89 Crawford Street
Leominster, Massachusetts 01453
Tel: 774.450.7177
Fax: 888.835.0617
www.lrt-llc.net

July 29, 2021

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)**
Arlington Town Yard
51 Grove Street
Arlington, Massachusetts

Dear Sir/Madam:

On behalf of the J. Derenzo Company (JDC), 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 EPA's National Pollutant Discharge Elimination System (NPDES) program. This NOI was prepared in accordance with the general requirements of the NPDES RGP and related guidance documentation provided by EPA. The completed NOI Form is provided in **Appendix A**.

Site Information

This NOI has been prepared for the management groundwater that will be generated during dewatering activities associated with construction activities that are to take place at the at the Arlington Department of Public Works (DPW) yard (the Site). The work is anticipated to be completed within twelve months. 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**.

Regulatory Status

The subject site which is designated as a Tier 1 site (Permit No. W008727) has been assigned Release Tracking Number (RTN) 3-4241 by the Massachusetts Department of Environmental Protection (MassDEP). The RTN was issued due to historic past use and remains open. The DPW yard property is a portion of the larger 51 Grove Street "Site" which encompasses properties currently owned by the Town of Arlington, Boston Gas Company, and portions of three abutting private properties. The DPW yard property was the location of a former manufactured gas plant (MGP) and a former chrome plating manufacturing facility. Most of the historical operations related to this Site occurred on the DPW yard property (now the Arlington Department of Public Works Yard). Activities on the DPW yard property has resulted in the release of oil and hazardous materials (OHM) to soil and groundwater. The compounds

associated with these releases include polycyclic aromatic hydrocarbons (PAHs), lead, total chromium, and hexavalent chromium.

Work Summary

The work at the Site includes the construction of the new building (Building E), the installation of new site utilities and other miscellaneous site improvements. To complete portions of the building foundation and other deeper excavations in the dry, dewatering will be required to lower the groundwater table as work is being performed. To do this, filtered sumps will be placed in low spots within the excavations. Water generated during dewatering (Source Water) will be pumped to a water treatment system prior to direct discharge to Mill Brook. The discharge location is depicted on **Figure 2**.

LRT collected representative groundwater samples from an onsite monitoring well (MW-04-03) on July 14, 2021 (**Figure 2**). A sample of the receiving water (Mill Brook) was also collected on the same day. 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 the NOI Form included within **Appendix A**, and copies of the laboratory data reports are provided in **Appendix B**. Concentrations of polycyclic aromatic hydrocarbons (PAHs) and metals including copper, and lead were detected in groundwater at concentrations above the respective NPDES RGP Effluent Limitations. To meet these standards, source water will undergo treatment that includes bag filtration, activated carbon and ion exchange resin 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 rate of up to 150 gallons per minute (gpm); the average effluent flow of the system is estimated to be 100 gpm, and the maximum flow will not exceed 150 gpm. Source water will enter one weir tank at the head of the system from the weir tank water will be pumped to a triple-bag filter skid (consisting of three-bag filter housings) followed by two carbon vessels plumbed in series. From the carbon vessels water, be pumped through two resin vessels filled with ion exchange media (one cation and one anion) plumbed in series and subsequently discharged to the approved discharge point.

Discharge from the water treatment system will pass through a flow/totalizer meter prior to direct discharge into Mill Brook, as depicted on **Figure 2**. Effluent sampling will correspond with this discharge location.

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 JDC, LRT is requesting coverage under the NPDES RGP for the discharge of treated wastewater to Mill Brook in support of construction dewatering activities that are to take place at the Arlington DPW Yard.

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, JDC 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

Jacob Jennings

Jacob Jennings
Staff Scientist / Estimator

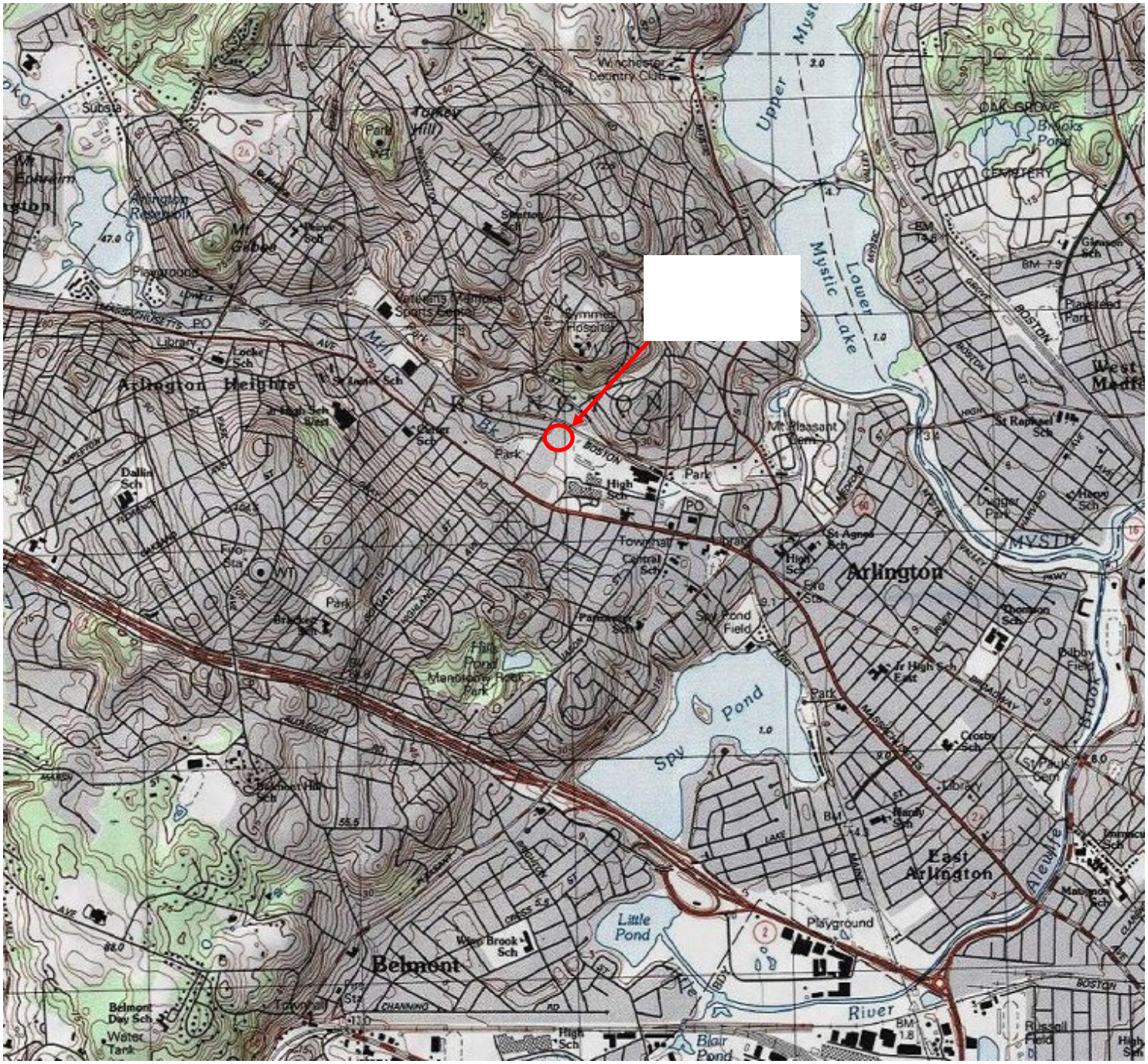
Kim Gravelle

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 Cutsheets and SDSs
Appendix D – Supplementary information
Appendix E – Boston Water and Sewer Commission (BWSC) Discharge Permit

cc: Cathy Vakalopoulos – Massachusetts Department of Environmental Protection
Bradd Biagini – JDC
Michael Rademacher – Town of Arlington

Figures



Source: ArcGIS Map Viewer

Notes:

1. Figure is not to scale.

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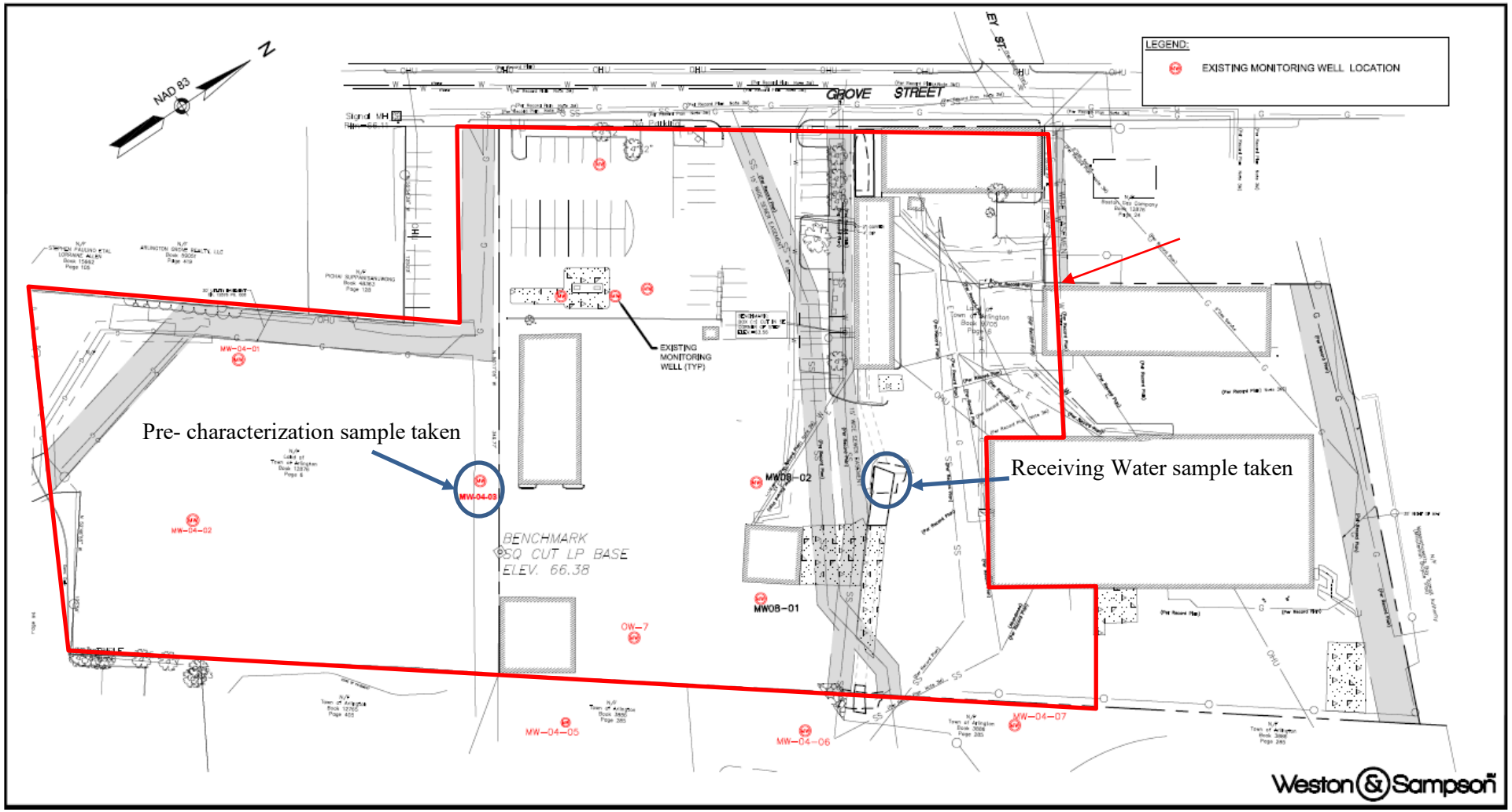
Figure 1 – Locus Plan
Arlington Town Yard
51 Grove Street
Arlington, MA



Notes

1. Figure is not to scale.

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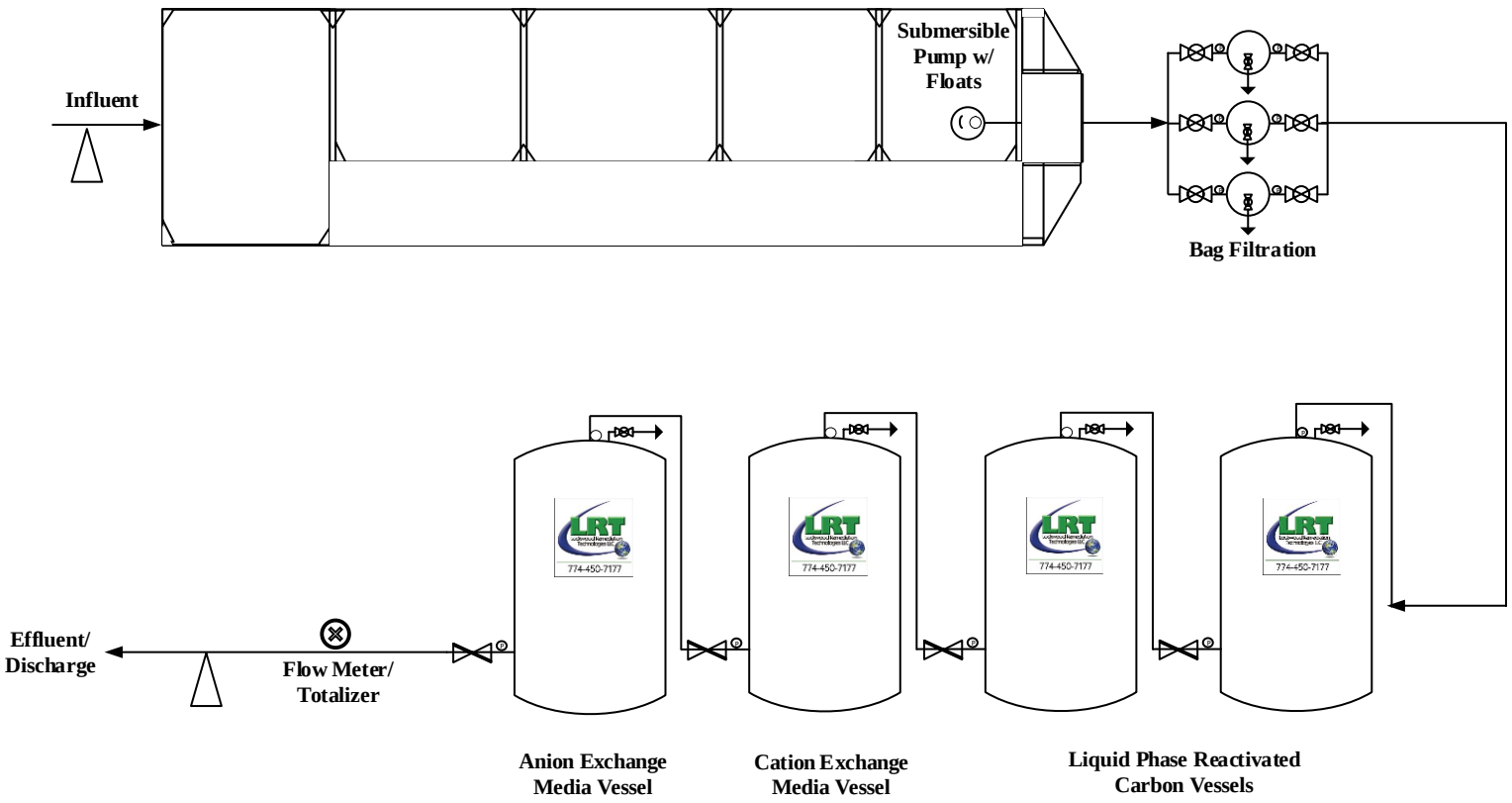
Figure 2 –Site Layout
Arlington Town Yard
51 Grove Street
Arlington, MA



Key:

Piping/Hose	→
Sample Port	▷
Ball Valve	⋈
Butterfly Valve	⋈
Pressure Gauge	⊙

Notes:

1.) Figure is not to scale
2.) System rated for 150 GPM

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

Arlington Town Yard
Arlington, MA

PROJECT No. 2-2237

FIGURE No. 3

Appendix A

NOI Form

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

A. General site information:

<table>
<tr><td rowspan="2">1. Name of site:
Arlington Town Yard</td><td colspan="3">Site address: 51 Grove Street, existing DPW Buildings and Yard
Street:</td></tr>
<tr><td>City: Arlington</td><td>State: MA</td><td>Zip: 02476</td></tr>
<tr><td rowspan="4">2. Site owner
Town of Arlington

Owner is (check one): ☐ Federal ■ State/Tribal ☐ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: Michael Rademacher, P.E.</td></tr>
<tr><td colspan="2">Telephone: 781-316-3101</td><td>Email:</td></tr>
<tr><td colspan="3">Mailing address: 51 Grove Street
Street:</td></tr>
<tr><td>City: Arlington</td><td>State: MA</td><td>Zip: 02476</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
J. Derenzo Company</td><td colspan="3">Contact Person: Bradd Biagini</td></tr>
<tr><td colspan="2">Telephone: 508-897-8035</td><td>Email: bbiagini@JDerenzo.com</td></tr>
<tr><td colspan="3">Mailing address:
Street: 338 Howard Street</td></tr>
<tr><td>City: Brockton</td><td>State: MA</td><td>Zip: 02302</td></tr>
<tr><td>4. NPDES permit number assigned by EPA:

NPDES permit is (check all that apply: ☐ RGP ☐ DGP ☐ CGP
☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:</td><td colspan="3">5. Other regulatory program(s) that apply to the site (check all that apply):
■ MA Chapter 21e; list RTN(s):
3-0004241
☐ NH Groundwater Management Permit or Groundwater Release Detection Permit:
☐ CERCLA
☐ UIC Program
☐ POTW Pretreatment
☐ CWA Section 404</td></tr>
</table>

B. Receiving water information:

1. Name of receiving water(s):	Waterbody identification of receiving water(s):	Classification of receiving water(s):
Mill Brook	MA71-07	B

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

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

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

3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP. (Physical Substrate Habitat Alterations), Escherichia Coli (E. Coli)

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.	0.176 CFS
5. Indicate the requested dilution factor for the calculation of water quality-based effluent limitations (WQBELs) determined in accordance with the instructions in Appendix V for sites in Massachusetts and Appendix VI for sites in New Hampshire.	1.53

6. Has the operator received confirmation from the appropriate State for the 7Q10and dilution factor indicated? (check one): ■ Yes ☐ No
If yes, indicate date confirmation received: 7/20/2021

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

C. Source water information:

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

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

2. Source water contaminants: Inorganics, Non-Halogenated Semi-Volatile Organic Compounds	
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): MA71-07	Outfall location(s): (Latitude, Longitude) 42.419843, -71.163460
Discharges enter the receiving water(s) via (check any that apply): ■ Direct discharge to the receiving water ☐ Indirect discharge, if so, specify: Direct Discharge to Mill Brook ☐ 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: N/A 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): 9/1/2021 - 9/1/2022 Indicate if the discharge is expected to occur over a duration of: ☐ less than 12 months ■ 12 months or more ☐ is an emergency discharge	
Has the operator attached a site plan in accordance with the instructions in D, above? (check one): ■ Yes ☐ No	

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

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

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

4. Influent and Effluent Characteristics

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
A. Inorganics									
Ammonia	✔		1	SM19-22	220	<30	<30	Report mg/L	---
Chloride		✔	1	EPA 300	100000	450000	450000	Report µg/l	---
Total Residual Chlorine	✔		1	SM21-22	20	<20	<20	0.2 mg/L	17
Total Suspended Solids		✔	1	SM21-22	1700	52000	52000	30 mg/L	---
Antimony	✔		1	200.8	1.0	<1.0	<1.0	206 µg/L	
Arsenic		✔	1	200.8	0.80	0.87	0.87	104 µg/L	
Cadmium	✔		1	200.8	0.20	<0.20	<0.20	10.2 µg/L	
Chromium III		✔	1	200.8	1.0	150	150	323 µg/L	119.6
Chromium VI		✔	1	SM21-22	4	57	57	323 µg/L	11.7
Copper		✔	1	200.8	1.0	7.0	7.0	242 µg/L	
Iron		✔	1	200.7	50	2900	2900	5,000 µg/L	1000
Lead		✔	1	200.8	0.50	15	15	160 µg/L	3.31
Mercury	✔		1	245.1	0.1	<0.1	<0.1	0.739 µg/L	
Nickel	✔		1	200.8	5.0	<5.0	<5.0	1,450 µg/L	8.3
Selenium	✔		1	200.8	5.0	<5.0	<5.0	235.8 µg/L	
Silver	✔		1	200.8	0.20	<0.20	<0.20	35.1 µg/L	
Zinc		✔	1	200.8	10	10	10	420 µg/L	
Cyanide			1	SM4500	1	1	1	178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX	✔		1	624.1		ND	ND	100 µg/L	---
Benzene	✔		1	624.1	0.130	<0.130	<0.130	5.0 µg/L	---
1,4 Dioxane	✔		1	624.1	21.5	<21.5	<21.5	200 µg/L	---
Acetone	✔		1	624.1	2.35	<2.35	<2.35	7.97 mg/L	---
Phenol	✔		1	625.1	39.4	<39.4	<39.4	1,080 µg/L	

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
C. Halogenated VOCs									
Carbon Tetrachloride	✔		1	624.1	0.170	<0.170	<0.170	4.4 µg/L	
1,2 Dichlorobenzene	✔		1	624.1	0.100	<0.100	<0.100	600 µg/L	---
1,3 Dichlorobenzene	✔		1	624.1	0.090	<0.090	<0.090	320 µg/L	---
1,4 Dichlorobenzene	✔		1	624.1	0.110	<0.110	<0.110	5.0 µg/L	---
Total dichlorobenzene								763 µg/L in NH	---
1,1 Dichloroethane	✔		1	624.1	0.160	<0.160	<0.160	70 µg/L	---
1,2 Dichloroethane	✔		1	624.1	0.320	<0.320	<0.320	5.0 µg/L	---
1,1 Dichloroethylene	✔		1	624.1	0.160	<0.160	<0.160	3.2 µg/L	---
Ethylene Dibromide	✔		1	504.1	0.0079	<0.0079	<0.0079	0.05 µg/L	---
Methylene Chloride	✔		1	624.1	0.300	<0.300	<0.300	4.6 µg/L	---
1,1,1 Trichloroethane	✔		1	624.1	0.170	<0.170	<0.170	200 µg/L	---
1,1,2 Trichloroethane	✔		1	624.1	0.150	<0.150	<0.150	5.0 µg/L	---
Trichloroethylene	✔		1	624.1	0.180	<0.180	<0.180	5.0 µg/L	---
Tetrachloroethylene	✔		1	624.1	0.200	<0.200	<0.200	5.0 µg/L	
cis-1,2 Dichloroethylene	✔		1	624.1	0.120	<0.120	<0.120	70 µg/L	---
Vinyl Chloride	✔		1	624.1	0.200	<0.200	<0.200	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates	✔		1	625.1		ND	ND	190 µg/L	
Diethylhexyl phthalate	✔		1	625.1	9.66	<9.66	<9.66	101 µg/L	
Total Group I PAHs		✔	1	625.1		58.1	58.1	1.0 µg/L	---
Benzo(a)anthracene		✔	1	625.1	0.14	11	11	As Total PAHs	0.0058
Benzo(a)pyrene		✔	1	625.1	0.087	14	14		0.0058
Benzo(b)fluoranthene		✔	1	625.1	0.11	10	10		0.0058
Benzo(k)fluoranthene		✔	1	625.1	0.071	3.7	3.7		0.0058
Chrysene		✔	1	625.1	0.087	12	12		0.0058
Dibenzo(a,h)anthracene		✔	1	625.1	0.11	1.7	1.7		0.0058
Indeno(1,2,3-cd)pyrene		✔	1	625.1	0.11	5.7	5.7		0.0058

Parameter	Known or believed absent	Known or believed present	# of samples	Test method (#)	Detection limit (µg/l)	Influent		Effluent Limitations	
						Daily maximum (µg/l)	Daily average (µg/l)	TBEL	WQBEL
Total Group II PAHs	✔		1	625.1		ND	ND	100 µg/L	---
Naphthalene	✔		1	625.1	19.7	<19.7	<19.7	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs	✔		1	608.3		ND	ND	0.000064 µg/L	---
Pentachlorophenol	✔		1	625.1	0.38	<0.38	<0.38	1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons	✔		1	1664B	2.8	<2.8	<2.8	5.0 mg/L	---
Ethanol	✔		1	624.1	34.2	<34.2	<34.2	Report mg/L	---
Methyl-tert-Butyl Ether	✔		1	624.1	0.170	<0.170	<0.170	70 µg/L	
tert-Butyl Alcohol	✔		1	624.1	5.34	<5.34	<5.34	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether	✔		1	624.1	0.150	<0.150	<0.150	90 µg/L in MA 140 µg/L in NH	---
Other (i.e., pH, temperature, hardness, salinity, LC_{50}, additional pollutants present); if so, specify:									
Hardness		✔	1	200.7		130000	130000		
pH		✔	1	Field		7.4	7.4		
Receiving Water									
Arsenic		✔	1	200.8		1.4	1.4		
Copper		✔	1	200.8		3.9	3.9		
Chromium		✔	1	200.8		29	29		
Hardness		✔	1	200.7		52000	52000		
Lead			1			5.5	5.5		
pH		✔	1	Field		7.8	7.8		
Hexavalent Chromium		✔	1	SM19-22		11	11		
Iron		✔	1	200.7		2000	2000		

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.

Source water will be pumped to a treatment system with a designed flow of up to 150 gallons per minute (gpm); the average effluent flow of the system is estimated to be 100 gpm, and the maximum flow will not exceed 150 gpm. Source water will enter one weir tank at the head of the system. From the weir tank, water will be pumped to a triple-bag filter skid (with three single bag filters) discharge from the bag filter will be pumped through two carbon vessels plumbed in series, discharge from the carbon vessels will be pumped through one resin vessel containing cation resin media then one resin vessel containing anion resin media. Water will pass through a flow/totalizer meter prior to direct discharge to Mill Brook with a final

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: activated carbon, ion exchange media

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: Carbon Vessels Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	150
Provide the proposed maximum effluent flow in gpm.	150
Provide the average effluent flow in gpm.	100
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 meeting the requirements of this general permit will be developed and implemented upon initiation of discharge
Notification provided to the appropriate State, including a copy of this NOI, if required.	Check one: Yes ■ No ☐
Notification provided to the municipality in which the discharge is located, including a copy of this NOI, if requested.	Check one: Yes ■ No ☐
Notification provided to the owner of a private or municipal storm sewer system, if such system is used for site discharges, including a copy of this NOI, if requested.	Check one: Yes ☐ No ☐ NA ■
Permission obtained from the owner of a private or municipal storm sewer system, if such system is used for site discharges. If yes, attach additional conditions. If no, attach explanation and timeframe for obtaining permission.	Check one: Yes ☐ No ☐ NA ■
Notification provided to the owner/operator of the area associated with activities covered by an additional discharge permit(s). Additional discharge permit is (check one): ☐ RGP ☐ DGP ☐ CGP ☐ MSGP ☐ Individual NPDES permit ☐ Other; if so, specify:	Check one: Yes ☐ No ■ NA ☐
Signature: 	Date: 7-29-21
Print Name and Title: BRADD BIAGINI - PROJECT MANAGER	

MA Limits

WQBEL

Enter number values in green boxes below

Enter values in the units specified

↓

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

Enter a dilution factor, if other than zero

↓

1.53

Enter values in the units specified

↓

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

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

↓

7.8	pH in **Standard Units**
25	Temperature in **°C**
0	Ammonia in **mg/L**
52	Hardness in **mg/L** $CaCO_3$
0	Salinity in **ppt**
0	Antimony in **µg/L**
1.4	Arsenic in **µg/L**
0	Cadmium in **µg/L**
29	Chromium III in **µg/L**
11	Chromium VI in **µg/L**
3.9	Copper in **µg/L**
2000	Iron in **µg/L**
5.5	Lead in **µg/L**
0	Mercury in **µg/L**
0	Nickel in **µg/L**
0	Selenium in **µg/L**
0.99	Silver in **µg/L**
12	Zinc in **µg/L**

Enter **influent** concentrations in the units specified

↓

0	TRC in **µg/L**
0	Ammonia in **mg/L**
0	Antimony in **µg/L**
0.87	Arsenic in **µg/L**
0	Cadmium in **µg/L**
150	Chromium III in **µg/L**
57	Chromium VI in **µg/L**
7	Copper in **µg/L**
2900	Iron in **µg/L**
15	Lead in **µg/L**
0	Mercury in **µg/L**
0	Nickel in **µg/L**
0	Selenium in **µg/L**
0	Silver in **µg/L**
10	Zinc in **µg/L**
1	Cyanide in **µg/L**
0	Phenol in **µg/L**
0	Carbon Tetrachloride in **µg/L**
0.37	Tetrachloroethylene in **µg/L**
0	Total Phthalates in **µg/L**
0	Diethylhexylphthalate in **µg/L**
11	Benzo(a)anthracene in **µg/L**
14	Benzo(a)pyrene in **µg/L**
10	Benzo(b)fluoranthene in **µg/L**
3.7	Benzo(k)fluoranthene in **µg/L**
12	Chrysene in **µg/L**
1.7	Dibenzo(a,h)anthracene in **µg/L**
5.7	Indeno(1,2,3-cd)pyrene in **µg/L**
0	Methyl-tert butyl ether in **µg/L**

Dilution Factor	1.5			
	TBEL applies if bolded		WQBEL applies if bolded	
A. Inorganics				
Ammonia	**Report**	mg/L	---	
Chloride	**Report**	µg/L	---	
Total Residual Chlorine	0.2	mg/L	**17**	µg/L
Total Suspended Solids	**30**	mg/L	---	
Antimony	**206**	µg/L	978	µg/L
Arsenic	**104**	µg/L	15	µg/L
Cadmium	**10.2**	µg/L	0.2767	µg/L
Chromium III	323	µg/L	**119.6**	µg/L
Chromium VI	323	µg/L	**11.7**	µg/L
Copper	**242**	µg/L	12.6	µg/L
Iron	5000	µg/L	**1000**	µg/L
Lead	160	µg/L	**3.31**	µg/L
Mercury	**0.739**	µg/L	1.38	µg/L
Nickel	**1450**	µg/L	81.7	µg/L
Selenium	**235.8**	µg/L	7.6	µg/L
Silver	**35.1**	µg/L	5.6	µg/L
Zinc	**420**	µg/L	181.4	µg/L
Cyanide	**178**	mg/L	7.9	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	458	µg/L
C. Halogenated VOCs				
Carbon Tetrachloride	**4.4**	µg/L	2.4	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	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	---	µg/L
Diethylhexyl phthalate	**101**	µg/L	3.4	µg/L
Total Group I Polycyclic Aromatic Hydrocarbons	**1.0**	µg/L	---	
Benzo(a)anthracene	1.0	µg/L	**0.0058**	µg/L
Benzo(a)pyrene	1.0	µg/L	**0.0058**	µg/L
Benzo(b)fluoranthene	1.0	µg/L	**0.0058**	µg/L
Benzo(k)fluoranthene	1.0	µg/L	**0.0058**	µg/L
Chrysene	1.0	µg/L	**0.0058**	µg/L
Dibenzo(a,h)anthracene	1.0	µg/L	**0.0058**	µg/L
Indeno(1,2,3-cd)pyrene	1.0	µg/L	**0.0058**	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	31	µg/L
tert-Butyl Alcohol	**120**	µg/L	---	
tert-Amyl Methyl Ether	**90**	µg/L	---	

From: Keohane, Kathleen (DEP)
To: Carlo Lombardo
Cc: Ruan, Xiaodan (DEP); Vakalopoulos, Catherine (DEP)
Subject: Arlington Town Yard, 51 Grove St, Arlington Dilution Calculations for NOI
Date: Tuesday, July 20, 2021 1:59:08 PM
Attachments: image002.jpg
image003.jpg
StreamStats Rev. 1.pdf
Culvert Opening.PNG
Dilution Calcs.xlsx

Okay, Carlo –

The 7Q10 of 0.176 cfs (.114 MGD) and the dilution factor calculation of 1.53 using a design flow of 150 gpm (0.216 MGD) for the proposed discharge to Mill Brook from the Arlington Town Yard at 51 Grove Street in your revised calculation is correct.

Here is water quality information to assist you with filling out the NOI (some of which you already have):

Waterbody and ID: Mill Brook (MA71-07) in the Boston Harbor: Mystic River Watershed
Classification: B, Warm water fishery
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 "MA71-07" to see the causes of impairments.
TMDLs: There are approved TMDL (pathogens and phosphorus) for this segment.

As you may know, 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) using ePLACE. Instructions on how to apply are located here: https://www.mass.gov/how-to/wm-15-npdes-general-permit-notice-of-intent and information on how to get ePLACE technical assistance is available on the ePLACE Portal webpage: https://eplace.eea.mass.gov/citizenaccess/.

Please let me know if you have any questions.

From: Carlo Lombardo <CLombardo@lrt-llc.net>
Sent: Tuesday, July 20, 2021 1:07 PM
To: Keohane, Kathleen (DEP) <Kathleen.Keohane@mass.gov>
Subject: RE: Dilution Calculations for NOI

Hi Kathleen,

I see exactly what you are saying.
Upon refinement of my search criteria and an improved delineation of
the basin I am given a 7q10 value of 0.176 cubic feet per second.
According to my calculations this gives a DF of 1.53. Significantly lower than my previous model.
I have adjusted my calculations and attached them alongside the revised delineation.

Thank you,

Carlo Lombardo
Staff Scientist

Lockwood Remediation Technologies, LLC
89 Crawford Street
Leominster, MA 01453
O: 774-450-7177
F: 888-835-0617
clombardo@lrt-llc.net

From: Keohane, Kathleen (DEP) <kathleen.keohane@state.ma.us>
Sent: Tuesday, July 20, 2021 11:42 AM
To: Carlo Lombardo <CLombardo@lrt-llc.net>
Subject: FW: Dilution Calculations for NOI

The segmant is MA71-07.

From: Keohane, Kathleen (DEP)
Sent: Tuesday, July 20, 2021 11:09 AM
To: Carlo Lombardo <CLombardo@lrt-llc.net>
Subject: RE: Dilution Calculations for NOI

I have reviewed your calculations, and you should use the StreamStats value for the discharge point, not the 7Q10 at the gage. The drainage area at that gage is greater than at the discharge point. When I run StreamStats at the discharge point, I get 0.19 cfs. I have attached my report, but you may want to run again with better StreamStats version than I have at home. I also noticed that the values in the "Assumptions" on the calculation sheet were leftover from a previous site.

Let me know if you have any questions. I can give you a quick turnaround now that I have done an initial review.

From: Carlo Lombardo <CLombardo@lrt-llc.net> that
Sent: Monday, July 19, 2021 2:02 PM
To: Ruan, Xiaodan (DEP) <xiaodan.ruan@mass.gov>
Cc: Keohane, Kathleen (DEP) <Kathleen.Keohane@mass.gov>
Subject: Dilution Calculations for NOI

Hi Xiaodan,

I hope this message finds you well. Please see attached dilution calculations for Arlington Town Yard at 51 Grove Street Arlington, MA for your review and approval.

The project:
Arlington Town Yard
51 Grove Street Arlington, MA
We plan to discharge to Mill Brook (MA71-01) via a culvert opening at 42.419843, -71.163460.

The 7 Day 10 Year Low Flow value given by streamstats report is 0.84 CFS and the calculated dilution factor at 150 GPM is 3.51.

Can you please confirm these values are accurate?

Thank you,

Carlo Lombardo
Staff Scientist

Lockwood Remediation Technologies, LLC
89 Crawford Street
Leominster, MA 01453
O: 774-450-7177
F: 888-835-0617
clombardo@lrt-llc.net

DILUTION CALCULATIONS
Arlington Town Yard
Arlington, MA

Calculate Dilution Factor (DF) for project based on 7 Day 10 Year (7Q10) Low Flow values

Calculate DF based on EPA formula $(Q_S + Q_D)/Q_D$, where Q_S is 7Q10 in million gallons per day (MGD) and Q_D is discharge flow in MGD

ASSUMPTIONS FOR 150 GPM SYSTEM

7Q10 is 0.176 cubic feet per second (cfs) - from StreamStats 4.6.1
A conversion of 7.48 is used to convert cubic feet to gallons
A design flow rate of 150 gallons per minute (gpm) is assumed

CALCULATIONS

7q10 Low Flow Value (Q_S)

$$Q_S = \frac{0.176 ft^3}{sec} \times \frac{7.48 \text{ gallons}}{ft^3} \times \frac{86{,}400 \text{ sec}}{day} \times \frac{1 \text{ MG}}{1{,}000{,}000 \text{ gallons}} = 0.114 \text{ MGD}$$

Discharge Flow Rate (Q_D)

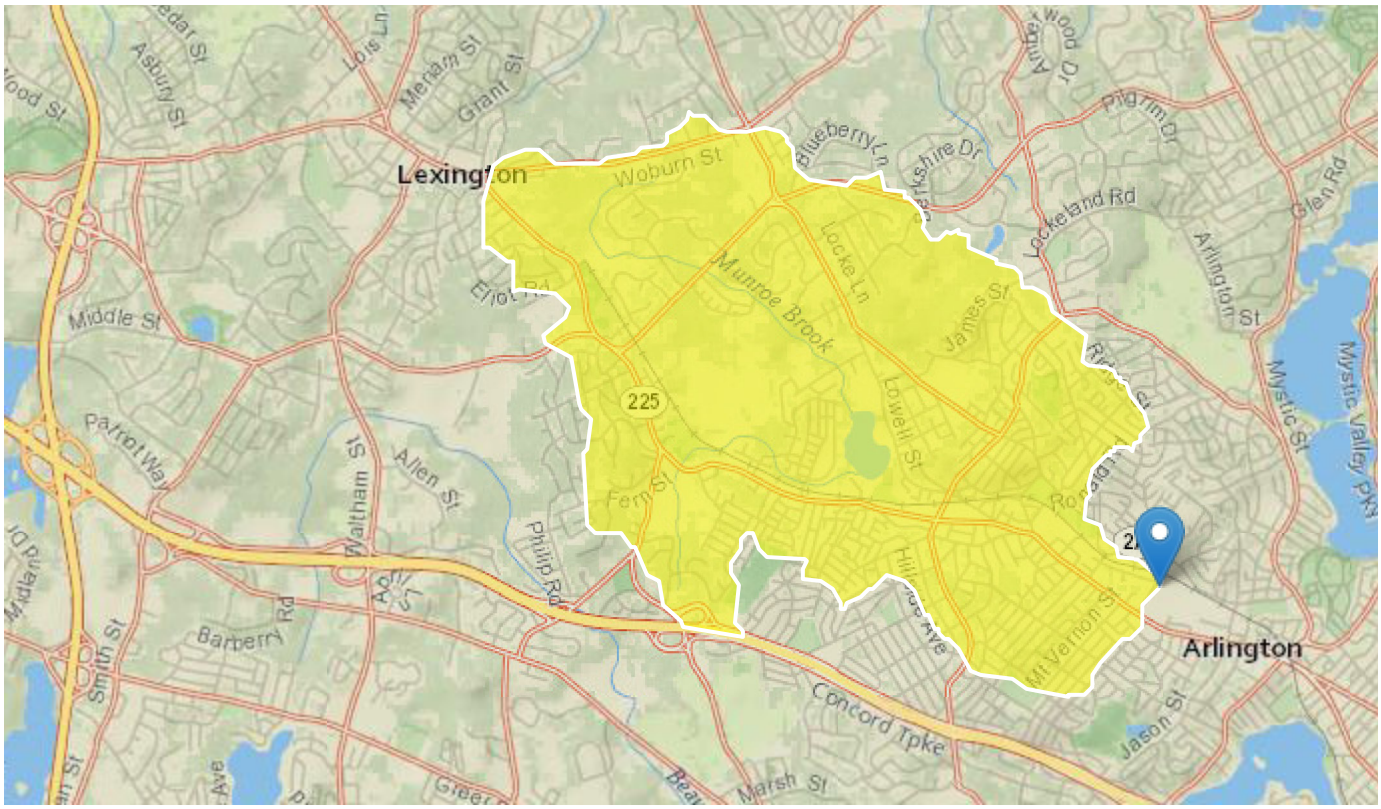
$$Q_D = \frac{150 \text{ gallons}}{min} \times \frac{1{,}440 \text{ min}}{day} \times \frac{1MG}{1{,}000{,}000 \text{ gallons}} = 0.216 \text{ MGD}$$

Dilution Factor (DF)

$$DF = \frac{Q_S + Q_D}{Q_D} = \frac{0.114 \text{ MGD} + 0.216 \text{ MDG}}{0.216 \text{ MGD}} = 1.53$$

StreamStats e rt r ingt n

egi n ID: MA
Works ace ID: MA20210720164939919000n
C icked P int (Latitude, L ngitude): 42.42000, -71.16396 n
Time: 2021-07-20 12:49:57 -0400



Streamstats based off of closest poi t to proposed discharge. Segme t ID: MA71-07

asin Characteristics

Parameter C de	Parameter Descri ti n n	Va ue	Unit
DRNAREA	Area that drains to a point on a stream n	4.5	square miles
BSLDEM250	Mean basin slope computed from 1:250K DEM	3.066	percent
DRFTPERSTR	Area of stratified drift per unit of stream length	0.17	square mile per mile
MAREGION	Region of Massachusetts 0 for Eastern 1 for Western	0	dimensionless

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

Parameter Code	Parameter Name	Value	Units	Min Limit	Max Limit
DRNAREA	Drainage Area	.5	square miles	.61	149
BSLDEM250	Mean Basin Slope from 250K DEM	3.066	percent	.32	24.6
DRFTPERSTR	Stratified Drift per Stream Length	0.17	square mile per mile	0	1.29
MAREGION	Massachusetts Region	0	dimensionless		1

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

PIl: Prediction Interval-Lower, PIu: Prediction Interval-Upper, ASEp: Average Standard Error of Prediction, SE: Standard Error (other -- see report)

Statistic	Value	Unit	PIl	PIu	SEp	ASEp
7 Day 2 Year Low Flow	0.417	ft^3/s	.15	1.12	49.5	49.5
7 Day 10 Year Low Flow	0.176	ft^3/s	.0494	0.584	70.8	70.8

Low-Flow Statistics Citations

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

Applicatio sio : 4.6.1

St amStats S vic s sio : 1.2.22

NSS S vic s sio : 2.1.2

Appendix B

Laboratory Data

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July 20, 2021

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

Project Location: Arlington Town Yard
Client Job Number:
Project Number: 2-2237
Laboratory Work Order Number: 21G0623

Enclosed are results of analyses for samples received by the laboratory on July 13, 2021. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kerry K. McGee
Project Manager

Table of Contents

Sample Summary 4

Case Narrative 5

Sample Results 8

21G0623-01 8

21G0623-02 17

Sample Preparation Information 19

QC Data 21

Volatile Organic Compounds by GC/MS 21

B285929 21

Semivolatile Organic Compounds by GC/MS 23

B286032 23

Semivolatile Organic Compounds by - GC/MS 24

B285899 24

Polychlorinated Biphenyls By GC/ECD 28

B285906 28

Metals Analyses (Total) 29

B285894 29

B285900 29

B285904 30

B286082 30

Conventional Chemistry Parameters by EPA/APHA/SW-846 Methods (Total) 31

B285869 31

B285873 31

B285890 31

B285895 31

Table of Contents (continued)

B286026 32

B286215 32

Drinking Water Organics EPA 504.1 33

B286276 33

Dual Column RPD Report 34

Flag/Qualifier Summary 39

Certifications 40

Chain of Custody/Sample Receipt 44

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

REPORT DATE: 7/20/2021

PURCHASE ORDER NUMBER: 2-2237

PROJECT NUMBER: 2-2237

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 21G0623

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

PROJECT LOCATION: Arlington Town Yard

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Influent	21G0623-01	Ground Water		-	MA M-MA-086/CT PH-0574/NY11148
				608.3	
				624.1	
				625.1	
				EPA 1664B	
				EPA 200.7	
				EPA 200.8	
				EPA 245.1	
				EPA 300.0	
				EPA 504.1	
				SM19-22 4500 NH3 C	
				SM21-22 2540D	
				SM21-22 3500 Cr B	
				SM21-22 4500 CL G	
				SM4500	MA M-MA-086/CT PH-0574/NY11148
				Tri Chrome Calc.	
Receiving Water	21G0623-02	Ground Water		EPA 200.7	
				EPA 200.8	
				EPA 245.1	
				SM19-22 4500 NH3 C	
				SM21-22 3500 Cr B	
				Tri Chrome Calc.	

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CASE NARRATIVE SUMMARY

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

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608.3

Qualifications:

S-13

Surrogate recovery is outside of control limits on both columns.
Data validation is not affected since all results are "not detected" and bias is on the high side.

Analyte & Samples(s) Qualified:

Decachlorobiphenyl
B285906-BLK1

Decachlorobiphenyl [2C]
B285906-BLK1

Tetrachloro-m-xylene
21G0623-01[Influent]

Tetrachloro-m-xylene [2C]
21G0623-01[Influent]

625.1

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:

1,2,4-Trichlorobenzene
21G0623-01[Influent], B285899-BLK1, B285899-BS1, B285899-BSD1

2-Chloronaphthalene
21G0623-01[Influent], B285899-BLK1, B285899-BS1, B285899-BSD1

Hexachlorocyclopentadiene
21G0623-01[Influent], B285899-BLK1, B285899-BS1, B285899-BSD1

Hexachloroethane
21G0623-01[Influent], B285899-BLK1, B285899-BS1, B285899-BSD1

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:

Benzidine
21G0623-01[Influent], B285899-BLK1, B285899-BS1, B285899-BSD1

RL-12

Elevated reporting limit due to matrix interference.

Analyte & Samples(s) Qualified:

21G0623-01[Influent]

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:

Benzidine
21G0623-01[Influent], B285899-BLK1, B285899-BS1, B285899-BSD1, S061535-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
21G0623-01[Influent], B285899-BLK1, B285899-BS1, B285899-BSD1, S061535-CCV1

V-06

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

Analyte & Samples(s) Qualified:

N-Nitrosodimethylamine
21G0623-01[Influent]

Pentachlorophenol (SIM)
S061550-CCV1

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

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:

Benzidine

21G0623-01[Influent], B285899-BLK1, B285899-BS1, B285899-BSD1, S061535-CCV1

V-35

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

Analyte & Samples(s) Qualified:

Benzidine

21G0623-01[Influent]

EPA 200.8

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:

Antimony

B285900-BS1

The results of analyses reported only relate to samples submitted to Con-Test, a Pace 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

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

Project Location: Arlington Town Yard | Sample Description: | Work Order: 21G0623

Date Received: 7/13/2021

Field Sample #: Influent | Sampled: 7/13/2021 12:00

Sample ID: 21G0623-01

Sample Matrix: Ground Water

Volatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acetone	<2.35	50.0	2.35	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
tert-Amyl Methyl Ether (TAME)	<0.150	0.500	0.150	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
Benzene	<0.130	1.00	0.130	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
Bromodichloromethane	<0.140	2.00	0.140	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
Bromoform	<0.290	2.00	0.290	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
Bromomethane	<1.07	2.00	1.07	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
tert-Butyl Alcohol (TBA)	<5.34	20.0	5.34	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
Carbon Tetrachloride	<0.170	2.00	0.170	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
Chlorobenzene	<0.0800	2.00	0.0800	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
Chlorodibromomethane	<0.160	2.00	0.160	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
Chloroethane	<0.370	2.00	0.370	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
Chloroform	<0.190	2.00	0.190	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
Chloromethane	<0.380	2.00	0.380	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
1,2-Dichlorobenzene	<0.100	2.00	0.100	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
1,3-Dichlorobenzene	<0.0900	2.00	0.0900	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
1,4-Dichlorobenzene	<0.110	2.00	0.110	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
1,2-Dichloroethane	<0.320	2.00	0.320	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
1,1-Dichloroethane	<0.160	2.00	0.160	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
1,1-Dichloroethylene	<0.160	2.00	0.160	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
trans-1,2-Dichloroethylene	<0.170	2.00	0.170	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
1,2-Dichloropropane	<0.180	2.00	0.180	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
cis-1,3-Dichloropropene	<0.120	2.00	0.120	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
1,4-Dioxane	<21.5	50.0	21.5	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
trans-1,3-Dichloropropene	<0.150	2.00	0.150	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
Ethanol	<34.2	50.0	34.2	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
Ethylbenzene	<0.0900	2.00	0.0900	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
Methyl tert-Butyl Ether (MTBE)	<0.170	2.00	0.170	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
Methylene Chloride	<0.300	5.00	0.300	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
1,1,2,2-Tetrachloroethane	<0.0900	2.00	0.0900	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
Tetrachloroethylene	0.370	2.00	0.200	µg/L	1	J	624.1	7/14/21	7/14/21 18:03	EEH
Toluene	<0.110	1.00	0.110	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
1,1,1-Trichloroethane	<0.170	2.00	0.170	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
1,1,2-Trichloroethane	<0.150	2.00	0.150	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
Trichloroethylene	<0.180	2.00	0.180	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
Trichlorofluoromethane (Freon 11)	<0.190	2.00	0.190	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
Vinyl Chloride	<0.200	2.00	0.200	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
m+p Xylene	<0.180	2.00	0.180	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH
o-Xylene	<0.0900	1.00	0.0900	µg/L	1		624.1	7/14/21	7/14/21 18:03	EEH

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	102	70-130		7/14/21 18:03
Toluene-d8	97.3	70-130		7/14/21 18:03
4-Bromofluorobenzene	95.3	70-130		7/14/21 18:03

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

Project Location: Arlington Town Yard | Sample Description: | Work Order: 21G0623

Date Received: 7/13/2021

Field Sample #: Influent | Sampled: 7/13/2021 12:00

Sample ID: 21G0623-01

Sample Matrix: Ground Water

Sample Flags: RL-12

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene (SIM)	11	0.20	0.14	µg/L	4		625.1	7/14/21	7/19/21 9:45	IMR
Benzo(a)pyrene (SIM)	14	0.39	0.087	µg/L	4		625.1	7/14/21	7/19/21 9:45	IMR
Benzo(b)fluoranthene (SIM)	10	0.20	0.11	µg/L	4		625.1	7/14/21	7/19/21 9:45	IMR
Benzo(k)fluoranthene (SIM)	3.7	0.79	0.071	µg/L	4		625.1	7/14/21	7/19/21 9:45	IMR
Bis(2-ethylhexyl)phthalate (SIM)	<1.9	3.9	1.9	µg/L	4		625.1	7/14/21	7/19/21 9:45	IMR
Chrysene (SIM)	12	0.79	0.087	µg/L	4		625.1	7/14/21	7/19/21 9:45	IMR
Dibenz(a,h)anthracene (SIM)	1.7	0.39	0.11	µg/L	4		625.1	7/14/21	7/19/21 9:45	IMR
Indeno(1,2,3-cd)pyrene (SIM)	5.7	0.39	0.11	µg/L	4		625.1	7/14/21	7/19/21 9:45	IMR
Pentachlorophenol (SIM)	<1.6	3.9	1.6	µg/L	4		625.1	7/14/21	7/19/21 9:45	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol (SIM)	26.6	15-110		7/19/21 9:45
Phenol-d6 (SIM)	29.8	15-110		7/19/21 9:45
Nitrobenzene-d5	64.6	30-130		7/19/21 9:45
2-Fluorobiphenyl	76.9	30-130		7/19/21 9:45
2,4,6-Tribromophenol (SIM)	105	15-110		7/19/21 9:45
p-Terphenyl-d14	82.2	30-130		7/19/21 9:45

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

Project Location: Arlington Town Yard | Sample Description: | Work Order: 21G0623

Date Received: 7/13/2021

Field Sample #: Influent | Sampled: 7/13/2021 12:00

Sample ID: 21G0623-01

Sample Matrix: Ground Water

Sample Flags: RL-12

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	<19.7	19.7	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
Acenaphthylene	<19.7	19.7	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
Anthracene	<19.7	19.7	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
Benzidine	<78.8	78.8	µg/L	4	V-04, V-05, R-05, V-34, V-35	625.1	7/14/21	7/19/21 21:36	BGL
Benzo(g,h,i)perylene	<19.7	19.7	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
4-Bromophenylphenylether	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
Butylbenzylphthalate	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
4-Chloro-3-methylphenol	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
Bis(2-chloroethyl)ether	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
Bis(2-chloroisopropyl)ether	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
2-Chloronaphthalene	<39.4	39.4	µg/L	4	L-04	625.1	7/14/21	7/19/21 21:36	BGL
2-Chlorophenol	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
4-Chlorophenylphenylether	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
Di-n-butylphthalate	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
1,3-Dichlorobenzene	<19.7	19.7	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
1,4-Dichlorobenzene	<19.7	19.7	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
1,2-Dichlorobenzene	<19.7	19.7	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
3,3-Dichlorobenzidine	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
2,4-Dichlorophenol	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
Diethylphthalate	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
2,4-Dimethylphenol	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
Dimethylphthalate	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
4,6-Dinitro-2-methylphenol	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
2,4-Dinitrophenol	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
2,4-Dinitrotoluene	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
2,6-Dinitrotoluene	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
Di-n-octylphthalate	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
1,2-Diphenylhydrazine/Azobenzene	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
Bis(2-Ethylhexyl)phthalate	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
Fluoranthene	<19.7	19.7	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
Fluorene	<19.7	19.7	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
Hexachlorobenzene	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
Hexachlorobutadiene	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
Hexachlorocyclopentadiene	<39.4	39.4	µg/L	4	L-04	625.1	7/14/21	7/19/21 21:36	BGL
Hexachloroethane	<39.4	39.4	µg/L	4	L-04	625.1	7/14/21	7/19/21 21:36	BGL
Isophorone	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
Naphthalene	<19.7	19.7	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
Nitrobenzene	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
2-Nitrophenol	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
4-Nitrophenol	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
N-Nitrosodimethylamine	<39.4	39.4	µg/L	4	V-06	625.1	7/14/21	7/19/21 21:36	BGL
N-Nitrosodi-n-propylamine	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
2-Methylnaphthalene	<19.7	19.7	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL

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

Project Location: Arlington Town Yard | Sample Description: | Work Order: 21G0623

Date Received: 7/13/2021

Field Sample #: Influent | Sampled: 7/13/2021 12:00

Sample ID: 21G0623-01

Sample Matrix: Ground Water

Sample Flags: RL-12

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Phenanthrene	<19.7	19.7	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
2-Methylphenol	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
Phenol	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
3/4-Methylphenol	<78.8	78.8	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
Pyrene	<19.7	19.7	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL
1,2,4-Trichlorobenzene	<19.7	19.7	µg/L	4	L-04	625.1	7/14/21	7/19/21 21:36	BGL
2,4,6-Trichlorophenol	<39.4	39.4	µg/L	4		625.1	7/14/21	7/19/21 21:36	BGL

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	28.0	15-110		7/19/21 21:36
Phenol-d6	32.0	15-110		7/19/21 21:36
Nitrobenzene-d5	59.9	30-130		7/19/21 21:36
2-Fluorobiphenyl	73.6	30-130		7/19/21 21:36
2,4,6-Tribromophenol	74.6	15-110		7/19/21 21:36
p-Terphenyl-d14	116	30-130		7/19/21 21:36

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

Project Location: Arlington Town Yard | Sample Description: | Work Order: 21G0623

Date Received: 7/13/2021

Field Sample #: Influent | Sampled: 7/13/2021 12:00

Sample ID: 21G0623-01

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]	<0.0877	0.0985	0.0877	µg/L	1		608.3	7/14/21	7/17/21 4:01	JMB
Aroclor-1221 [1]	<0.0813	0.0985	0.0813	µg/L	1		608.3	7/14/21	7/17/21 4:01	JMB
Aroclor-1232 [1]	<0.0828	0.0985	0.0828	µg/L	1		608.3	7/14/21	7/17/21 4:01	JMB
Aroclor-1242 [1]	<0.0867	0.0985	0.0867	µg/L	1		608.3	7/14/21	7/17/21 4:01	JMB
Aroclor-1248 [1]	<0.0823	0.0985	0.0823	µg/L	1		608.3	7/14/21	7/17/21 4:01	JMB
Aroclor-1254 [1]	<0.0926	0.0985	0.0926	µg/L	1		608.3	7/14/21	7/17/21 4:01	JMB
Aroclor-1260 [1]	<0.0808	0.0985	0.0808	µg/L	1		608.3	7/14/21	7/17/21 4:01	JMB

Surrogates	% Recovery		Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	133		30-150		7/17/21 4:01
Decachlorobiphenyl [2]	131		30-150		7/17/21 4:01
Tetrachloro-m-xylene [1]	**172**	*	30-150	S-13	7/17/21 4:01
Tetrachloro-m-xylene [2]	**166**	*	30-150	S-13	7/17/21 4:01

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

Project Location: Arlington Town Yard | Sample Description: | Work Order: 21G0623

Date Received: 7/13/2021

Field Sample #: Influent | Sampled: 7/13/2021 12:00

Sample ID: 21G0623-01

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	7/14/21	7/15/21 11:29	QNW
Arsenic	0.87	0.80		µg/L	1		EPA 200.8	7/14/21	7/15/21 11:29	QNW
Cadmium	ND	0.20		µg/L	1		EPA 200.8	7/14/21	7/15/21 11:29	QNW
Chromium	150	1.0		µg/L	1		EPA 200.8	7/14/21	7/15/21 11:29	QNW
Chromium, Trivalent	0.093			mg/L	1		Tri Chrome Calc.	7/14/21	7/15/21 11:29	QNW
Copper	7.0	1.0		µg/L	1		EPA 200.8	7/14/21	7/15/21 11:29	QNW
Iron	2.9	0.050		mg/L	1		EPA 200.7	7/14/21	7/15/21 11:48	AJL
Lead	15	0.50		µg/L	1		EPA 200.8	7/15/21	7/16/21 13:07	QNW
Mercury	ND	0.00010		mg/L	1		EPA 245.1	7/14/21	7/15/21 11:02	CJV
Nickel	ND	5.0		µg/L	1		EPA 200.8	7/14/21	7/15/21 11:29	QNW
Selenium	ND	5.0	0.78	µg/L	1		EPA 200.8	7/14/21	7/15/21 11:29	QNW
Silver	ND	0.20		µg/L	1		EPA 200.8	7/14/21	7/15/21 11:29	QNW
Zinc	10	10		µg/L	1		EPA 200.8	7/14/21	7/15/21 11:29	QNW
Hardness	130	1.4		mg/L	1		EPA 200.7	7/14/21	7/20/21 11:25	AJL

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

Project Location: Arlington Town Yard | Sample Description: | Work Order: 21G0623

Date Received: 7/13/2021

Field Sample #: Influent | Sampled: 7/13/2021 12:00

Sample ID: 21G0623-01

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	0.30	0.22	mg/L	1		SM19-22 4500 NH3 C	7/15/21	7/19/21 9:30	EC
Chloride	450	10		mg/L	10		EPA 300.0	7/19/21	7/19/21 13:52	IS
Chlorine, Residual	ND	0.020		mg/L	1		SM21-22 4500 CL G	7/13/21	7/13/21 20:00	ALG
Hexavalent Chromium	0.057	0.0040		mg/L	1		SM21-22 3500 Cr B	7/13/21	7/13/21 22:00	DJM
Total Suspended Solids	52	1.7		mg/L	1		SM21-22 2540D	7/14/21	7/14/21 13:26	LL
Silica Gel Treated HEM (SGT-HEM)	ND	2.8		mg/L	1		EPA 1664B	7/14/21	7/14/21 9:15	LL

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

Project Location: Arlington Town Yard | Sample Description: | Work Order: 21G0623

Date Received: 7/13/2021

Field Sample #: Influent | Sampled: 7/13/2021 12:00

Sample ID: 21G0623-01

Sample Matrix: Ground Water

Drinking Water Organics EPA 504.1

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
1,2-Dibromoethane (EDB) (1)	ND	0.020	0.0079	µg/L	1		EPA 504.1	7/19/21	7/19/21 20:53	JMB

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,3-Dibromopropane (1)	96.4	70-130		7/19/21 20:53

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

Project Location: Arlington Town Yard | Sample Description: | Work Order: 21G0623

Date Received: 7/13/2021

Field Sample #: Influent | Sampled: 7/13/2021 12:00

Sample ID: 21G0623-01

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
Cyanide	0.001 - J	0.005	0.001	mg/L	1		SM4500	7/15/21	7/15/21 12:38	AAL

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Project Location: Arlington Town Yard | Sample Description: | Work Order: 21G0623

Date Received: 7/13/2021

Field Sample #: Receiving Water | Sampled: 7/13/2021 12:00

Sample ID: 21G0623-02

Sample Matrix: Ground Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	ND	1.0		µg/L	1		EPA 200.8	7/14/21	7/15/21 11:39	QNW
Arsenic	1.4	0.80		µg/L	1		EPA 200.8	7/14/21	7/15/21 11:39	QNW
Cadmium	ND	0.20		µg/L	1		EPA 200.8	7/14/21	7/15/21 11:39	QNW
Chromium	29	1.0		µg/L	1		EPA 200.8	7/14/21	7/15/21 11:39	QNW
Chromium, Trivalent	0.018			mg/L	1		Tri Chrome Calc.	7/14/21	7/15/21 11:39	QNW
Copper	3.9	1.0		µg/L	1		EPA 200.8	7/14/21	7/15/21 11:39	QNW
Iron	2.0	0.050		mg/L	1		EPA 200.7	7/14/21	7/15/21 0:05	AJL
Lead	5.5	0.50		µg/L	1		EPA 200.8	7/15/21	7/16/21 13:09	QNW
Mercury	ND	0.00010		mg/L	1		EPA 245.1	7/14/21	7/15/21 11:03	CJV
Nickel	ND	5.0		µg/L	1		EPA 200.8	7/14/21	7/15/21 11:39	QNW
Selenium	ND	5.0	0.78	µg/L	1		EPA 200.8	7/14/21	7/15/21 11:39	QNW
Silver	0.99	0.20		µg/L	1		EPA 200.8	7/14/21	7/15/21 11:39	QNW
Zinc	12	10		µg/L	1		EPA 200.8	7/14/21	7/15/21 11:39	QNW
Hardness	52	1.4		mg/L	1		EPA 200.7	7/14/21	7/15/21 0:05	AJL

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

Project Location: Arlington Town Yard | Sample Description: | Work Order: 21G0623

Date Received: 7/13/2021

Field Sample #: Receiving Water | Sampled: 7/13/2021 12:00

Sample ID: 21G0623-02

Sample Matrix: Ground Water

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	ND	0.30	0.22	mg/L	1		SM19-22 4500 NH3 C	7/15/21	7/19/21 9:30	EC
Hexavalent Chromium	0.011	0.0040		mg/L	1		SM21-22 3500 Cr B	7/13/21	7/13/21 22:00	DJM

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

Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21G0623-01 [Influent]	B285906	1020	5.00	07/14/21

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21G0623-01 [Influent]	B285929	5	5.00	07/14/21

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21G0623-01 [Influent]	B285899	1020	1.00	07/14/21

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21G0623-01 [Influent]	B286032	1020	1.00	07/14/21

EPA 1664B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21G0623-01 [Influent]	B285890	500		07/14/21

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21G0623-01 [Influent]	B285894	50.0	50.0	07/14/21
21G0623-01 [Influent]	B285894	50.0		07/14/21
21G0623-02 [Receiving Water]	B285894	50.0	50.0	07/14/21
21G0623-02 [Receiving Water]	B285894	50.0		07/14/21

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21G0623-01 [Influent]	B285900	50.0	50.0	07/14/21
21G0623-02 [Receiving Water]	B285900	50.0	50.0	07/14/21

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21G0623-01RE1 [Influent]	B286082	50.0	50.0	07/15/21
21G0623-02RE1 [Receiving Water]	B286082	50.0	50.0	07/15/21

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date

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

Sample Extraction Data

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21G0623-01 [Influent]	B285904	6.00	6.00	07/14/21
21G0623-02 [Receiving Water]	B285904	6.00	6.00	07/14/21

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21G0623-01 [Influent]	B286215	10.0	10.0	07/19/21

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

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21G0623-01 [Influent]	B286276	35.3	35.0	07/19/21

SM19-22 4500 NH3 C

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21G0623-01 [Influent]	B286026	100	100	07/15/21
21G0623-02 [Receiving Water]	B286026	100	100	07/15/21

SM21-22 2540D

Lab Number [Field ID]	Batch	Initial [mL]	Date
21G0623-01 [Influent]	B285895	300	07/14/21

SM21-22 3500 Cr B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21G0623-01 [Influent]	B285873	50.0	50.0	07/13/21
21G0623-02 [Receiving Water]	B285873	50.0	50.0	07/13/21

SM21-22 4500 CL G

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
21G0623-01 [Influent]	B285869	100	100	07/13/21

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

Lab Number [Field ID]	Batch	Initial [mL]	Date
21G0623-01 [Influent]	B285900	50.0	07/14/21
21G0623-02 [Receiving Water]	B285900	50.0	07/14/21

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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 B285929 - SW-846 5030B										
Blank (B285929-BLK1)				Prepared & Analyzed: 07/14/21						
Acetone	ND	50.0	µg/L							
tert-Amyl Methyl Ether (TAME)	ND	0.500	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							
tert-Butyl Alcohol (TBA)	ND	20.0	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							
1,4-Dioxane	ND	50.0	µg/L							
trans-1,3-Dichloropropene	ND	2.00	µg/L							
Ethanol	ND	50.0	µg/L							
Ethylbenzene	ND	2.00	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	2.00	µg/L							
Methylene Chloride	ND	5.00	µg/L							
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	*25.0*		µg/L	25.0		100	70-130			
Surrogate: Toluene-d8	*24.2*		µg/L	25.0		96.8	70-130			
Surrogate: 4-Bromofluorobenzene	*23.6*		µg/L	25.0		94.4	70-130			
LCS (B285929-BS1)				Prepared & Analyzed: 07/14/21						
Acetone	200	50.0	µg/L	200		102	70-160			†
tert-Amyl Methyl Ether (TAME)	21	0.500	µg/L	20.0		107	70-130			
Benzene	20	1.00	µg/L	20.0		97.8	65-135			
Bromodichloromethane	22	2.00	µg/L	20.0		111	65-135			
Bromoform	23	2.00	µg/L	20.0		116	70-130			
Bromomethane	12	2.00	µg/L	20.0		57.9	15-185			
tert-Butyl Alcohol (TBA)	180	20.0	µg/L	200		87.8	40-160			†
Carbon Tetrachloride	23	2.00	µg/L	20.0		113	70-130			
Chlorobenzene	21	2.00	µg/L	20.0		105	65-135			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B285929 - SW-846 5030B										
LCS (B285929-BS1)				Prepared & Analyzed: 07/14/21						
Chlorodibromomethane	22	2.00	µg/L	20.0		109	70-135			
Chloroethane	19	2.00	µg/L	20.0		97.2	40-160			
Chloroform	21	2.00	µg/L	20.0		105	70-135			
Chloromethane	16	2.00	µg/L	20.0		79.0	20-205			
1,2-Dichlorobenzene	20	2.00	µg/L	20.0		99.7	65-135			
1,3-Dichlorobenzene	21	2.00	µg/L	20.0		105	70-130			
1,4-Dichlorobenzene	20	2.00	µg/L	20.0		101	65-135			
1,2-Dichloroethane	20	2.00	µg/L	20.0		102	70-130			
1,1-Dichloroethane	21	2.00	µg/L	20.0		106	70-130			
1,1-Dichloroethylene	22	2.00	µg/L	20.0		109	50-150			
trans-1,2-Dichloroethylene	19	2.00	µg/L	20.0		93.4	70-130			
1,2-Dichloropropane	21	2.00	µg/L	20.0		106	35-165			
cis-1,3-Dichloropropene	20	2.00	µg/L	20.0		101	25-175			
1,4-Dioxane	180	50.0	µg/L	200		91.1	40-130			†
trans-1,3-Dichloropropene	22	2.00	µg/L	20.0		108	50-150			
Ethanol	160	50.0	µg/L	200		82.4	40-160			
Ethylbenzene	20	2.00	µg/L	20.0		102	60-140			
Methyl tert-Butyl Ether (MTBE)	21	2.00	µg/L	20.0		103	70-130			
Methylene Chloride	23	5.00	µg/L	20.0		114	60-140			
1,1,2,2-Tetrachloroethane	21	2.00	µg/L	20.0		103	60-140			
Tetrachloroethylene	21	2.00	µg/L	20.0		106	70-130			
Toluene	20	1.00	µg/L	20.0		102	70-130			
1,1,1-Trichloroethane	22	2.00	µg/L	20.0		109	70-130			
1,1,2-Trichloroethane	21	2.00	µg/L	20.0		106	70-130			
Trichloroethylene	22	2.00	µg/L	20.0		108	65-135			
Trichlorofluoromethane (Freon 11)	24	2.00	µg/L	20.0		121	50-150			
Vinyl Chloride	17	2.00	µg/L	20.0		84.1	5-195			
m+p Xylene	41	2.00	µg/L	40.0		103	70-130			
o-Xylene	21	1.00	µg/L	20.0		103	70-130			
Surrogate: 1,2-Dichloroethane-d4	*24.8*		µg/L	25.0		99.1	70-130			
Surrogate: Toluene-d8	*23.9*		µg/L	25.0		95.6	70-130			
Surrogate: 4-Bromofluorobenzene	*25.0*		µg/L	25.0		100	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 B286032 - SW-846 3510C										
Blank (B286032-BLK1)				Prepared & Analyzed: 07/15/21						
Benzo(a)anthracene (SIM)	ND	0.050	µg/L							
Benzo(a)pyrene (SIM)	ND	0.10	µg/L							
Benzo(b)fluoranthene (SIM)	ND	0.050	µg/L							
Benzo(k)fluoranthene (SIM)	ND	0.20	µg/L							
Bis(2-ethylhexyl)phthalate (SIM)	ND	1.0	µg/L							
Chrysene (SIM)	ND	0.20	µg/L							
Dibenz(a,h)anthracene (SIM)	ND	0.10	µg/L							
Indeno(1,2,3-cd)pyrene (SIM)	ND	0.10	µg/L							
Pentachlorophenol (SIM)	ND	1.0	µg/L							
Surrogate: 2-Fluorophenol (SIM)	*67.9*		µg/L	200		33.9	15-110			
Surrogate: Phenol-d6 (SIM)	*68.2*		µg/L	200		34.1	15-110			
Surrogate: Nitrobenzene-d5	*58.6*		µg/L	100		58.6	30-130			
Surrogate: 2-Fluorobiphenyl	*59.0*		µg/L	100		59.0	30-130			
Surrogate: 2,4,6-Tribromophenol (SIM)	*186*		µg/L	200		93.2	15-110			
Surrogate: p-Terphenyl-d14	*75.2*		µg/L	100		75.2	30-130			
LCS (B286032-BS1)				Prepared & Analyzed: 07/15/21						
Benzo(a)anthracene (SIM)	32.2	1.0	µg/L	50.0		64.3	33-143			
Benzo(a)pyrene (SIM)	31.8	2.0	µg/L	50.0		63.5	17-163			
Benzo(b)fluoranthene (SIM)	35.3	1.0	µg/L	50.0		70.6	24-159			
Benzo(k)fluoranthene (SIM)	34.4	4.0	µg/L	50.0		68.7	11-162			
Bis(2-ethylhexyl)phthalate (SIM)	38.1	20	µg/L	50.0		76.2	8-158			
Chrysene (SIM)	31.9	4.0	µg/L	50.0		63.8	17-168			
Dibenz(a,h)anthracene (SIM)	34.7	2.0	µg/L	50.0		69.3	10-227			
Indeno(1,2,3-cd)pyrene (SIM)	36.4	2.0	µg/L	50.0		72.7	10-171			
Pentachlorophenol (SIM)	35.5	20	µg/L	50.0		70.9	14-176			
Surrogate: 2-Fluorophenol (SIM)	*59.1*		µg/L	200		29.5	15-110			
Surrogate: Phenol-d6 (SIM)	*63.9*		µg/L	200		32.0	15-110			
Surrogate: Nitrobenzene-d5	*45.5*		µg/L	100		45.5	30-130			
Surrogate: 2-Fluorobiphenyl	*50.1*		µg/L	100		50.1	30-130			
Surrogate: 2,4,6-Tribromophenol (SIM)	*169*		µg/L	200		84.6	15-110			
Surrogate: p-Terphenyl-d14	*62.2*		µg/L	100		62.2	30-130			
LCS Dup (B286032-BSD1)				Prepared & Analyzed: 07/15/21						
Benzo(a)anthracene (SIM)	35.2	1.0	µg/L	50.0		70.4	33-143	9.08	53	
Benzo(a)pyrene (SIM)	34.6	2.0	µg/L	50.0		69.3	17-163	8.67	72	
Benzo(b)fluoranthene (SIM)	38.6	1.0	µg/L	50.0		77.3	24-159	8.98	71	
Benzo(k)fluoranthene (SIM)	37.4	4.0	µg/L	50.0		74.9	11-162	8.58	63	
Bis(2-ethylhexyl)phthalate (SIM)	41.6	20	µg/L	50.0		83.2	8-158	8.84	82	
Chrysene (SIM)	35.0	4.0	µg/L	50.0		70.0	17-168	9.21	87	
Dibenz(a,h)anthracene (SIM)	37.9	2.0	µg/L	50.0		75.8	10-227	8.98	126	
Indeno(1,2,3-cd)pyrene (SIM)	39.7	2.0	µg/L	50.0		79.4	10-171	8.73	99	
Pentachlorophenol (SIM)	38.9	20	µg/L	50.0		77.7	14-176	9.15	86	
Surrogate: 2-Fluorophenol (SIM)	*62.5*		µg/L	200		31.3	15-110			
Surrogate: Phenol-d6 (SIM)	*67.3*		µg/L	200		33.6	15-110			
Surrogate: Nitrobenzene-d5	*53.1*		µg/L	100		53.1	30-130			
Surrogate: 2-Fluorobiphenyl	*54.6*		µg/L	100		54.6	30-130			
Surrogate: 2,4,6-Tribromophenol (SIM)	*181*		µg/L	200		90.4	15-110			
Surrogate: p-Terphenyl-d14	*66.0*		µg/L	100		66.0	30-130			

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QUALITY CONTROL

Semivolatile Organic Compounds by - GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B285899 - SW-846 3510C										
Blank (B285899-BLK1)				Prepared: 07/14/21 Analyzed: 07/15/21						
Acenaphthene	ND	5.00	µg/L							
Acenaphthylene	ND	5.00	µg/L							
Anthracene	ND	5.00	µg/L							
Benzidine	ND	20.0	µg/L							R-05, V-04, V-05, V-34
Benzo(g,h,i)perylene	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-chloroethyl)ether	ND	10.0	µg/L							
Bis(2-chloroisopropyl)ether	ND	10.0	µg/L							
2-Chloronaphthalene	ND	10.0	µg/L							L-04
2-Chlorophenol	ND	10.0	µg/L							
4-Chlorophenylphenylether	ND	10.0	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							
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							L-04
Hexachloroethane	ND	10.0	µg/L							L-04
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-Nitrosodi-n-propylamine	ND	10.0	µg/L							
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							L-04
2,4,6-Trichlorophenol	ND	10.0	µg/L							
Surrogate: 2-Fluorophenol	*73.3*		µg/L	200		36.6	15-110			

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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 B285899 - SW-846 3510C											
Blank (B285899-BLK1)				Prepared: 07/14/21 Analyzed: 07/15/21							
Surrogate: Phenol-d6	*73.9*		µg/L	200		37.0		15-110			
Surrogate: Nitrobenzene-d5	*58.1*		µg/L	100		58.1		30-130			
Surrogate: 2-Fluorobiphenyl	*60.3*		µg/L	100		60.3		30-130			
Surrogate: 2,4,6-Tribromophenol	*174*		µg/L	200		87.2		15-110			
Surrogate: p-Terphenyl-d14	*107*		µg/L	100		107		30-130			
LCS (B285899-BS1)				Prepared: 07/14/21 Analyzed: 07/15/21							
Acenaphthene	27.5	5.00	µg/L	50.0		55.1		47-145			
Acenaphthylene	29.4	5.00	µg/L	50.0		58.7		33-145			
Anthracene	35.7	5.00	µg/L	50.0		71.3		27-133			
Benzidine	53.5	20.0	µg/L	50.0		107		40-140			V-04, V-05, R-05, V-34
Benzo(g,h,i)perylene	33.5	5.00	µg/L	50.0		66.9		10-219			
4-Bromophenylphenylether	32.0	10.0	µg/L	50.0		64.0		53-127			
Butylbenzylphthalate	35.7	10.0	µg/L	50.0		71.4		10-152			
4-Chloro-3-methylphenol	35.3	10.0	µg/L	50.0		70.6		22-147			
Bis(2-chloroethyl)ether	26.2	10.0	µg/L	50.0		52.3		12-158			
Bis(2-chloroisopropyl)ether	25.0	10.0	µg/L	50.0		49.9		36-166			
2-Chloronaphthalene	22.7	10.0	µg/L	50.0		**45.3**	*	60-120			L-04
2-Chlorophenol	26.1	10.0	µg/L	50.0		52.2		23-134			
4-Chlorophenylphenylether	31.0	10.0	µg/L	50.0		61.9		25-158			
Di-n-butylphthalate	37.0	10.0	µg/L	50.0		74.0		10-120			
1,3-Dichlorobenzene	15.1	5.00	µg/L	50.0		30.3		10-172			
1,4-Dichlorobenzene	15.3	5.00	µg/L	50.0		30.6		20-124			
1,2-Dichlorobenzene	16.4	5.00	µg/L	50.0		32.8		32-129			
3,3-Dichlorobenzidine	39.8	10.0	µg/L	50.0		79.5		10-262			
2,4-Dichlorophenol	29.1	10.0	µg/L	50.0		58.3		39-135			
Diethylphthalate	37.1	10.0	µg/L	50.0		74.3		10-120			
2,4-Dimethylphenol	29.6	10.0	µg/L	50.0		59.2		32-120			
Dimethylphthalate	36.4	10.0	µg/L	50.0		72.9		10-120			
4,6-Dinitro-2-methylphenol	44.4	10.0	µg/L	50.0		88.8		10-181			
2,4-Dinitrophenol	36.6	10.0	µg/L	50.0		73.3		10-191			
2,4-Dinitrotoluene	42.2	10.0	µg/L	50.0		84.4		39-139			
2,6-Dinitrotoluene	42.8	10.0	µg/L	50.0		85.5		50-158			
Di-n-octylphthalate	35.1	10.0	µg/L	50.0		70.2		4-146			
1,2-Diphenylhydrazine/Azobenzene	31.3	10.0	µg/L	50.0		62.6		40-140			
Bis(2-Ethylhexyl)phthalate	34.7	10.0	µg/L	50.0		69.5		8-158			
Fluoranthene	36.6	5.00	µg/L	50.0		73.1		26-137			
Fluorene	31.5	5.00	µg/L	50.0		63.0		59-121			
Hexachlorobenzene	35.2	10.0	µg/L	50.0		70.4		10-152			
Hexachlorobutadiene	13.4	10.0	µg/L	50.0		26.8		24-120			
Hexachlorocyclopentadiene	10.5	10.0	µg/L	50.0		**21.1**	*	40-140			L-04
Hexachloroethane	12.7	10.0	µg/L	50.0		**25.5**	*	40-120			L-04
Isophorone	30.3	10.0	µg/L	50.0		60.6		21-196			
Naphthalene	21.7	5.00	µg/L	50.0		43.4		21-133			
Nitrobenzene	25.7	10.0	µg/L	50.0		51.5		35-180			
2-Nitrophenol	28.4	10.0	µg/L	50.0		56.7		29-182			
4-Nitrophenol	27.8	10.0	µg/L	50.0		55.6		10-132			
N-Nitrosodimethylamine	24.1	10.0	µg/L	50.0		48.2		40-140			
N-Nitrosodi-n-propylamine	24.5	10.0	µg/L	50.0		49.0		10-230			
2-Methylnaphthalene	25.4	5.00	µg/L	50.0		50.9		40-140			
Phenanthrene	35.6	5.00	µg/L	50.0		71.2		54-120			
2-Methylphenol	27.1	10.0	µg/L	50.0		54.2		40-140			

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

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 B285899 - SW-846 3510C												
LCS (B285899-BS1)				Prepared: 07/14/21 Analyzed: 07/15/21								
Phenol	15.2	10.0	µg/L	50.0		30.4		5-120				
3/4-Methylphenol	26.4	20.0	µg/L	50.0		52.7		40-140				
Pyrene	36.0	5.00	µg/L	50.0		72.0		52-120				
1,2,4-Trichlorobenzene	18.2	5.00	µg/L	50.0		**36.4**	*	44-142				L-04
2,4,6-Trichlorophenol	32.6	10.0	µg/L	50.0		65.1		37-144				
Surrogate: 2-Fluorophenol	*68.5*		µg/L	200		34.2		15-110				
Surrogate: Phenol-d6	*70.5*		µg/L	200		35.2		15-110				
Surrogate: Nitrobenzene-d5	*54.9*		µg/L	100		54.9		30-130				
Surrogate: 2-Fluorobiphenyl	*61.0*		µg/L	100		61.0		30-130				
Surrogate: 2,4,6-Tribromophenol	*161*		µg/L	200		80.7		15-110				
Surrogate: p-Terphenyl-d14	*101*		µg/L	100		101		30-130				
LCS Dup (B285899-BSD1)				Prepared: 07/14/21 Analyzed: 07/15/21								
Acenaphthene	28.1	5.00	µg/L	50.0		56.2		47-145	2.08		48	
Acenaphthylene	30.1	5.00	µg/L	50.0		60.3		33-145	2.62		74	
Anthracene	36.9	5.00	µg/L	50.0		73.9		27-133	3.47		66	
Benzidine	20.9	20.0	µg/L	50.0		41.9		40-140	**87.5**	*	30	R-05, V-04, V-05, V-34
Benzo(g,h,i)perylene	37.0	5.00	µg/L	50.0		73.9		10-219	9.94		97	
4-Bromophenylphenylether	32.5	10.0	µg/L	50.0		65.0		53-127	1.58		43	
Butylbenzylphthalate	37.3	10.0	µg/L	50.0		74.7		10-152	4.46		60	
4-Chloro-3-methylphenol	37.3	10.0	µg/L	50.0		74.6		22-147	5.51		73	
Bis(2-chloroethyl)ether	30.4	10.0	µg/L	50.0		60.8		12-158	15.0		108	
Bis(2-chloroisopropyl)ether	28.0	10.0	µg/L	50.0		55.9		36-166	11.3		76	
2-Chloronaphthalene	23.8	10.0	µg/L	50.0		**47.6**	*	60-120	4.95		24	L-04
2-Chlorophenol	26.6	10.0	µg/L	50.0		53.3		23-134	2.01		61	
4-Chlorophenylphenylether	31.8	10.0	µg/L	50.0		63.6		25-158	2.58		61	
Di-n-butylphthalate	37.6	10.0	µg/L	50.0		75.3		10-120	1.74		47	
1,3-Dichlorobenzene	14.2	5.00	µg/L	50.0		28.3		10-172	6.76		30	
1,4-Dichlorobenzene	15.0	5.00	µg/L	50.0		29.9		20-124	2.31		30	
1,2-Dichlorobenzene	16.0	5.00	µg/L	50.0		32.1		32-129	2.34		30	
3,3-Dichlorobenzidine	40.7	10.0	µg/L	50.0		81.5		10-262	2.43		108	
2,4-Dichlorophenol	32.2	10.0	µg/L	50.0		64.4		39-135	10.0		50	
Diethylphthalate	37.8	10.0	µg/L	50.0		75.6		10-120	1.74		100	
2,4-Dimethylphenol	32.1	10.0	µg/L	50.0		64.2		32-120	8.04		58	
Dimethylphthalate	37.7	10.0	µg/L	50.0		75.5		10-120	3.53		183	
4,6-Dinitro-2-methylphenol	44.1	10.0	µg/L	50.0		88.2		10-181	0.678		203	
2,4-Dinitrophenol	39.1	10.0	µg/L	50.0		78.1		10-191	6.39		132	
2,4-Dinitrotoluene	44.7	10.0	µg/L	50.0		89.4		39-139	5.71		42	
2,6-Dinitrotoluene	44.1	10.0	µg/L	50.0		88.1		50-158	2.99		48	
Di-n-octylphthalate	36.1	10.0	µg/L	50.0		72.2		4-146	2.87		69	
1,2-Diphenylhydrazine/Azobenzene	32.7	10.0	µg/L	50.0		65.5		40-140	4.43		30	
Bis(2-Ethylhexyl)phthalate	36.1	10.0	µg/L	50.0		72.2		8-158	3.90		82	
Fluoranthene	36.8	5.00	µg/L	50.0		73.5		26-137	0.518		66	
Fluorene	32.2	5.00	µg/L	50.0		64.4		59-121	2.20		38	
Hexachlorobenzene	35.5	10.0	µg/L	50.0		71.1		10-152	0.990		55	
Hexachlorobutadiene	12.7	10.0	µg/L	50.0		25.5		24-120	4.98		62	
Hexachlorocyclopentadiene	10.2	10.0	µg/L	50.0		**20.5**	*	40-140	2.89		30	L-04
Hexachloroethane	11.6	10.0	µg/L	50.0		**23.2**	*	40-120	9.20		52	L-04
Isophorone	33.0	10.0	µg/L	50.0		66.1		21-196	8.68		93	
Naphthalene	23.5	5.00	µg/L	50.0		47.1		21-133	8.23		65	
Nitrobenzene	27.7	10.0	µg/L	50.0		55.5		35-180	7.52		62	
2-Nitrophenol	30.6	10.0	µg/L	50.0		61.2		29-182	7.50		55	

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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 B285899 - SW-846 3510C											
LCS Dup (B285899-BSD1)				Prepared: 07/14/21 Analyzed: 07/15/21							
4-Nitrophenol	26.3	10.0	µg/L	50.0		52.6		10-132	5.54	131	
N-Nitrosodimethylamine	23.6	10.0	µg/L	50.0		47.2		40-140	2.05	30	
N-Nitrosodi-n-propylamine	27.2	10.0	µg/L	50.0		54.3		10-230	10.3	87	
2-Methylnaphthalene	27.2	5.00	µg/L	50.0		54.4		40-140	6.76	30	
Phenanthrene	35.5	5.00	µg/L	50.0		71.1		54-120	0.112	39	
2-Methylphenol	27.4	10.0	µg/L	50.0		54.8		40-140	1.06	30	
Phenol	16.2	10.0	µg/L	50.0		32.4		5-120	6.50	64	
3/4-Methylphenol	28.6	20.0	µg/L	50.0		57.3		40-140	8.33	30	
Pyrene	37.5	5.00	µg/L	50.0		74.9		52-120	4.00	49	
1,2,4-Trichlorobenzene	17.9	5.00	µg/L	50.0		**35.9**	*	44-142	1.44	50	L-04
2,4,6-Trichlorophenol	33.9	10.0	µg/L	50.0		67.7		37-144	3.91	58	
Surrogate: 2-Fluorophenol	*69.4*		µg/L	200		34.7		15-110			
Surrogate: Phenol-d6	*72.9*		µg/L	200		36.4		15-110			
Surrogate: Nitrobenzene-d5	*58.3*		µg/L	100		58.3		30-130			
Surrogate: 2-Fluorobiphenyl	*63.8*		µg/L	100		63.8		30-130			
Surrogate: 2,4,6-Tribromophenol	*163*		µg/L	200		81.7		15-110			
Surrogate: p-Terphenyl-d14	*104*		µg/L	100		104		30-130			

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

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 B285906 - SW-846 3510C											
Blank (B285906-BLK1)				Prepared: 07/14/21 Analyzed: 07/17/21							
Aroclor-1016	ND	0.100	µg/L								
Aroclor-1016 [2C]	ND	0.100	µg/L								
Aroclor-1221	ND	0.100	µg/L								
Aroclor-1221 [2C]	ND	0.100	µg/L								
Aroclor-1232	ND	0.100	µg/L								
Aroclor-1232 [2C]	ND	0.100	µg/L								
Aroclor-1242	ND	0.100	µg/L								
Aroclor-1242 [2C]	ND	0.100	µg/L								
Aroclor-1248	ND	0.100	µg/L								
Aroclor-1248 [2C]	ND	0.100	µg/L								
Aroclor-1254	ND	0.100	µg/L								
Aroclor-1254 [2C]	ND	0.100	µg/L								
Aroclor-1260	ND	0.100	µg/L								
Aroclor-1260 [2C]	ND	0.100	µg/L								
Surrogate: Decachlorobiphenyl	*1.95*		µg/L	1.00		**195**	*	30-150			S-13
Surrogate: Decachlorobiphenyl [2C]	*1.80*		µg/L	1.00		**180**	*	30-150			S-13
Surrogate: Tetrachloro-m-xylene	*1.30*		µg/L	1.00		130		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.26*		µg/L	1.00		126		30-150			
LCS (B285906-BS1)				Prepared: 07/14/21 Analyzed: 07/17/21							
Aroclor-1016	0.522	0.200	µg/L	0.500		104		50-140			
Aroclor-1016 [2C]	0.495	0.200	µg/L	0.500		99.0		50-140			
Aroclor-1260	0.510	0.200	µg/L	0.500		102		8-140			
Aroclor-1260 [2C]	0.468	0.200	µg/L	0.500		93.7		8-140			
Surrogate: Decachlorobiphenyl	*1.93*		µg/L	2.00		96.4		30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.80*		µg/L	2.00		90.2		30-150			
Surrogate: Tetrachloro-m-xylene	*1.51*		µg/L	2.00		75.3		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.47*		µg/L	2.00		73.5		30-150			
LCS Dup (B285906-BSD1)				Prepared: 07/14/21 Analyzed: 07/17/21							
Aroclor-1016	0.527	0.200	µg/L	0.500		105		50-140	1.04		
Aroclor-1016 [2C]	0.502	0.200	µg/L	0.500		100		50-140	1.45		
Aroclor-1260	0.496	0.200	µg/L	0.500		99.3		8-140	2.78		
Aroclor-1260 [2C]	0.456	0.200	µg/L	0.500		91.2		8-140	2.71		
Surrogate: Decachlorobiphenyl	*1.30*		µg/L	2.00		65.0		30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.22*		µg/L	2.00		61.2		30-150			
Surrogate: Tetrachloro-m-xylene	*1.57*		µg/L	2.00		78.5		30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.54*		µg/L	2.00		77.1		30-150			

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 B285894 - EPA 200.7											
Blank (B285894-BLK1)				Prepared & Analyzed: 07/14/21							
Iron	ND	0.050	mg/L								
Hardness	ND	1.4	mg/L								
LCS (B285894-BS1)				Prepared & Analyzed: 07/14/21							
Iron	4.14	0.050	mg/L	4.00		103		85-115			
Hardness	29	1.4	mg/L	26.4		109		85-115			
LCS Dup (B285894-BSD1)				Prepared & Analyzed: 07/14/21							
Iron	3.67	0.050	mg/L	4.00		91.8		85-115	12.0	20	
Hardness	25	1.4	mg/L	26.4		93.1		85-115	16.0	20	
Batch B285900 - EPA 200.8											
Blank (B285900-BLK1)				Prepared: 07/14/21 Analyzed: 07/15/21							
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								
Nickel	ND	5.0	µg/L								
Selenium	ND	5.0	µg/L								
Silver	ND	0.20	µg/L								
Zinc	ND	10	µg/L								
LCS (B285900-BS1)				Prepared: 07/14/21 Analyzed: 07/15/21							
Antimony	602	10	µg/L	500		**120**	*	85-115			L-07
Arsenic	556	8.0	µg/L	500		111		85-115			
Cadmium	541	2.0	µg/L	500		108		85-115			
Chromium	534	10	µg/L	500		107		85-115			
Copper	1070	10	µg/L	1000		107		85-115			
Nickel	551	50	µg/L	500		110		85-115			
Selenium	549	50	µg/L	500		110		85-115			
Silver	489	2.0	µg/L	500		97.8		85-115			
Zinc	1140	100	µg/L	1000		114		85-115			
LCS Dup (B285900-BSD1)				Prepared: 07/14/21 Analyzed: 07/15/21							
Antimony	531	10	µg/L	500		106		85-115	12.4	20	
Arsenic	492	8.0	µg/L	500		98.3		85-115	12.4	20	
Cadmium	477	2.0	µg/L	500		95.4		85-115	12.6	20	
Chromium	469	10	µg/L	500		93.8		85-115	13.0	20	
Copper	951	10	µg/L	1000		95.1		85-115	11.8	20	
Nickel	490	50	µg/L	500		98.0		85-115	11.6	20	
Selenium	490	50	µg/L	500		98.0		85-115	11.3	20	
Silver	437	2.0	µg/L	500		87.4		85-115	11.3	20	
Zinc	1000	100	µg/L	1000		100		85-115	12.7	20	

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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 B285904 - EPA 245.1										
Blank (B285904-BLK1)				Prepared: 07/14/21 Analyzed: 07/15/21						
Mercury	ND	0.00010	mg/L							
LCS (B285904-BS1)				Prepared: 07/14/21 Analyzed: 07/15/21						
Mercury	0.00407	0.00010	mg/L	0.00400		102	85-115			
LCS Dup (B285904-BSD1)				Prepared: 07/14/21 Analyzed: 07/15/21						
Mercury	0.00405	0.00010	mg/L	0.00400		101	85-115	0.461	20	
Batch B286082 - EPA 200.8										
Blank (B286082-BLK1)				Prepared: 07/15/21 Analyzed: 07/16/21						
Lead	ND	0.50	µg/L							
LCS (B286082-BS1)				Prepared: 07/15/21 Analyzed: 07/16/21						
Lead	482	5.0	µg/L	500		96.4	85-115			
LCS Dup (B286082-BSD1)				Prepared: 07/15/21 Analyzed: 07/16/21						
Lead	469	5.0	µg/L	500		93.8	85-115	2.69	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
Batch B285869 - SM21-22 4500 CL G										
Blank (B285869-BLK1)				Prepared & Analyzed: 07/13/21						
Chlorine, Residual	ND	0.020	mg/L							
LCS (B285869-BS1)				Prepared & Analyzed: 07/13/21						
Chlorine, Residual	0.70	0.020	mg/L	0.663		106	80.3-122			
LCS Dup (B285869-BSD1)				Prepared & Analyzed: 07/13/21						
Chlorine, Residual	0.70	0.020	mg/L	0.663		105	80.3-122	1.00	10.7	
Batch B285873 - SM21-22 3500 Cr B										
Blank (B285873-BLK1)				Prepared & Analyzed: 07/13/21						
Hexavalent Chromium	ND	0.0040	mg/L							
LCS (B285873-BS1)				Prepared & Analyzed: 07/13/21						
Hexavalent Chromium	0.11	0.0040	mg/L	0.100		106	90-114			
LCS Dup (B285873-BSD1)				Prepared & Analyzed: 07/13/21						
Hexavalent Chromium	0.11	0.0040	mg/L	0.100		106	90-114	0.00	5	
Batch B285890 - EPA 1664B										
Blank (B285890-BLK1)				Prepared & Analyzed: 07/14/21						
Silica Gel Treated HEM (SGT-HEM)	ND	1.4	mg/L							
LCS (B285890-BS1)				Prepared & Analyzed: 07/14/21						
Silica Gel Treated HEM (SGT-HEM)	10		mg/L	10.0		104	64-132			
Duplicate (B285890-DUP1)		**Source: 21G0623-01**		Prepared & Analyzed: 07/14/21						
Silica Gel Treated HEM (SGT-HEM)	ND	2.8	mg/L		ND			NC	18	
Matrix Spike (B285890-MS1)		**Source: 21G0623-01**		Prepared & Analyzed: 07/14/21						
Silica Gel Treated HEM (SGT-HEM)	72	14	mg/L	100	ND	72.0	64-132			
Batch B285895 - SM21-22 2540D										
Blank (B285895-BLK1)				Prepared & Analyzed: 07/14/21						
Total Suspended Solids	ND	2.5	mg/L							
LCS (B285895-BS1)				Prepared & Analyzed: 07/14/21						
Total Suspended Solids	230	10	mg/L	200		115	53.8-124			

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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 B285895 - SM21-22 2540D										
Duplicate (B285895-DUP1)	**Source: 21G0623-01**			Prepared & Analyzed: 07/14/21						
Total Suspended Solids	54	1.7	mg/L		52			3.80	5	
Batch B286026 - SM19-22 4500 NH3 C										
Blank (B286026-BLK1)				Prepared: 07/15/21 Analyzed: 07/19/21						
Ammonia as N	ND	0.30	mg/L							
LCS (B286026-BS1)				Prepared: 07/15/21 Analyzed: 07/19/21						
Ammonia as N	4.8	0.30	mg/L	5.00		95.8	86.2-110			
LCS Dup (B286026-BSD1)				Prepared: 07/15/21 Analyzed: 07/19/21						
Ammonia as N	4.8	0.30	mg/L	5.00		95.8	86.2-110	0.00	10	
Batch B286215 - EPA 300.0										
Blank (B286215-BLK1)				Prepared & Analyzed: 07/19/21						
Chloride	ND	1.0	mg/L							
LCS (B286215-BS1)				Prepared & Analyzed: 07/19/21						
Chloride	9.4	1.0	mg/L	10.0		94.4	90-110			
LCS Dup (B286215-BSD1)				Prepared & Analyzed: 07/19/21						
Chloride	9.5	1.0	mg/L	10.0		94.9	90-110	0.491	20	

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QUALITY CONTROL

Drinking Water Organics EPA 504.1 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B286276 - EPA 504 water										
Blank (B286276-BLK1)				Prepared & Analyzed: 07/19/21						
1,2-Dibromoethane (EDB)	ND	0.021	µg/L							
Surrogate: 1,3-Dibromopropane	*1.06*		µg/L	1.04		102	70-130			
LCS (B286276-BS1)				Prepared & Analyzed: 07/19/21						
1,2-Dibromoethane (EDB)	0.234	0.020	µg/L	0.256		91.6	70-130			
Surrogate: 1,3-Dibromopropane	*0.973*		µg/L	1.02		95.2	70-130			
LCS Dup (B286276-BSD1)				Prepared & Analyzed: 07/19/21						
1,2-Dibromoethane (EDB)	0.234	0.021	µg/L	0.263		88.8	70-130	0.109		
Surrogate: 1,3-Dibromopropane	*0.932*		µg/L	1.05		88.5	70-130			
Matrix Spike (B286276-MS1)		**Source: 21G0623-01**		Prepared & Analyzed: 07/19/21						
1,2-Dibromoethane (EDB)	0.207	0.020	µg/L	0.247	ND	84.0	65-135			
Surrogate: 1,3-Dibromopropane	*0.899*		µg/L	0.987		91.1	70-130			

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

608.3

LCS

Lab Sample ID: B285906-BS1

Date(s) Analyzed: 07/17/2021 07/17/2021

Instrument ID (1): ECD4

Instrument ID (2): ECD4

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	0.522	
	2	0.000	0.000	0.000	0.495	4.9
Aroclor-1260	1	0.000	0.000	0.000	0.510	
	2	0.000	0.000	0.000	0.468	8.6

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

608.3

LCS Dup

Lab Sample ID: B285906-BSD1 Date(s) Analyzed: 07/17/2021 07/17/2021

Instrument ID (1): ECD4 Instrument ID (2): ECD4

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	0.527	
	2	0.000	0.000	0.000	0.502	5.4
Aroclor-1260	1	0.000	0.000	0.000	0.496	
	2	0.000	0.000	0.000	0.456	9.2

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

EPA 504.1

LCS

Lab Sample ID: B286276-BS1

Date(s) Analyzed: 07/19/2021 07/19/2021

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		
1,2-Dibromoethane (EDB)	1	3.321	0.000	0.000	0.234	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

EPA 504.1

LCS Dup

Lab Sample ID: B286276-BSD1 Date(s) Analyzed: 07/19/2021 07/19/2021

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		
1,2-Dibromoethane (EDB)	1	3.315	0.000	0.000	0.234	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

EPA 504.1

Matrix Spike

Lab Sample ID: B286276-MS1 Date(s) Analyzed: 07/19/2021 07/19/2021

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		
1,2-Dibromoethane (EDB)	1	3.321	0.000	0.000	0.207	

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FLAG/QUALIFIER SUMMARY

*	QC result is outside of established limits.
†	Wide recovery limits established for difficult compound.
‡	Wide RPD limits established for difficult compound.
#	Data exceeded client recommended or regulatory level
ND	Not Detected
RL	Reporting Limit is at the level of quantitation (LOQ)
DL	Detection Limit is the lower limit of detection determined by the MDL study
MCL	Maximum Contaminant Level
	Percent recoveries and relative percent differences (RPDs) are determined by the software using values in the calculation which have not been rounded.
	No results have been blank subtracted unless specified in the case narrative section.

J	Detected but below the Reporting Limit (lowest calibration standard); therefore, result is an estimated concentration (CLP J-Flag).
L-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-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.
R-05	Laboratory fortified blank duplicate RPD is outside of control limits. Reduced precision is anticipated for any reported value for this compound.
RL-12	Elevated reporting limit due to matrix interference.
S-13	Surrogate recovery is outside of control limits on both columns. Data validation is not affected since all results are "not detected" and bias is on the high side.
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-06	Continuing calibration verification (CCV) did not meet method specifications and was biased on the high 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.
V-35	Initial calibration verification (ICV) did not meet method specifications and was biased on the high side for this compound. Reported result is estimated.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
- in Water	
Cyanide	CT,MA,NH,NY,RI,NC,ME,VA
608.3 in Water	
Aroclor-1016	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1016 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1221	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1221 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1232	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1232 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1242	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1242 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1248	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1248 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1254	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1254 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1260	CT,MA,NH,NY,RI,NC,ME,VA
Aroclor-1260 [2C]	CT,MA,NH,NY,RI,NC,ME,VA
624.1 in Water	
Acetone	CT,NY,MA,NH
tert-Amyl Methyl Ether (TAME)	MA
Benzene	CT,NY,MA,NH,RI,NC,ME,VA
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
tert-Butyl Alcohol (TBA)	NY,MA
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
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
1,4-Dioxane	MA
trans-1,3-Dichloropropene	CT,NY,MA,NH,RI,NC,ME,VA
Ethanol	NY,MA,NH
Ethylbenzene	CT,NY,MA,NH,RI,NC,ME,VA
Methyl tert-Butyl Ether (MTBE)	NY,MA,NH,NC
Methylene Chloride	CT,NY,MA,NH,RI,NC,ME,VA
Naphthalene	NY,MA,NC

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
624.1 in Water	
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
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(g,h,i)perylene	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-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
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

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
625.1 in Water	
Hexachloroethane	CT,MA,NH,NY,NC,RI,ME,VA
Isophorone	CT,MA,NH,NY,NC,RI,ME,VA
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
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
2-Fluorophenol	NC,VA
Phenol-d6	VA
Nitrobenzene-d5	VA
EPA 200.7 in Water	
Iron	CT,MA,NH,NY,RI,NC,ME,VA
Hardness	CT,MA,NH,NY,RI,VA
EPA 200.8 in Water	
Antimony	CT,MA,NH,NY,RI,NC,ME,VA
Arsenic	CT,MA,NH,NY,RI,NC,ME,VA
Cadmium	CT,MA,NH,NY,RI,NC,ME,VA
Chromium	CT,MA,NH,NY,RI,NC,ME,VA
Copper	CT,MA,NH,NY,RI,NC,ME,VA
Lead	CT,MA,NH,NY,RI,NC,ME,VA
Nickel	CT,MA,NH,NY,RI,NC,ME,VA
Selenium	CT,MA,NH,NY,RI,NC,ME,VA
Silver	CT,MA,NH,NY,RI,NC,ME,VA
Zinc	CT,MA,NH,NY,RI,NC,ME,VA
EPA 245.1 in Water	
Mercury	CT,MA,NH,RI,NY,NC,ME,VA
EPA 300.0 in Water	
Chloride	NC,NY,MA,VA,ME,NH,CT,RI
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

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
SM21-22 4500 CL G in Water	
Chlorine, Residual	CT,MA,RI,ME

Con-Test, a Pace 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	06/30/2022
CT	Connecticut Department of Publilc Health	PH-0165	12/31/2022
NY	New York State Department of Health	10899 NELAP	04/1/2022
NH-S	New Hampshire Environmental Lab	2516 NELAP	02/5/2022
RI	Rhode Island Department of Health	LAO00112	12/30/2021
NC	North Carolina Div. of Water Quality	652	12/31/2021
NJ	New Jersey DEP	MA007 NELAP	06/30/2022
FL	Florida Department of Health	E871027 NELAP	06/30/2022
VT	Vermont Department of Health Lead Laboratory	LL720741	07/30/2022
ME	State of Maine	MA00100	06/9/2023
VA	Commonwealth of Virginia	460217	12/14/2021
NH-P	New Hampshire Environmental Lab	2557 NELAP	09/6/2021
VT-DW	Vermont Department of Health Drinking Water	VT-255716	06/12/2022
NC-DW	North Carolina Department of Health	25703	07/31/2021
PA	Commonwealth of Pennsylvania DEP	68-05812	06/30/2022
MI	Dept. of Env, Great Lakes, and Energy	9100	09/6/2021

21C0623

con-test ANALYTICAL LABORATORY

http://www.contestlabs.com

Doc # 381 Rev 1_03242017

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

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Company Name: Lockwood Remediation Technologies

Address: 89 Crawford Street, Leominster, MA 01453

Phone: (774) 450-7177

Project Name: Arlington Town Yard

Project Location:

Project Number: 2-2237

Project Manager: Kim Gravelle

Con-Test Quote Name/Number:

Invoice Recipient:

Sampled By:

Requested Turnaround Time

7-Day ☐ 10-Day ☐

Due Date: 5-day

Rush-Approval Required

1-Day ☐ 3-Day ☐

2-Day ☐ 4-Day ☐

Data Delivery

Format: PDF ☑ EXCEL ☐

Other:

CLP Like Data Pkg Required: ☐

Email To: jjennings@lrt-llc.net

CC: bcaccavale@lrt-llc.net

ANALYSIS REQUESTED

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1]Matrix Code	Conc Code	Ammonia	Chloride	TRC	Total Metals (Sb,As,Cd, Cr III, Cu, Fe, Pb, Hg, Ni, Se, Ag, Zn)	Cyanide	Voc's	Semi-Voc's	PCB's	TPH	TSS	EDB	Hardness	Salinity	Chromium VI
	# of Containers							2	1	1	2	1	3	2	2	2	1	3	2	2	2
	[2] Preservation Code							S	I	I	N	X	H	I	I	S	I	T	N	I	I
	[3] Container Code							P	P	p	P	P	V	A	A	A	P	V	P	P	P
1	Influent	7/13	12:40		x	GW	U	X	X	X	X	X	X	X	X	X	X	X	X		X
2	Receiving Water	7/13	12:00		x	GW	U	X			X								X		X

Comments: pH In: 7.4@19.9 °C pH RW: 7.8@19.9 °C

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

Samples are for NPDES RGP Parameters.

Relinquished by: (signature)	Date/Time:
Received by: (signature)	7/13/21 1605
Relinquished by: (signature)	7/13/21 1740
Received by: (signature)	7/13/21 1740
Relinquished by: (signature)	Date/Time:
Received by: (signature)	Date/Time:

Detection Limit Requirements

MA

CT

Other:

Special Requirements

☐ MA MCP Required

MCP Certification Form Required

☐ CT RCP Required

RCP Certification Form Required

☐ MA State DW Required

PWSID #

con-test ANALYTICAL LABORATORY www.contestlabs.com

NELAC and AIHA-LAP, LLC Accredited

Project Entity

☐ Government ☐ Municipality ☐ MWRA ☐ WRTA

☐ Federal ☐ 21 J ☐ School

☐ City ☐ Brownfield ☐ MBTA

Other

☐ Chromatogram

☐ *AIHA-LAP,LLC*

PCB ONLY

☐ Soxhlet

☐ Non Soxhlet

Dissolved Metals Samples

○ Field Filtered

○ Lab to Filter

Orthophosphate Samples

○ Field Filtered

○ Lab to Filter

[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)

[3] Container Codes:
A = Amber Glass
G = Glass
P = Plastic
ST = Sterile
V = Vial
S = Summa Canister
T = Tedlar Bag
O = Other (please define)

Table of Contents

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 _____ Date 7/13/21 Time 1740

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 # 3 Actual Temp - 4.4

By Blank # _____ Actual Temp - _____

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

Was COC Relinquished ? T Does Chain Agree With Samples? 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 Project T Analysis T ID's T Sampler Name 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? David

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 T

Vials		Containers:	#		#		#
Unp-		1 Liter Amb.	6	1 Liter Plastic	1	16 oz Amb.	
HCL-	3	500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic	11	4oz Amb/Clear	
Bisulfate-		Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-	3	SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

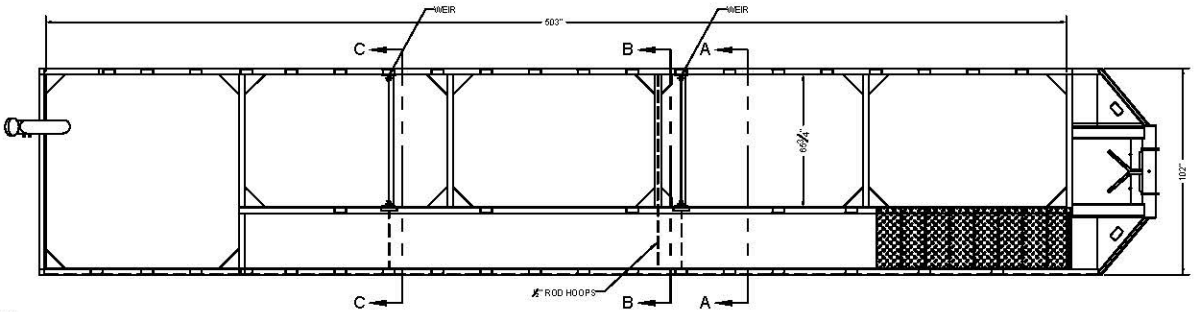
Unused Media

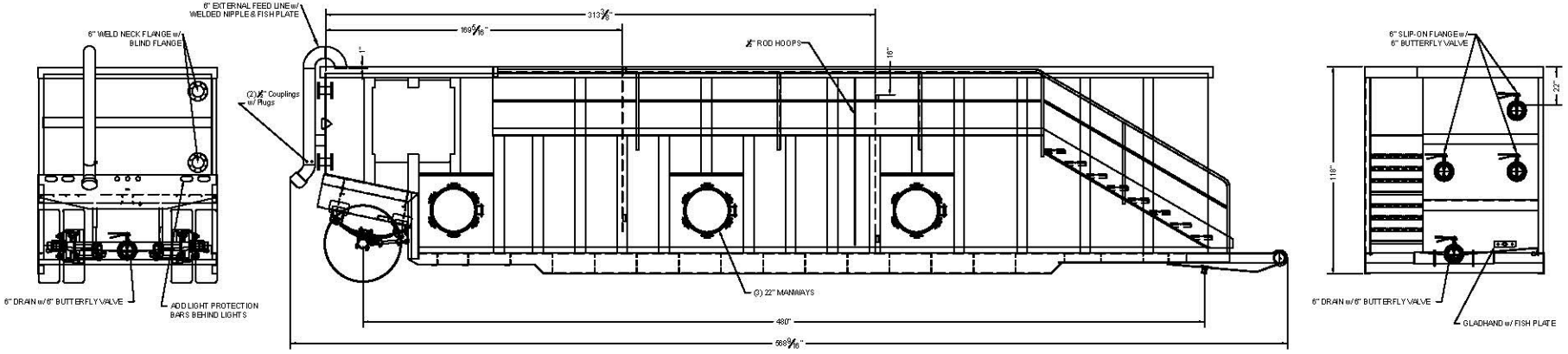
Vials	#	Containers:	#		#		#
Unp-		1 Liter Amb.		1 Liter Plastic		16 oz Amb.	
HCL-		500 mL Amb.		500 mL Plastic		8oz Amb/Clear	
Meoh-		250 mL Amb.		250 mL Plastic		4oz Amb/Clear	
Bisulfate-		Col./Bacteria		Flashpoint		2oz Amb/Clear	
DI-		Other Plastic		Other Glass		Encore	
Thiosulfate-		SOC Kit		Plastic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

Comments:

Appendix C

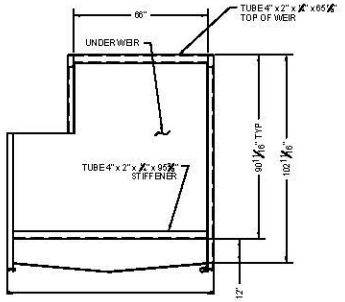
Cutsheets



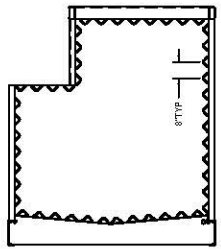


STANDARD SPECIFICATION

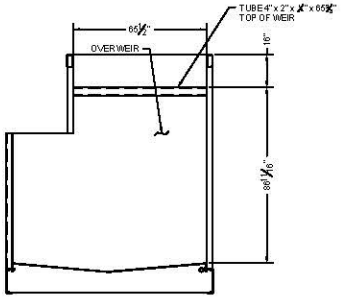
CAPACITY: .... 18,480 GALLONS (440 BBL)
SIDE SHEETS: .... 1/4" A36 PLATE
FRONT SHEET: .... 1/4" A36 PLATE
REAR SHEET: .... 1/4" A36 PLATE
FLOOR: .... 1/4" A36 PLATE
MAIN FLOOR RAILS: .... 12" x 20.7# STRUCTURAL CHANNEL
FLOOR CROSSMEMBERS: .... 1/4" A36 PLATE
SIDE STAKES: .... ONE PIECE 3/16" A36 PLATE
SUSPENSION: .... 3 LEAF SPRING, 22,500 LBS. CACPACITY
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)



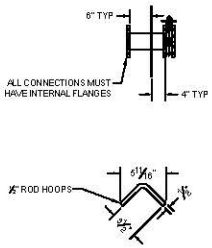
SECTION VIEW "C-C"



SECTION VIEW "B-B"



SECTION VIEW "A-A"



NOTE:
This drawing is a representation baseline for this model of tank. Variations between this drawing and the actual equipment do exist, primarily with appurtenance locations, sizes and quantities.

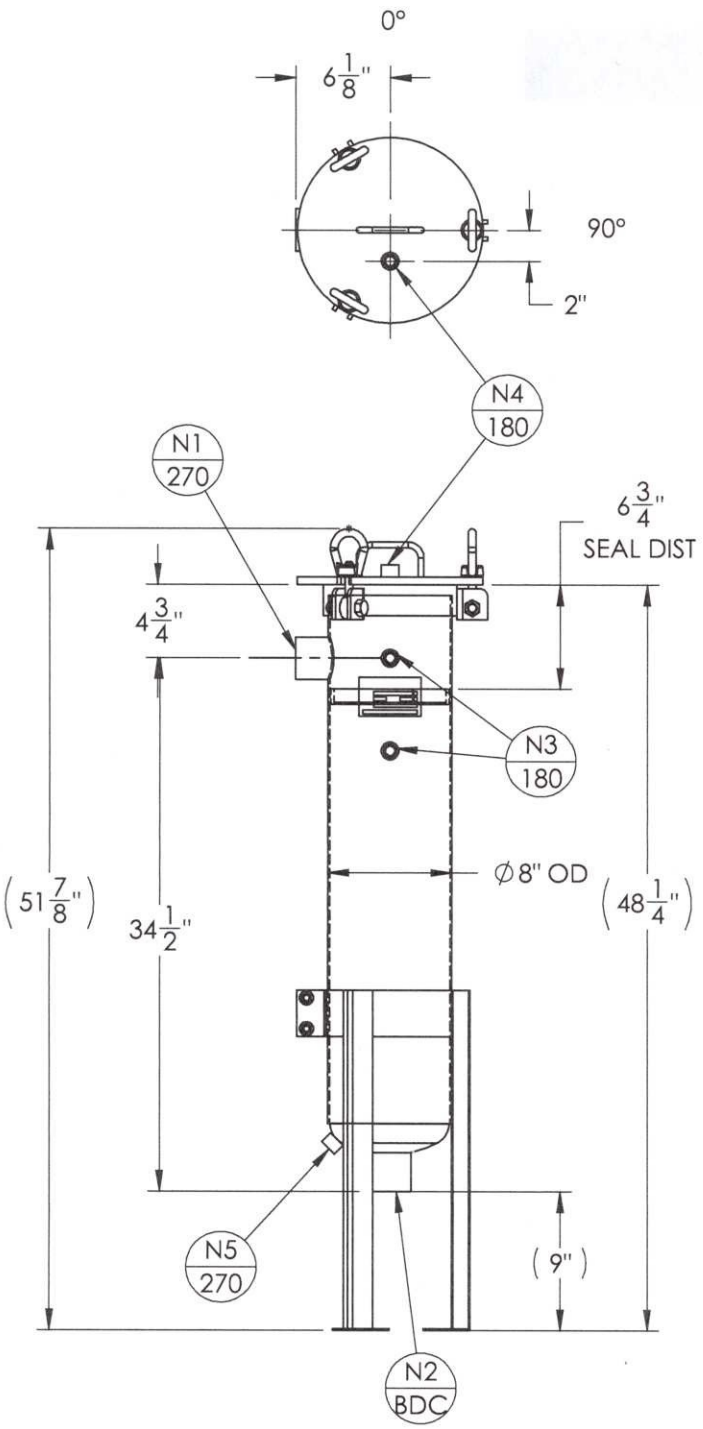
18,000 gal. Weir Tank

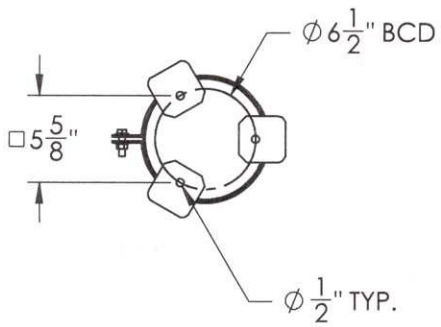
Lockwood Remediation Technologies, LLC

89 Crawford Street
Leominster, Massachusetts 01453
O: 774-450-7177
F: 888-835-0617

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.

1:1

THIRD ANGLE PROJECTION

TOLERANCES-UNLESS OTHERWISE NOTED
DECIMAL .X =±.1" .XX =±.02" .XXX =±.005"
FRACTIONAL ≤24" =±1/16" >24" =±1/8"
ANGULAR =± 1°
MAX. MACHINED SURFACE FINISH 125

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	REV. No. 0
PAGE: 1 OF 4	CHK'D: JM	SCALE: NTS			

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

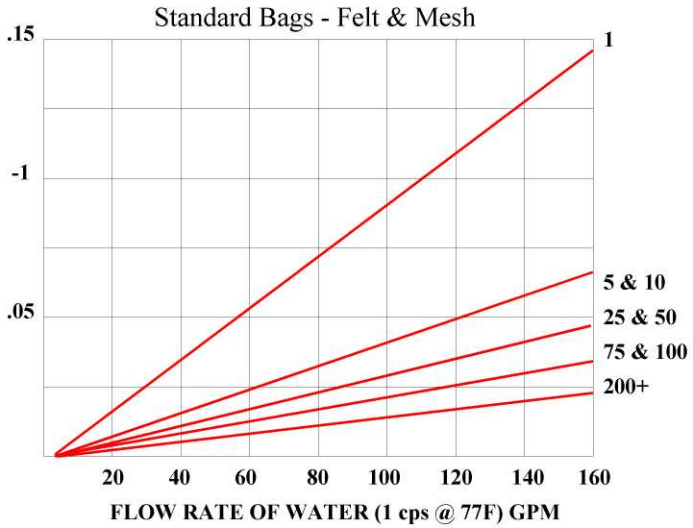
Optional Filter Media

Felt: Nomex, Polyester, Polypropylene

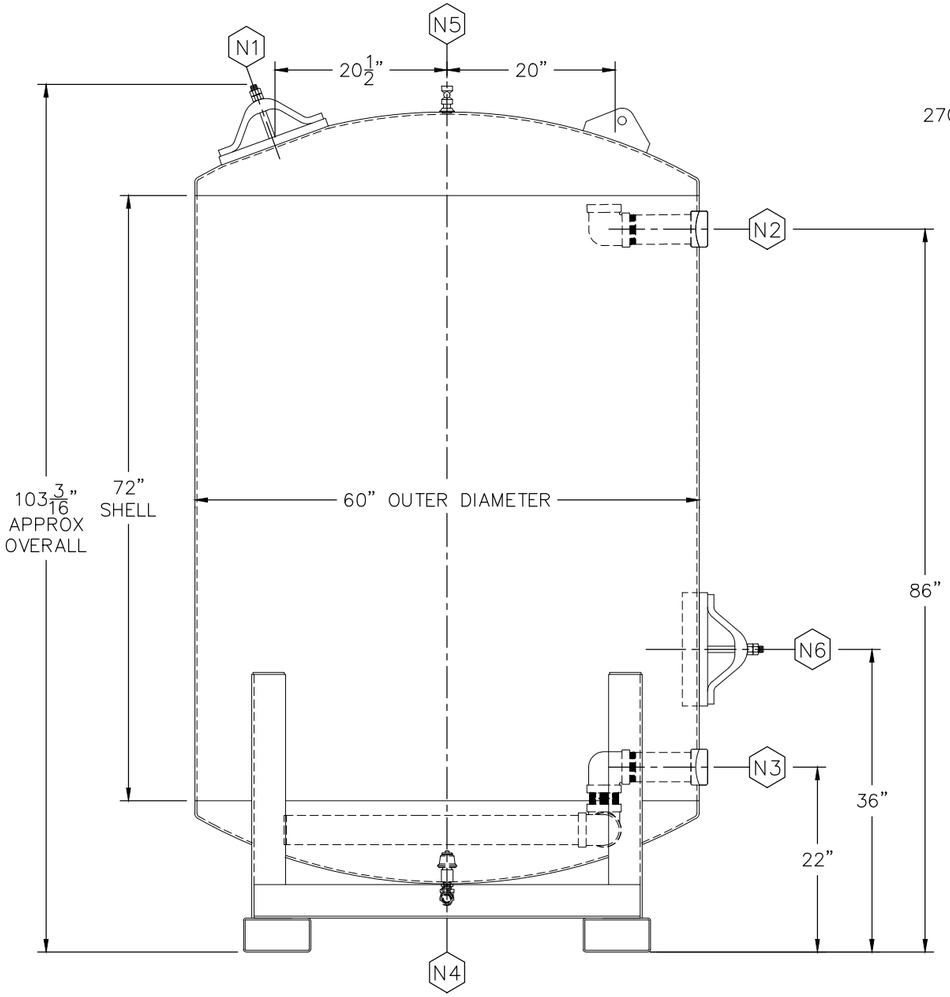
Monofilament: Nylon, Polyester, Polypropylene

Multifilament: Nylon, Polyester

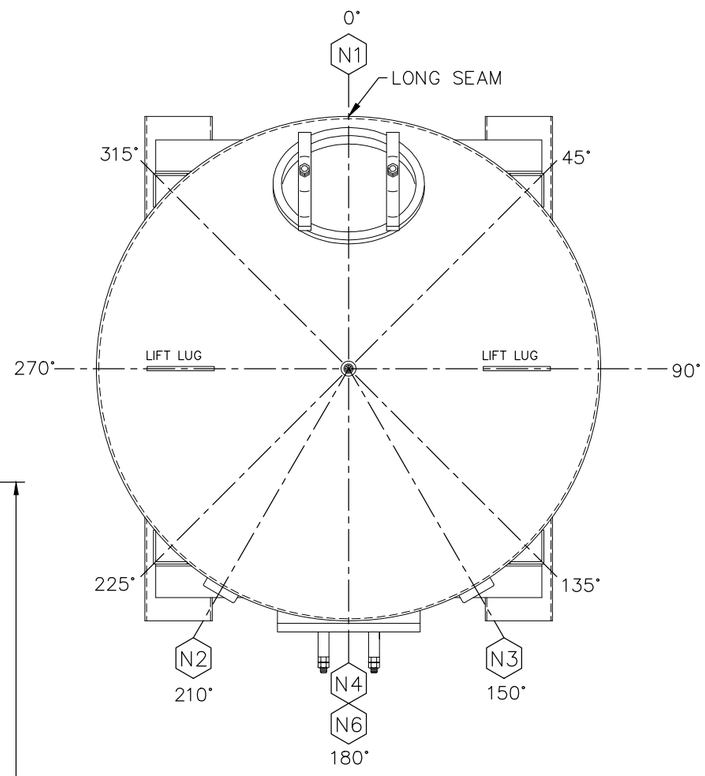
Polypropylene: Oil Removal



SCHEDULE OF OPENINGS		
ID	*DESCRIPTION*	*SERVICE*
N1	14" x 18" ELLIPTICAL MANWAY	UPPER BED ACCESS
N2	3" 3000# FNPT FULL COUPLING	PROCESS INFLUENT
N3	3" 3000# FNPT FULL COUPLING	PROCESS EFFLUENT
N4	1/2" 3000# FNPT FULL COUPLING	DRAIN w/ BALL VALVE
N5	1/4" 150# FNPT TANK FLANGE	VENT w/ VALVE
N6	14" x 18" ELLIPTICAL MANWAY	LOWER BED ACCESS



ELEVATION VIEW
NOT TRUE ORIENTATION



PLAN VIEW
TRUE ORIENTATION

VESSEL DESIGN DATA			
VESSEL REGISTRATION	N/A	YEAR BUILT	NOT YET BUILT
VESSEL CONSTRUCTION	NON-CODE	VESSEL SERIAL NUMBER	TBD
INTERNAL DESIGN PRESSURE	75 PSIG	CAPACITY (VOLUME)	1064.00 gal
INTERNAL DESIGN TEMP.	140 DEG. F	WEIGHT (EMPTY)	1922 lbs
EXTERNAL DESIGN PRESSURE	ATMOSPHERIC	WEIGHT (FULL)	12924 lbs
OPERATING PRESSURE	N/A	SHELL 1 MATERIAL	SA-36 ROLLED PLATE NOM. TH. = 0.25"
OPERATING TEMP.	N/A	SHELL 2 MATERIAL	N/A
MIN. DESIGN METAL TEMP.	-20 DEG. F @ 75 PSIG	TOP HEAD MATERIAL	SA-36 HOT FORMED NOM. TH. = 0.25"
MAWP (NEW & COLD)	TBD	BOTTOM HEAD MATERIAL	SA-36 HOT FORMED NOM. TH. = 0.25"
MAWP (HOT & CORRODED)	TBD	NOZZLES NECKS/FLANGES	SA-106-B, SA-105, SA-312-304
HYDROSTATIC TEST PRESSURE	N/A	GASKETS	BUNA-N
HYDROSTATIC TEST MEDIUM	N/A	INTERNALS	STAINLESS STEEL
CORROSION ALLOWANCE	NONE	SURFACE PREP INTERNAL	SSPC-SP10
RADIOGRAPHY	NONE	SURFACE PREP EXTERNAL	SSPC-SP6
POST WELD HEAT TREAT.	N/A	INTERNAL COATING	CARBOLINE CARBOGUARD 635 5-10 MILS DFT
MATERIAL IMPACT TESTS	N/A	EXTERNAL PRIMER	CARBOLINE CARBOGUARD 635 5-10 MILS DFT
MATERIAL HARDNESS	N/A	EXTERNAL PAINT/COATING	CARBOLINE CARBOTHANE 8845(GREEN)3-5 MILS DFT

REV NO	REVISION NOTE	DATE	SIGNATURE
1			
2			
3			
4			
5			

LRT
Lockwood Remediation Technologies LLC

CUSTOMER	JOB #	DATE	SCALE NTS
DESIGNED BY	HPAF-3000		
APPROVED BY	QUANTITY	UNITS	DRAWING #

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

RESINTECH INC
INNOVATIONS IN ION EXCHANGE

CGS

CATION EXCHANGE RESIN
SOFTENING GRADE
Na FORM

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.

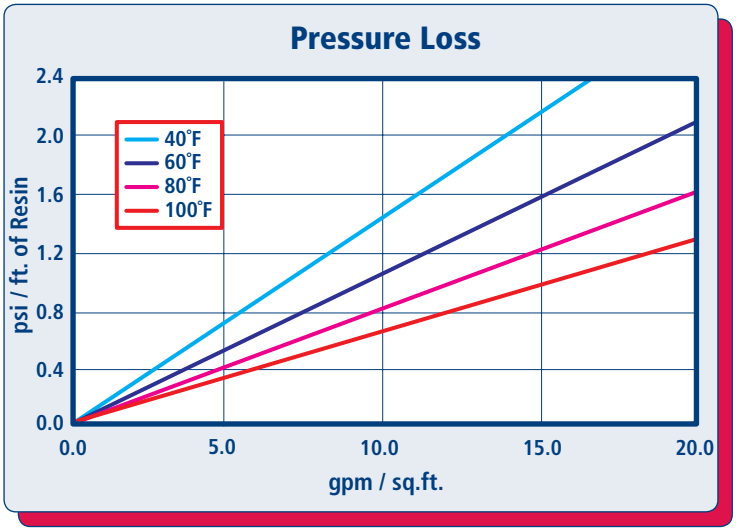
NSF/ANSI 44-61 CERTIFIED FOR MATERIAL SAFETY

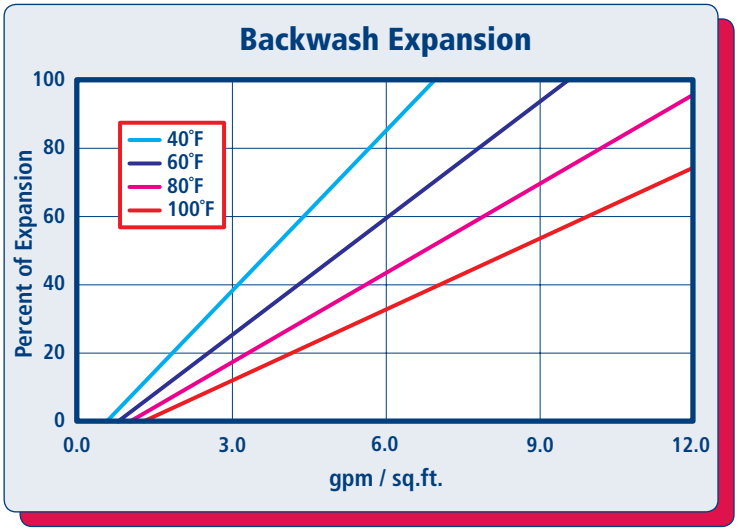
FEATURES & BENEFITS

- **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.

160 Cooper Road • West Berlin, NJ 08091 USA • p: 856.768.9600 • f: 856.768.9601 • e: ixresin@resintech.com • w: resintech.com

RESINTECH® CGS

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

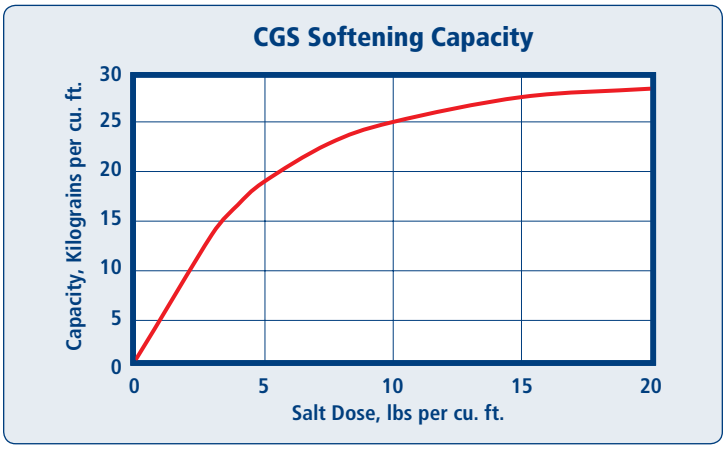
Maximum continuous temperature	
Sodium form	250˚F
Minimum bed depth	24 inches
Backwash expansion	25 to 50 percent
Maximum pressure loss	25 psi
Operating pH range	0 to 14 SU
Regenerant Concentration	
Salt cycle	10 to 15 percent NaCl
Regenerant level	4 to 15 lbs./cu.ft.
Regenerant flow rate.	0.5 to 1.5 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

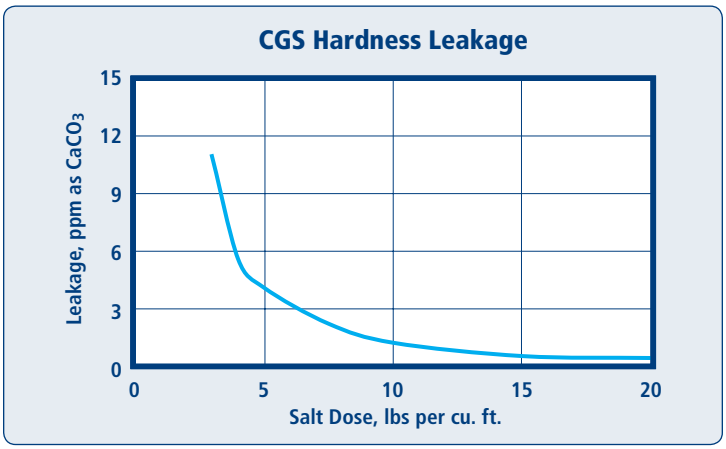
APPLICATIONS

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.



RESINTECH INC
INNOVATIONS IN ION EXCHANGE
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

SBG1

ANION EXCHANGE RESIN TYPE ONE GEL Cl OR OH FORM

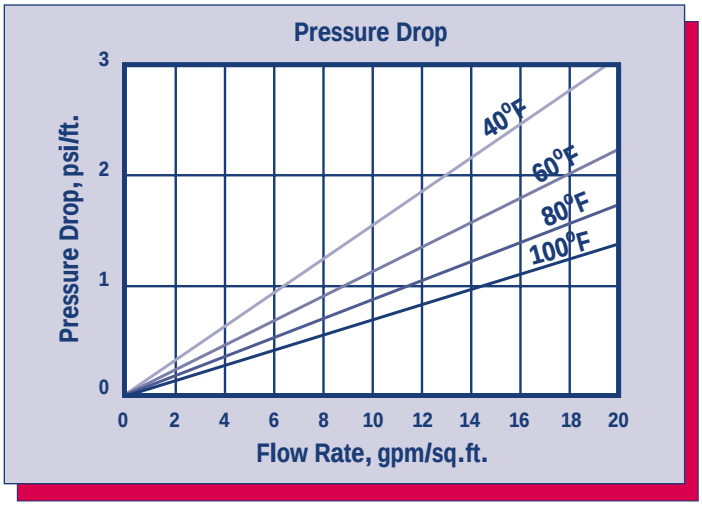
ResinTech SBG1 is a high capacity, shock resistant, gelular, Type 1, strongly basic anion exchange resin supplied in the chloride or hydroxide form as moist, tough, uniform, spherical beads. *ResinTech SBG1* is intended for use in all types of deionization systems and chemical processing applications. It is similar to *ResinTech SBG1P* but has a higher volumetric capacity and exhibits lower TOC leach rates. This makes it the better performer in single use applications such as in cartridge deionization and when high levels of regeneration are used such as in polishing mixed beds. On the other hand, *ResinTech SBG1P* is more resistant to organic fouling and gives higher operating capacities at low regeneration levels such as those used in make up demineralizers.

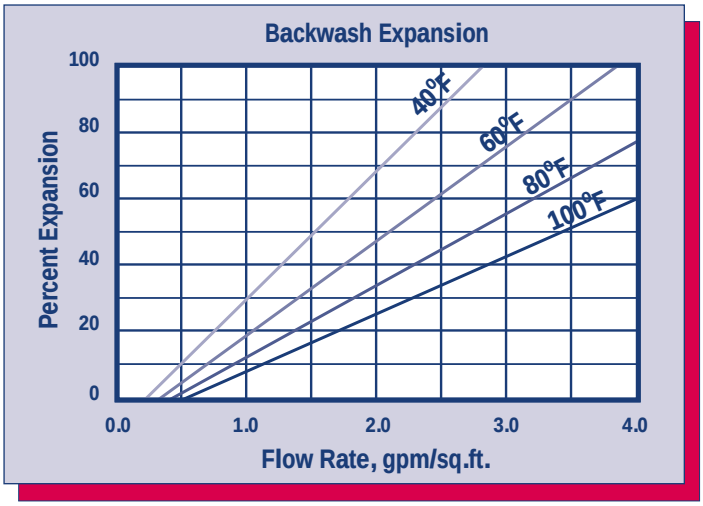
FEATURES & BENEFITS

- **COMPLIES WITH FDA REGULATIONS FOR POTABLE WATER APPLICATIONS.**
  Conforms to paragraph 21CFR173.125 of the Food Additives Regulations of the F.D.A.*
- **HIGH TOTAL CAPACITY**
  Provides longer run lengths in single use applications or where high levels of regeneration are used such as in mixed bed polishers, cartridge demineralizers.
- **UNIFORM PARTICLE SIZE**
  16 to plus 50 mesh range; gives a LOWER PRESSURE DROP while maintaining SUPERIOR KINETICS.
- **SUPERIOR PHYSICAL STABILITY**
- **LOWER TOC LEACH RATE**
  Makes it ideal for polishing mixed beds in wafer washing and other high purity water polishing applications.

*For potable water applications, the resin must be properly pre-treated, usually by multiple exhaustion and regeneration cycles, to ensure compliance with extractable levels.

HYDRAULIC PROPERTIES





PRESSURE DROP

The graph above shows the expected pressure loss per foot of bed depth as a function of flow rate, at various temperatures.

BACKWASH

After each cycle the resin bed should be backwashed at a rate that expands the bed 50 to 75 percent. This will remove any foreign matter and reclassify the bed. The graph above shows the expansion characteristics of *ResinTech SBG1* in the sodium form.

RESINTECH® SBG1

PHYSICAL PROPERTIES

Polymer Structure	Styrene Crosslinked with DVB
Functional Group	R-N-$(CH_3)_3^+Cl^-$
Ionic Form, as shipped	Chloride or Hydroxide
Physical Form	Tough, Spherical Beads
Screen Size Distribution	16 to 50
+16 mesh (U.S. Std)	< 5 percent
-50 mesh (U.S. Std)	< 1 percent
pH Range	0 to14
Sphericity	> 93 percent
Uniformity Coefficient	Approx. 1.6
Water Retention	
Chloride Form	43 to 50 percent
Hydroxide Form	Approx. 53 to 60 percent
Solubility	Insoluble
Approximate Shipping Weight	
Cl Form	44 lbs/cu.ft.
OH Form	41 lbs/cu.ft.
Swelling Cl- to OH-	18 to 25 percent
Total Capacity	
Cl Form	1.45 meq/ml min
OH Form	1.15 meq/ml min

SUGGESTED OPERATING CONDITIONS

Maximum Continuous Temperature	
Hydroxide Form	140°F
alt Form	170°F
Minimum Bed Depth	24 inches
Backwash Rate	50 to 75 percent Bed Expansion
Regenerant Concentration*	2 to 6 percent
Regenerant Flow Rate	0.25 to 1.0 gpm/cu.ft.
Regenerant Contact Time	At least 40 Minutes
Regenerant Level	4 to 10 pounds/cu.ft.
Displacement Rinse Rate	Same as Regenerant Flow Rate
Displacement Rinse Volume	10 to 15 gals/cu.ft.
Fast Rinse Rate	Same as Service Flow Rate
Fast Rinse Volume	35 to 60 gals/cu.ft.
Service Flow Rates	
Polishing Mixed Beds	3 to 15 gpm/cu.ft.
Non-Polishing Apps.	2 to 4 gpm/cu.ft.

OPERATING CAPACITY

The operating capacity of *RESINTECH SBG1* for a variety of acids at various regeneration levels when treating an influent with a concentration 500 ppm, expressed as $CaCO_3$ is shown in the following table:

Pounds $NaOH/ft^3$	Capacity Kilograms per cubic foot			
	HCl	H_2SO_4	H_2SiO_3	H_2CO_3
4	11.3	14.0	14.7	18.6
6	12.8	16.3	17.3	19.8
8	14.3	13.3	19.5	21.6
10	15.5	20.0	22.2	22.2

APPLICATIONS

DEMINERALIZATION – *RESINTECH SBG1* is highly recommended for use in mixed bed demineralizers, wherever complete ion removal; superior physical and osmotic stability and low TOC leachables are required such as in wafer fabrication and other ultrapure applications.

RESINTECH SBG1 has high total capacity and low swelling on regeneration and provides maximum operating capacity in cartridge deionization applications. It is ideal for single use applications such as precious metal recovery, radwaste disposal and purification of toxic waste streams.

Highly crosslinked Type 1, styrenic anion exchangers have greater thermal and oxidation resistance than other types of strong base resins. They can be operated and regenerated at higher temperatures. The combination of lower porosity, high total capacity and Type 1 functionality make *RESINTECH SBG1* the resin of choice when water temperatures exceed 85°F and where the combination of carbon dioxide, borate and silica exceed 40% of the total anions.

RESINTECH SBG1P and *RESINTECH SBG1* are quite similar; the difference between them is the degree of porosity. *RESINTECH SBG1P* has greater porosity that gives it faster kinetics, and greater ability to reversibly sorb slow moving ions such as Naturally occurring Organic Matter (NOM). At lower regeneration levels and where chlorides make up a substantial portion of the anion load, or where the removal and elution of naturally occurring organics is of concern *RESINTECH SBG1P*, SBACR or SBG2 should be considered. At the higher regeneration levels used in mixed bed polishers *RESINTECH SBG1* provides higher capacity, and the lowest possible TOC leach rates.

***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.

GROOVED & SMOOTH-END FLOWMETER MODEL MG/MS100

SPECIFICATIONS

PERFORMANCE

ACCURACY/REPEATABILITY: ±2% of reading guaranteed throughout full range. ±1% over reduced range. Repeatability 0.25% or better.
RANGE: (see dimensions chart below)
HEAD LOSS: (see dimensions chart below)
MAXIMUM TEMPERATURE: (Standard Construction) 160°F constant
PRESSURE RATING: 150 psi

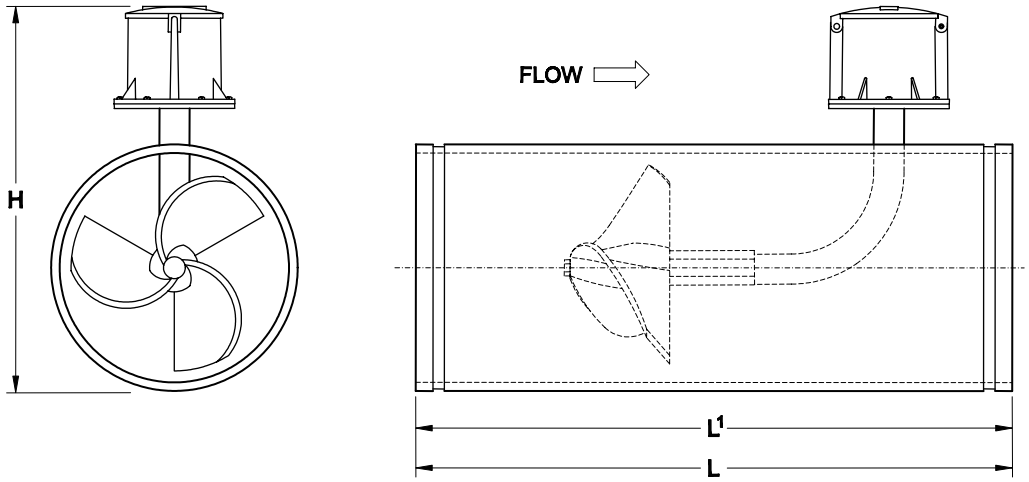
MATERIALS

TUBE: Epoxy-coated carbon steel.
BEARING ASSEMBLY: Impeller shaft is 316 stainless steel. Ball bearings are 440C stainless steel.
MAGNETS: (Permanent type) Cast or sintered alnico
BEARING HOUSING: Brass; Stainless Steel optional
IMPELLER: Impellers are manufactured of high-impact plastic, retaining their shape and accuracy over the life of the meter. High temperature impeller is optional.

REGISTER: An instantaneous flowrate indicator and six-digit straight-reading totalizer are standard. The register is hermetically sealed within a die cast aluminum case. This protective housing includes a domed acrylic lens and hinged lens cover with locking hasp.
COATING: Fusion-bonded epoxy

OPTIONS

- Forward/reverse flow measurement
- High temperature construction
- "Over Run" bearing assembly for higher-than-normal flowrates
- Electronic Propeller Meter available in all sizes of this model
- A complete line of flow recording/control instrumentation
- Straightening vanes and register extensions available
- Certified calibration test results



McCrometer reserves the right to change design or specifications without notice.

MG100 / MS100	DIMENSIONS												
Meter Size (inches)	**2**	**2 ½**	**3**	**4**	**6**	**8**	**10**	**12**	**14**	**16**	**18**	**20**	**24**
Maximum Flow U.S. GPM	250	250	250	600	1200	1500	1800	2500	3000	4000	5000	6000	8500
Minimum Flow U.S. GPM	40	40	40	50	90	100	125	150	250	275	400	475	700
Head Loss in Inches at Max. Flow	29.50	29.50	29.50	23.00	17.00	6.75	3.75	2.75	2.00	1.75	1.50	1.25	1.00
Shipping Weight, lbs.	* See Special Note		17	40	54	68	87	106	140	144	172	181	223
H (inches)			10.9	12.78	13.84	14.84	16.91	18.90	20.53	22.53	25.53	26.53	30.53
L (inches) MG100			13	20	20	20	20	20	20	22	22	22	22
L^1 (inches) MS100			13	20	22	22	22	22	22	24	24	24	24
O.D. of Meter Tube			3.50	4.500	6.625	8.625	10.750	12.750	14.00	16.00	18.00	20.00	24.00

Special Note—
Reducing fittings incorporating grooves are supplied to adapt the 3-inch model to smaller line sizes.

Larger flowmeters on special order.

Appendix D

Supporting Information

MassDEP - Bureau of Waste Site Cleanup

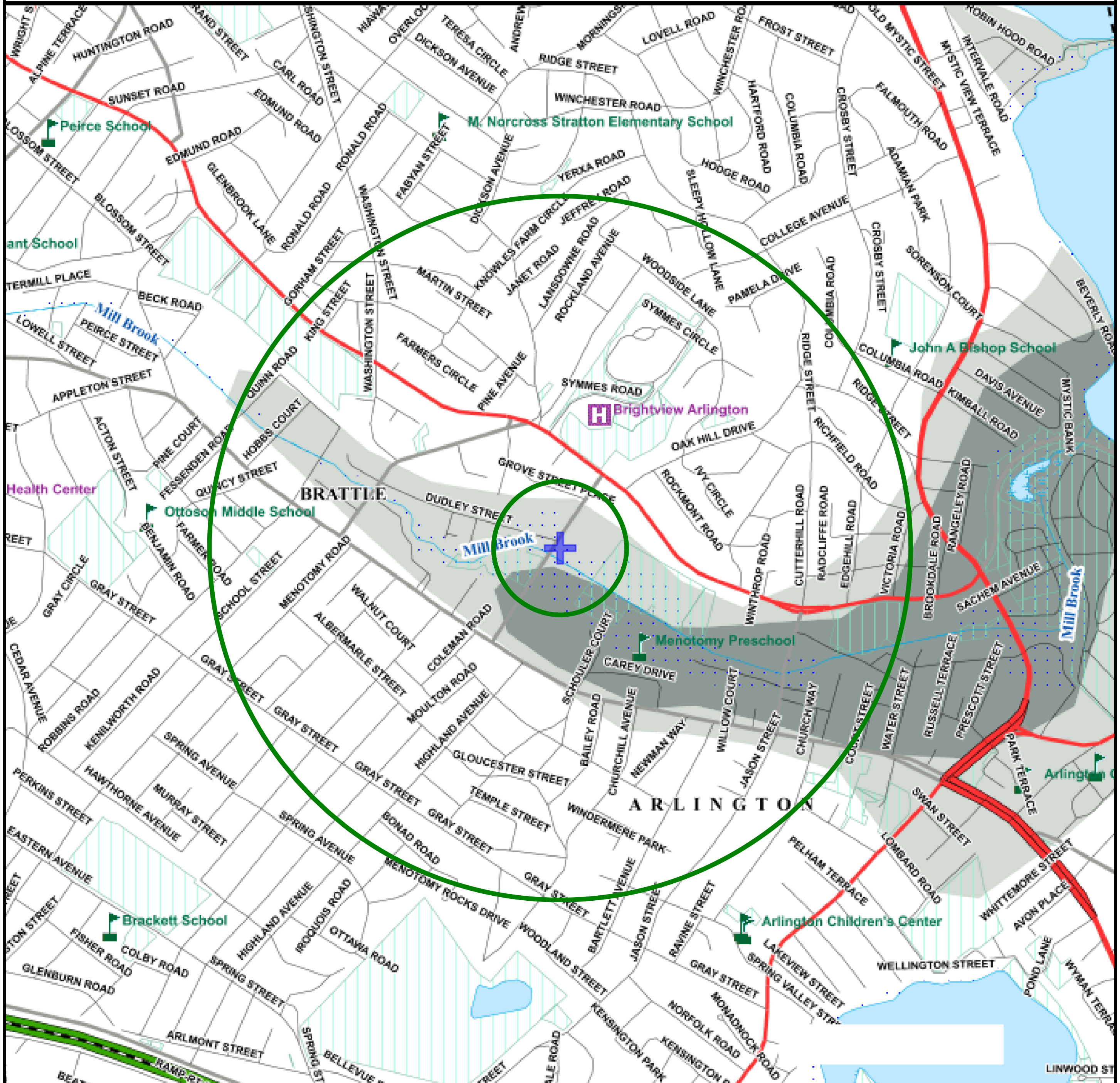
Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:
ARLINGTON TOWN YARD
51 GROVE STREET ARLINGTON, MA

NAD83 UTM Meters:
4698707mN, 321967mE (Zone 19)
July 8, 2021

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 51 Grove Street Arlington, MA is eligible for coverage under this general permit under FWS Criterion B. 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:

- The Northern long-eared bat was listed as "Threatened" in Middlesex County.

Based upon a information provided by U.S. Fish & Wildlife Service (USFWS), temporary dewatering activities at the site are not expected to impact the Northern Long-eared Bat.

Northern long-eared bats spend winter hibernating in caves and mines. They use areas in various sized caves or mines with constant temperatures, high humidity, and no air currents. During the summer, northern long-eared bats roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and snags (dead trees). There are no caves and mines located at the site. There are no trees in the immediate vicinity of the site; and tree removal is not part of the scope of work related to this Notice of Intent. Therefore, temporary dewatering activities will have "no impact" to the Northern Long-eared Bat.

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: July 08, 2021
Consultation Code: 05E1NE00-2021-SLI-4061
Event Code: 05E1NE00-2021-E-12305
Project Name: Arlington Town Yard

Subject: List of threatened and endangered species that may occur in your proposed project location 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: 05E1NE00-2021-SLI-4061
Event Code: 05E1NE00-2021-E-12305
Project Name: Arlington Town Yard
Project Type: DEVELOPMENT
Project Description: Construction of new DPW building (building E)
Construction of new salt shed and pump island
Installation of associated site utility

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@42.41993805,-71.16351761600703,14z

Counties: Middlesex County, Massachusetts

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

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

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

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

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

Mammals

NAME	STATUS
Northern Long-eared Bat *Myotis septentrionalis*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9045

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 found that no historic properties are located on the project site. Therefore, construction and dewatering / water treatment work will be conducted on an existing development and will not impact surrounding areas. 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): Arlington; Street No: 51; Street Name: Grove; Resource Type(s): Area, Building, Burial Ground, Object, Structure;

Inv. No.	Property Name	Street	Town	Year