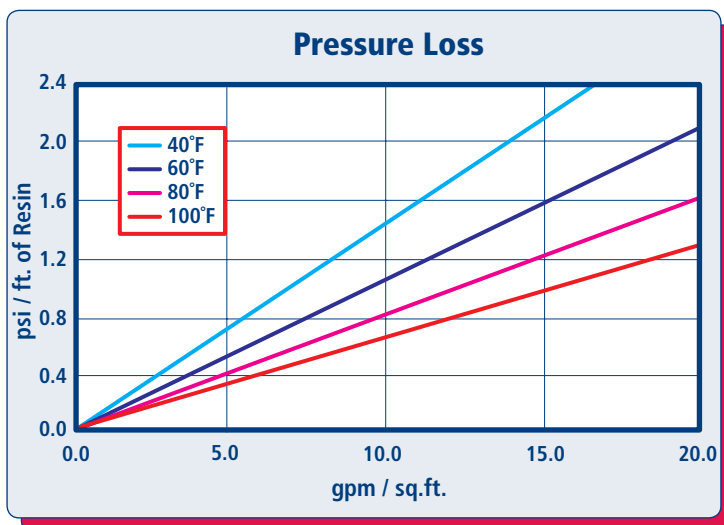
93% plus sphericity and high crush strengths together with carefully controlled particle distribution provides long life and low pressure drop

- **COMPLIES WITH US FDA REGULATIONS**

Conforms to paragraph 21CFR173.25 of the Food Additives Regulations of the US FDA

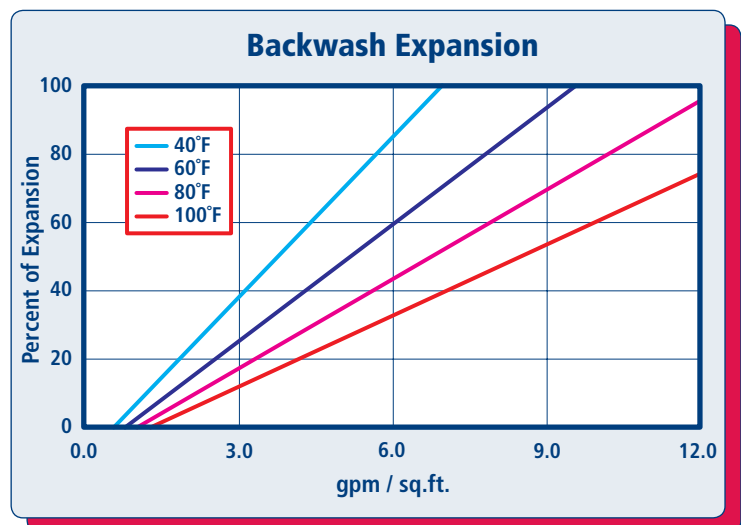
Prior to first use for potable water, resin should be backwashed for a minimum of 20 minutes, followed by 10 bed volumes of downflow rinse.

HYDRAULIC PROPERTIES



PRESSURE LOSS

The graph above shows the expected pressure loss of *ResinTech CGS* per foot of bed depth as a function of flow rate at various temperatures.



BACKWASH

The graph above shows the expansion characteristics of *ResinTech CGS* as a function of flow rate at various temperatures.

PHYSICAL PROPERTIES

Polymer Structure	Styrene/DVB
Polymer Type	Gel
Functional Group	Sulfonic Acid
Physical Form	Spherical beads
Ionic Form as shipped	Sodium
Total Capacity	
Sodium form	>1.8 meq/mL
Water Retention	
Sodium form	40 to 52 percent
Approximate Shipping Weight	
Sodium form	50 lbs./cu.ft.
Screen Size Distribution (U.S. mesh)	16 to 50
Maximum Fines Content (<50 mesh)	1 percent
Minimum Sphericity	90 percent
Uniformity Coefficient	1.6 approx.
Resin Color	Amber

Note: Physical properties can be certified on a per lot basis, available upon request

SUGGESTED OPERATING CONDITIONS

Maximum continuous temperature	
Sodium form	250°F
Minimum bed depth	24 inches
Backwash expansion	25 to 50 percent
Maximum pressure loss	25 psi
Operating pH range	0 to 14 SU
Regenerant Concentration	
Salt cycle	10 to 15 percent NaCl
Regenerant level	4 to 15 lbs./cu.ft.
Regenerant flow rate.	0.5 to 1.5 gpm/cu.ft.
Regenerant contact time	>20 minutes
Displacement flow rate	Same as dilution water
Displacement volume	10 to 15 gallons/cu.ft.
Rinse flow rate	Same as service flow
Rinse volume	35 to 60 gallons/cu.ft.
Service flow rate	1 to 10 gpm/cu.ft.

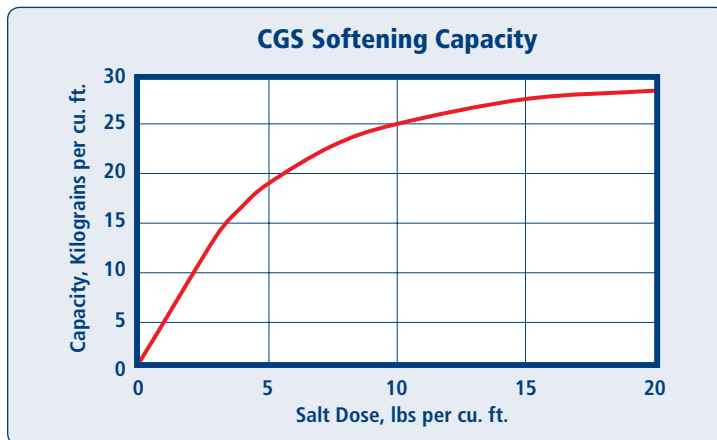
Note: These guidelines describe average low risk operating conditions. They are not intended to be absolute minimums or maximums.

For operation outside these guidelines, contact ResinTech Technical Support

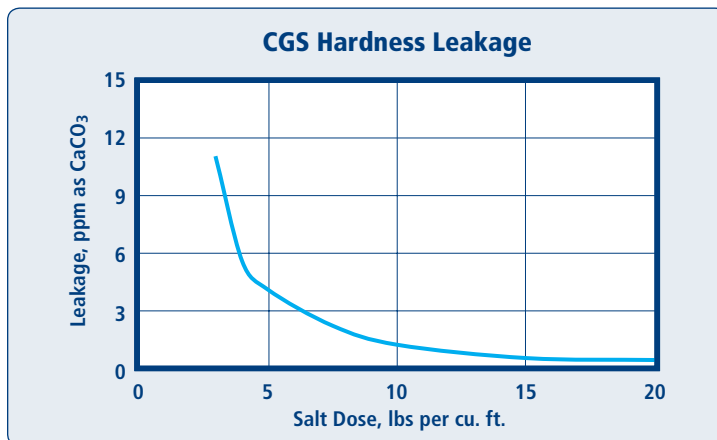
APPLICATIONS

SOFTENING

RESINTECH CGS is a standard crosslinked cation resin optimized for residential and commercial applications. This type of resin is easier to regenerate than the higher crosslinked resins. CGS has marginal resistance to chlorine and other oxidants and is not ideal for high temperature and other high stress applications.



Capacity and leakage data are based on the following: 2:1 Ca:Mg ratio, 500 ppm TDS as CaCO₃, 0.2% hardness in the salt and 10% brine concentration applied co-currently through the resin over 30 minutes. No engineering downgrade has been applied.



East Coast - West Berlin, NJ p:856.768.9600 • Midwest - Chicago, IL p:708.777.1167 • West Coast - Los Angeles, CA p:323.262.1600

CAUTION: DO NOT MIX ION EXCHANGE RESIN WITH STRONG OXIDIZING AGENTS. Nitric acid and other strong oxidizing agents can cause explosive reactions when mixed with organic materials, such as ion exchange resins.

MATERIAL SAFETY DATA SHEETS (MSDS) are available for all ResinTech Inc. products. To obtain a copy, contact your local ResinTech sales representative or our corporate headquarters. They contain important health and safety information. That information may be needed to protect your employees and customers from any known health and safety hazards associated with our products. We recommend that you secure and study the pertinent MSDS for our products and any other products being used. These suggestions and data are based on information we believe to be reliable. They are offered in good faith. However we do not make any guarantee or warranty. We caution against using these products in an unsafe manner or in violation of any patents; further we assume no liability for the consequences of any such actions.

RESINTECH is a registered trademark © of RESINTECH INC.

CGS rev 1.1

ZENNER PERFORMANCE Cast Iron Turbine Meters Sizes 2" through 12"

INTRODUCTION: ZENNER PERFORMANCE Turbine Meters are designed for applications where flows are usually moderate to high and occasionally low. They are used in measurement of potable cold water in commercial and industrial services where flows are in one direction.

OPERATION: Water flows through the turbine section which causes the rotor to turn proportionately to the quantity of water flowing through the meter. A drive magnet transmits the motion of the rotor to a driven magnet located within the hermetically sealed register. The magnet is connected to a gear train which translates the rotations into volume totalization displayed on the register dial face. The only moving parts in the meter are the rotor assembly and vertical shaft.

CONSTRUCTION: ZENNER PERFORMANCE Turbine Meters consist of three basic components: Cast Iron Epoxy Coated main case, measuring element, and sealed register. The measuring element assembly includes the rotor assembly, vertical shaft and a calibration vane which eliminates the need for calibration change gears.

MAINTENANCE: ZENNER PERFORMANCE Turbine Meters are engineered and manufactured to provide long-term service and operate virtually maintenance free. If necessary the universal measuring element (UME) can be removed from the main case for maintenance. Interchangeability of certain parts between like sized meters minimizes spare parts inventory.

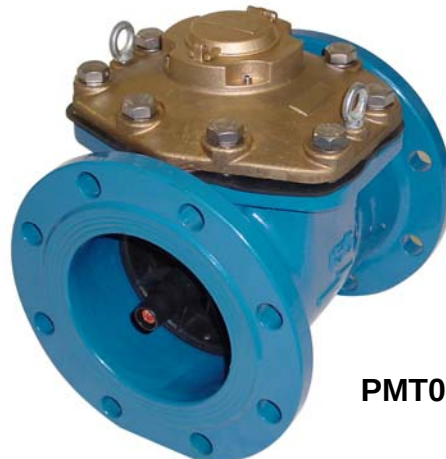
CONFORMANCE: ZENNER PERFORMANCE Turbine Meters are tested and comply with AWWA C701 Class II performance standards.

STRAINERS: ZENNER PERFORMANCE recommends the use of a separate strainer upstream from the turbine meter. Strainers reduce the chance of damage to the rotor as well as the frequency in which it must be removed for inspection. The lack of a strainer may void the warranty of the turbine meter.

CONNECTIONS: Companion flanges for installation of meters on various pipe types and sizes are available in bronze or cast iron.



PMT04



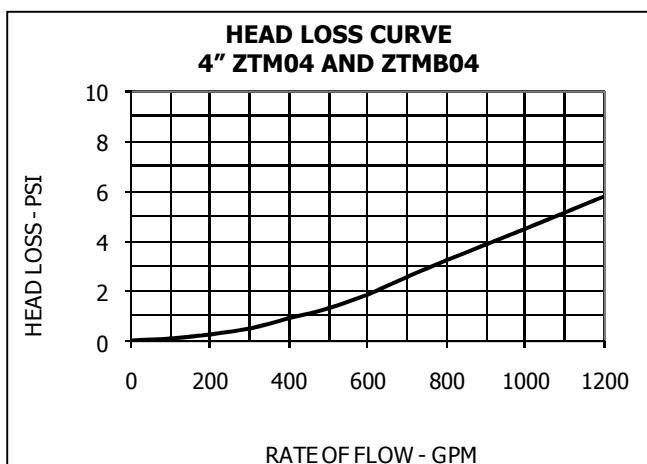
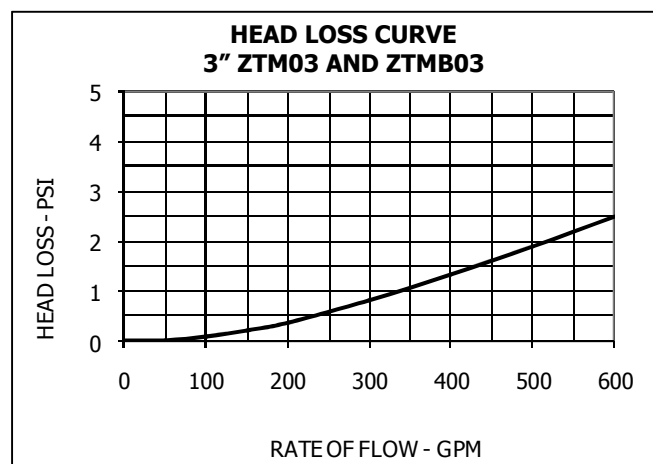
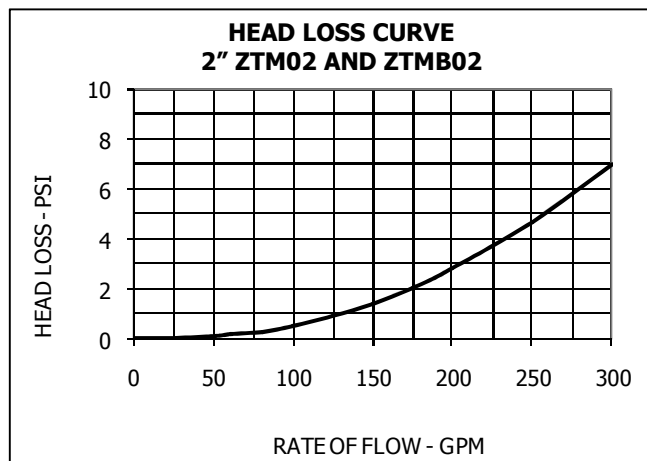
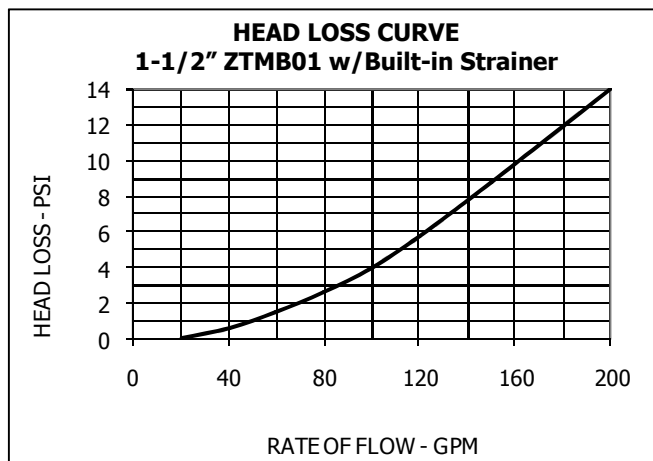
PMT06

ZENNER PERFORMANCE

15280 Addison Rd #340, Addison, TX 75001, (972) 386-6611, Fax (972) 386-1814
www.zennerusa.com

MODEL		PMT02	PMT03	PMT04	PMT06	PMT08	PMT10	PMT12
SIZE		2"	3"	4"	6"	8"	10"	12"
Flow rate maximum intermittent	USGPM	400	550	1250	2500	4500	7000	8800
Maximum continuous	USGPM	200	450	1000	2000	3500	5500	6200
Optimum operating flow range	USGPM	3 - 200	5 - 550	10 - 1250	20 - 2500	30 - 4500	50 - 7000	90 - 8800
Low flow rate	USGPM	2	2-1/2	5	12	20	45	65
Start-up flow rate	USGPM	7/8	1-1/8	1-3/8	7-1/2	8	15	15
Maximum Working Pressure	P.S.I.	160	160	160	160	160	160	160
Maximum Temperature	Deg. F	140	140	140	140	140	140	140
Length	Inches	7-7/8	8-7/8	9-7/8	11-7/8	13-3/4	17-3/4	19-5/8
Height	Inches	9-1/2	10-1/4	11	12-7/8	14-1/4	19	20-1/4
Width	Inches	7	7-1/2	9	11	13-1/2	16	19
Weight	Pounds	24	32	38	84	126	225	255
Number of holes per flange		4	4	8	8	8	12	12

ZENNER ZTM and ZTMB Turbine Water Meters (Without Strainer) Typical Head Loss Curves



ZENNER USA

15280 Addison Rd #340, Addison, TX 75001, (972) 386-6611, Fax (972) 386-1814

www.zennerusa.com



Appendix D

Supporting Information

Lockwood Remediation
Technologies LLC

MassDEP - Bureau of Waste Site Cleanup

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

Site Information:

LOT 3 INNER BELT ROAD
LOT 3 INNER BELT ROAD SOMERVILLE, MA

NAD83 UTM Meters:

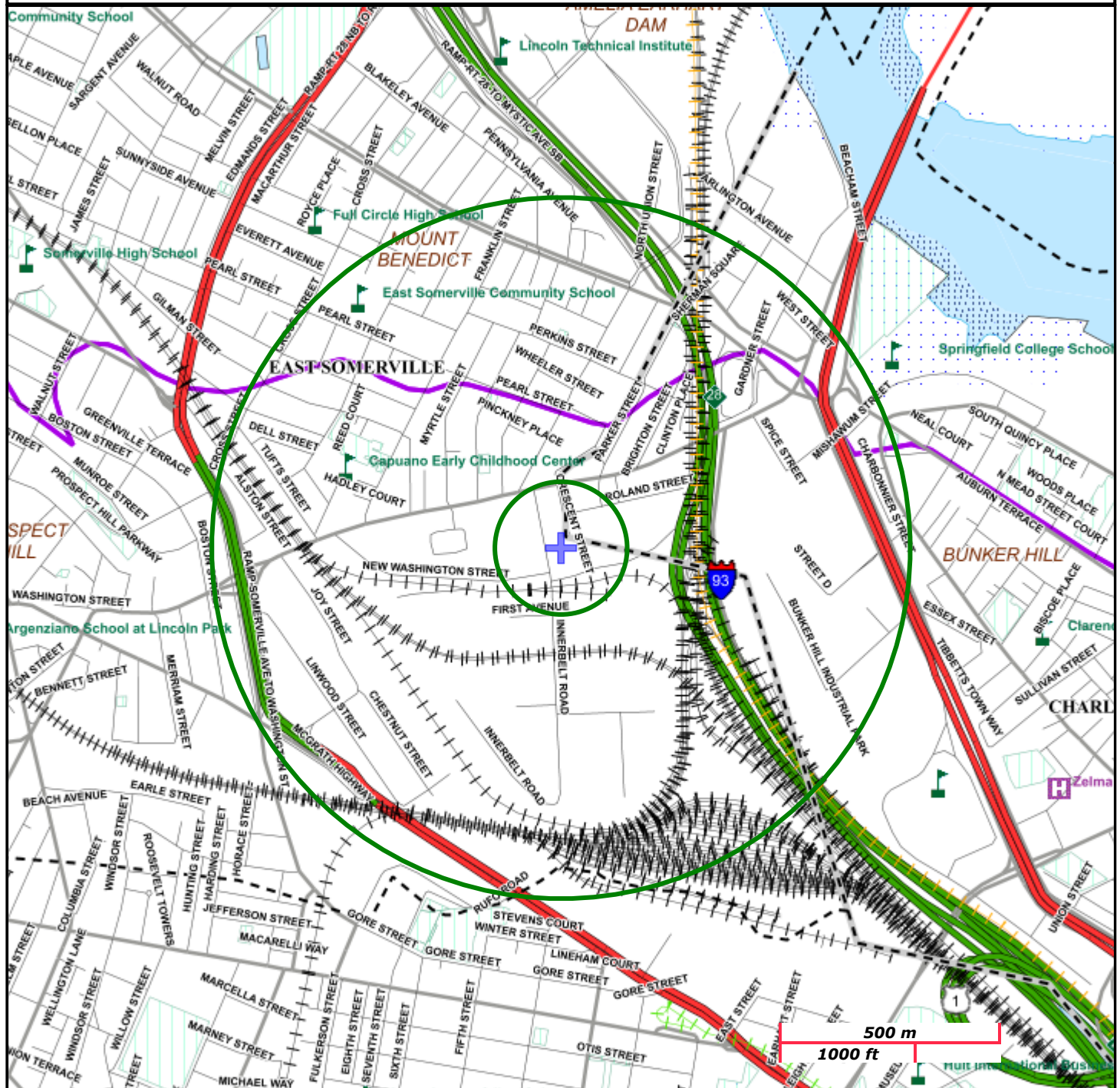
4694156mN, 328705mE (Zone: 19)
May 28, 2020

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



MassDEP

Commonwealth of Massachusetts
Department of Environmental Protection



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

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

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

Aquifers: Medium Yield, High Yield, EPA Sole Source

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

PWS Protection Areas: Zone II, IWPA, Zone A

Hydrography: Open Water, PWS Reservoir, Tidal Flat

Wetlands: Freshwater, Saltwater, Cranberry Bog

FEMA 100yr Floodplain; Protected Open Space; ACEC

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

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



Documentation of the Results of the ESA Eligibility Determination:

Using information in Appendix II of the NPDES RGP, the project located at 20 inner Belt Road Somerville, Massachusetts is eligible for coverage under this general permit under FWS Criterion A. This project is located in Middlesex County. No designated critical habitats were listed in the project area. An Endangered Species Consultation was conducted on the U.S. Fish & Wildlife Service New England Field Office ECOS IPaC webpage for the Site:

No Endangered species found at this location.



United States Department of the Interior

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



In Reply Refer To:

May 28, 2020

Consultation Code: 05E1NE00-2020-SLI-2734

Event Code: 05E1NE00-2020-E-08261

Project Name: Lot 3 Inner Belt Road

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-2734

Event Code: 05E1NE00-2020-E-08261

Project Name: Lot 3 Inner Belt Road

Project Type: Water Withdrawal / Depletion

Project Description: Construction Dewatering

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/42.381501186120744N71.08099877260098W>



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 Fisheries¹, 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.



Documentation of the National Historic Preservation Act Eligibility Determination:

As part of this permit, a determination was made as to whether there were any historic properties or places listed on the national register in the path of the discharge or in the vicinity of the construction of treatment systems or BMPs related to the discharge. A search on the Massachusetts Cultural Resource Information System Database and the National Register of Historic Places did not list any potential historic properties on or near the project site in the databases. Therefore, the proposed discharge will not have the potential to cause effects on historical properties.

Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Somerville; Street No: 3; Street Name: Inner Belt Rd; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year
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