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

November 29, 2018

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

Reference: **Notice of Intent (NOI) - Remediation General Permit (RGP)**
Revere Beach Hotel
49-54 Revere Beach Boulevard
Revere, MA
LRT Reference # 2-1759

Dear Sir/Madam:

On behalf of JBX Developers, Inc. (JBX), 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 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 of water that will be generated during dewatering activities associated with the construction of the Revere Beach Hotel located at 49-54 Revere Beach Boulevard, Revere, Massachusetts (the Site). This work will take place within approximately one half of the site and is anticipated to be completed within twelve months, thereby precluding the need for Whole Effluent Toxicity (WET) testing unless specifically requested by EPA. The Site is not listed as a disposal site with the Massachusetts Department of Environmental Protection (MassDEP). A Site Locus is provided as **Figure 1**; a Discharge Location plan is provided as **Figure 2**; and a Receiving Water Location plan is provided as **Figure 3**.

Work Summary

The project includes the construction of a hotel. To complete portions of the footing excavations in the dry, dewatering is required to lower the groundwater table as the work is being performed. To do this, a series of wellpoints surrounding the perimeter of the work area will be utilized, and the water generated during dewatering (Source water) will be pumped to a treatment system prior to discharge to a catch basin located on Ocean Drive, with ultimate discharge to Sales Creek. To characterize groundwater from the

proposed excavation area, LRT collected representative groundwater samples from one onsite test pit (Influent) and the receiving water (Sales Creek) on November 8, 2018. The samples were analyzed for various parameters in accordance with the NPDES RGP. The location of the test pit and receiving water is depicted on **Figures 2** and **3**, respectively.

Discharge and Receiving Surface Water Information

A summary of analytical data is provided on the NOI Form included in **Appendix A**, and copies of the laboratory data reports are provided in **Appendix B**. The "Report Only" compounds ammonia and chloride were detected in each of the samples. Concentrations of total suspended solids (TSS), volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), total residual chlorine (TRC), and various metals were detected in groundwater. To meet the applicable NPDES RGP Standards, source water will undergo treatment that includes bag filtration and potentially carbon and metals treatment, if necessary. Details of the water treatment system are provided below.

Water Treatment System

A water treatment system schematic is provided as **Figure 4**. Cutsheets of the system components, product information and Safety Data Sheets (SDS) are included in **Appendix C**. Source water will be pumped to a treatment system with a design flow of up to 500 gallons per minute (gpm); the average effluent flow of the system is estimated to be 300 gpm, and the maximum flow will not exceed 500 gpm. Source water will enter two 18,000-gallon weir tanks at head of the system. From the weir tanks, water is pumped to one (1) multi bag filter skid. Discharge from the bag filters will pass through a flow/totalizer meter prior to discharge to Sales Creek. Contingency water treatment components include a two (2) media vessels each containing 10,000 pounds of reactivated liquid phase carbon, followed by one (1) media vessel containing 160 cubic feet of cation exchange resin.

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 is not located within an Area of Critical Environmental Concern (ACEC) and is not listed as a National Historic Place. Documentation is included in **Appendix D**.

A consultation with National Marine Fisheries Service (NMFS) was conducted., LRT certifies eligibility according to the NMFS Criterion as the remediation activity discharges are not likely to adversely affect listed species and will result in either no effect or no adverse modification of critical habitat and also result in no take of a listed species. In support of this certification, the remaining Documentation for Eligibility Determination is provided 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 JBX, we are requesting coverage under the NPDES RGP for the discharge of treated wastewater to Sales Creek in support of construction dewatering activities that are to take place at 49-54 Revere Beach Boulevard, Revere, Massachusetts.

The enclosed NOI form provides required information on the general site conditions, discharge, treatment system, receiving water, and consultation with federal services.

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

Kim Gravelle

Kim Gravelle, P.G.
Project Manager

Paul Lockwood

Paul Lockwood
President

Encl: Figure 1 – Locus Plan
Figure 2 – Discharge Location
Figure 3 – Receiving Water Location
Figure 4 – Water Treatment System Schematic
Appendix A – NOI Form
Appendix B – Laboratory Data
Appendix C – Water Treatment System
Appendix D – Supplemental Information

cc: Steve Johnson, JBX Developers, Inc.
Christopher Gobeille, Landmark Utilities and Site Excavation
Nicholas Rystrom, P.E., City of Revere

Figures

Source: MassGIS, Oliver topographic Map.

Notes

1. Figure is not to scale.

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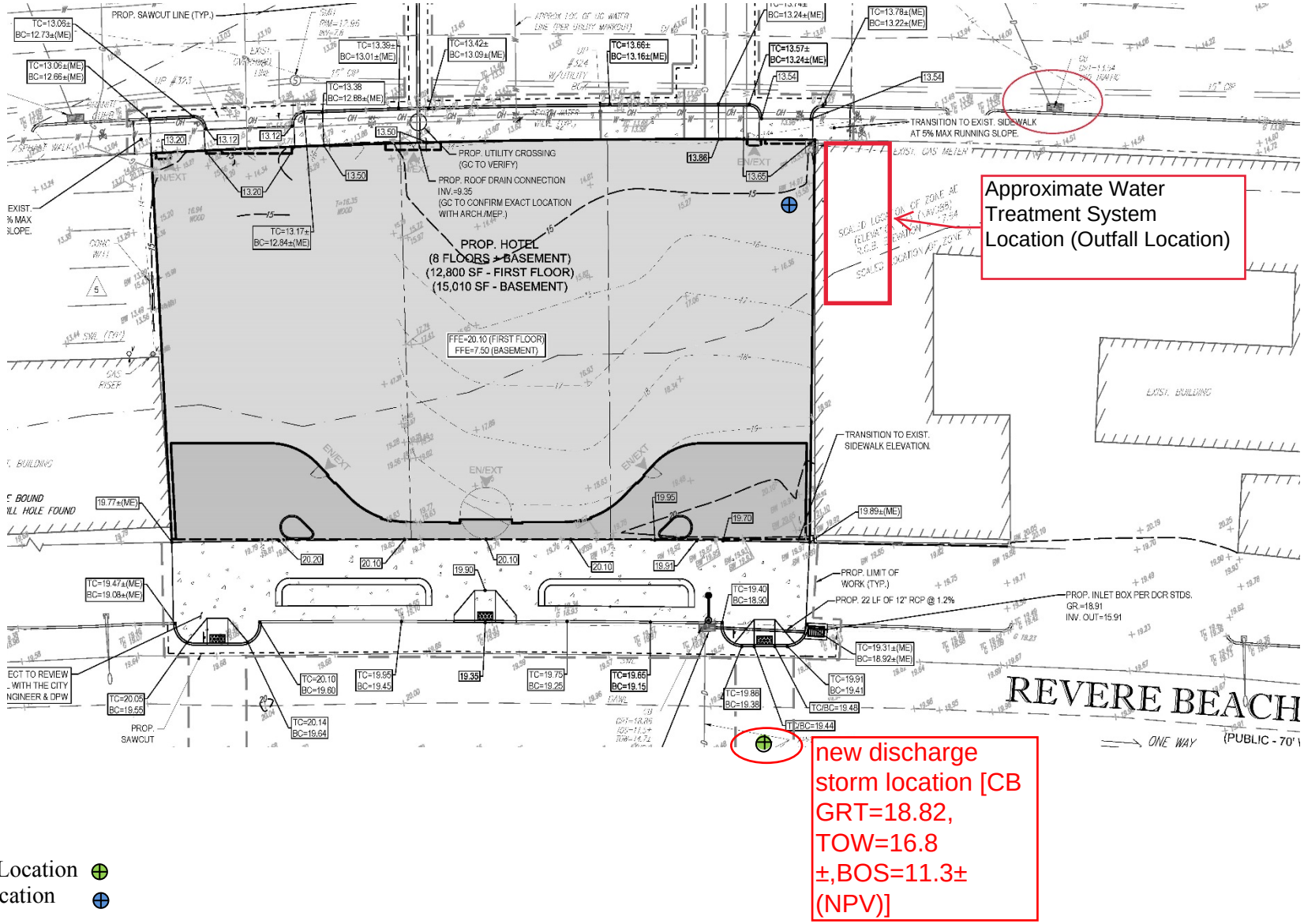
Figure 1 – Locus Plan
Revere Beach Hotel
49-54 Revere Beach Boulevard
Revere, Massachusetts



Key

Discharge Location ⊕
Test Pit Location ⊕

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Figure 2 – Discharge Location
Revere Beach Hotel
49-54 Revere Beach Boulevard
Revere, Massachusetts

Key

Receiving Water Location ⊕

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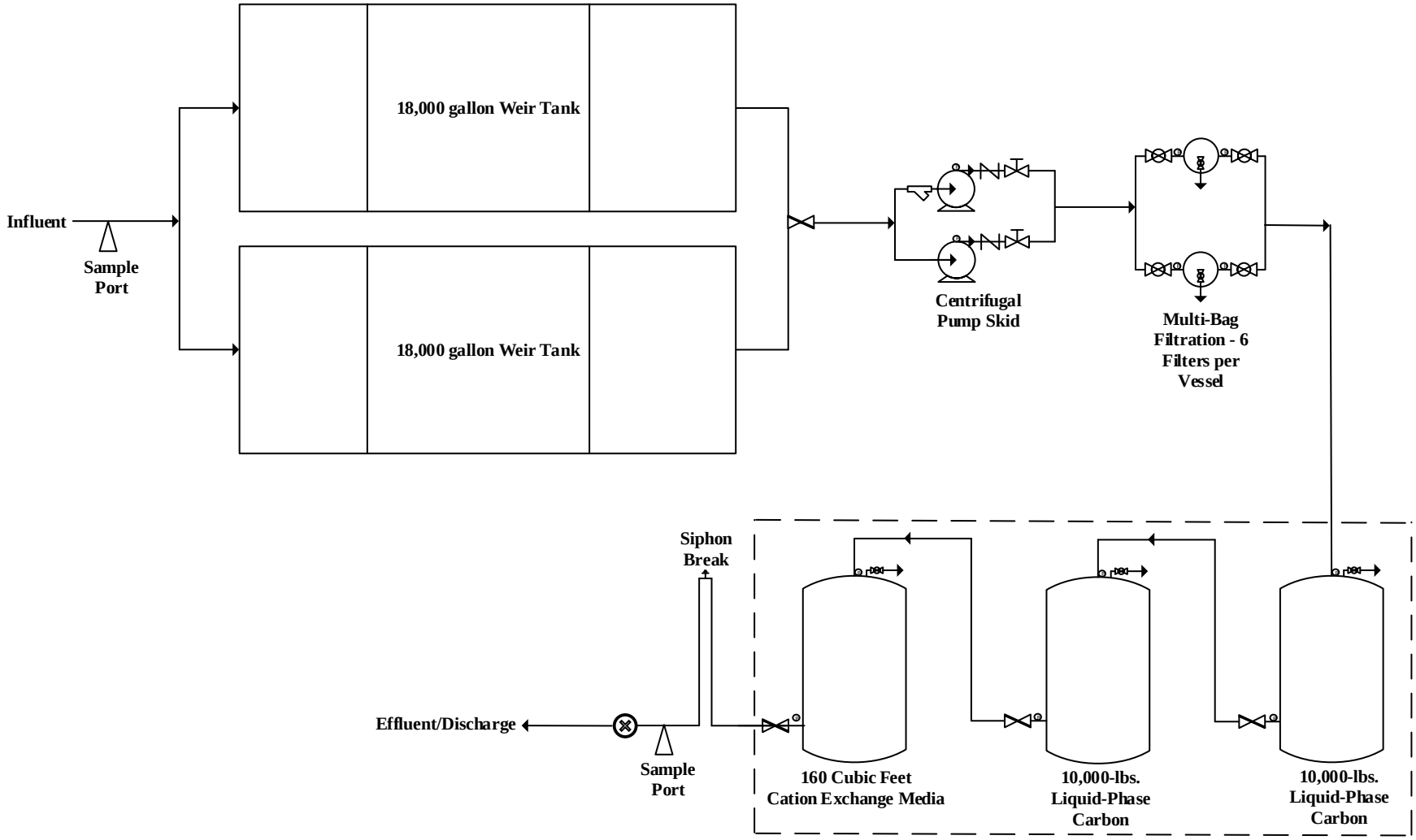
Figure 3 – Receiving Water Location
Revere Beach Hotel
49-54 Revere Beach Boulevard
Revere, Massachusetts



Notes:

1.) Figure is not to scale
2.) System rated for 500 GPM

Key:

- Piping/Hose
- Ball Valve
- Butterfly Valve
- Gate Valve
- Bleed Valve Assembly
- Pressure Gauge
- Sample Port
- Contingent

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

DESIGNED BY: LRT | DRAWN BY: KG

CHECKED BY: | DATE:

Water Treatment System Schematic

Revere Beach Hotel
49-54 Revere Beach Boulevard
Revere, Massachusetts

PROJECT No. 2-1738

FIGURE No. 4

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:
Revere Beach Hotel</td><td colspan="3">Site address: 49-54 Revere Beach Boulevard
Street:</td></tr>
<tr><td>City: Revere</td><td>State: MA</td><td>Zip:</td></tr>
<tr><td rowspan="4">2. Site owner
JBX Developers Inc.

Owner is (check one): ☐ Federal ☐ State/Tribal ■ Private
☐ Other; if so, specify:</td><td colspan="3">Contact Person: Steve Johnson</td></tr>
<tr><td colspan="2">Telephone: 617-682-2107</td><td>Email:</td></tr>
<tr><td colspan="3">Mailing address: 440 William F. McClellan Highway, Suite 105C
Street:</td></tr>
<tr><td>City: East Boston</td><td>State: MA</td><td>Zip: 02128</td></tr>
<tr><td rowspan="4">3. Site operator, if different than owner
Landmark Utilities and Site Excavation</td><td colspan="3">Contact Person: Christopher Gobeille</td></tr>
<tr><td colspan="2">Telephone:</td><td>Email:</td></tr>
<tr><td colspan="3">Mailing address:
Street: P.O. Box 444</td></tr>
<tr><td>City: Hathorne</td><td>State: MA</td><td>Zip: 01937</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):
☐ 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): SB
Receiving water is (check any that apply): ☐ Outstanding Resource Water ☐ Ocean Sanctuary ☐ territorial sea ☐ Wild and Scenic River		
2. Has the operator attached a location map in accordance with the instructions in B, above? (check one): ■ Yes ☐ No Are sensitive receptors present near the site? (check one): ☐ Yes ■ No If yes, specify:		
3. Indicate if the receiving water(s) is listed in the State's Integrated List of Waters (i.e., CWA Section 303(d)). Include which designated uses are impaired, and any pollutants indicated. Also, indicate if a final TMDL is available for any of the indicated pollutants. For more information, contact the appropriate State as noted in Part 4.6 of the RGP. N/A		
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.		N/A saltwater
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.		N/A
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: Discharge to Saltwater, No Dilution requested		
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: TSS, VOCs, PAHs, TRC, Ethanol and Metals	
a. For source waters that are contaminated groundwater or contaminated surface water, indicate are any contaminants present that are not included in the RGP? (check one): ☐ Yes ■ No If yes, indicate the contaminant(s) and the maximum concentration present in accordance with the instructions in Appendix VIII.	b. For a source water that is a surface water other than the receiving water, potable water or other, indicate any contaminants present at the maximum concentration in accordance with the instructions in Appendix VIII? (check one): ☐ Yes ☐ No
3. Has the source water been previously chlorinated or otherwise contains residual chlorine? (check one): ☐ Yes ■ No	

D. Discharge information

1.The discharge(s) is a(n) (check any that apply): ☐ Existing discharge ■ New discharge ☐ New source	
Outfall(s): 001	Outfall location(s): (Latitude, Longitude)
Discharges enter the receiving water(s) via (check any that apply): ☐ Direct discharge to the receiving water ■ Indirect discharge, if so, specify: Discharge to Storm Drain Catch Basin located on Revere Beach Boulevard (see Figure 2) ☐ 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: DCR 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): December 2018 through July 2019 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	4500	375	808	808	Report mg/L	---
Chloride	✔		1	300.0	25,000	280,000	280,000	Report µg/l	---
Total Residual Chlorine	✔		1	4500	20	1,000	1,000	0.2 mg/L	7.5
Total Suspended Solids	✔		1	2540	3,100	84,000	84,000	30 mg/L	---
Antimony		✔	1	200.8	1.0	<1.0	<1.0	206 µg/L	
Arsenic	✔		1	200.8	1.0	3.3	3.3	104 µg/L	
Cadmium	✔		1	200.8	0.20	0.21	0.21	10.2 µg/L	
Chromium III	✔		1	200.8	10	3.9	3.9	323 µg/L	
Chromium VI		✔	1	3500	4.0	<4.0	<4.0	323 µg/L	
Copper	✔		1	200.8	1.0	14	14	242 µg/L	3.7
Iron	✔		1	200.7	50	5,300	5,300	5,000 µg/L	
Lead	✔		1	200.8	0.50	53	53	160 µg/L	8.5
Mercury		✔	1	245.1	0.10	<0.10	<0.10	0.739 µg/L	
Nickel	✔		1	200.8	5.0	7.4	7.4	1,450 µg/L	
Selenium	✔		1	200.8	5.0	1.4	1.4	235.8 µg/L	
Silver		✔	1	200.8	0.20	<0.20	<0.20	35.1 µg/L	
Zinc	✔		1	200.8	20	65	65	420 µg/L	
Cyanide		✔	1	4500	5.0	<5.0	<5.0	178 mg/L	
B. Non-Halogenated VOCs									
Total BTEX	✔		1	624	1.0	4.98	4.98	100 µg/L	---
Benzene		✔	1	624	1.0	<1.0	<1.0	5.0 µg/L	---
1,4 Dioxane		✔	1	624	50	<50	<50	200 µg/L	---
Acetone	✔		1	624	50	4.4	4.4	7.97 mg/L	---
Phenol		✔	1	625	10	<10	<10	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	2.0	<2.0	<2.0	4.4 µg/L	
1,2 Dichlorobenzene		✔	1	624	2.0	<2.0	<2.0	600 µg/L	---
1,3 Dichlorobenzene		✔	1	624	2.0	<2.0	<2.0	320 µg/L	---
1,4 Dichlorobenzene		✔	1	624	2.0	<2.0	<2.0	5.0 µg/L	---
Total dichlorobenzene		✔	1	624	2.0	<2.0	<2.0	763 µg/L in NH	---
1,1 Dichloroethane		✔	1	624	2.0	<2.0	<2.0	70 µg/L	---
1,2 Dichloroethane		✔	1	624	2.0	<2.0	<2.0	5.0 µg/L	---
1,1 Dichloroethylene		✔	1	624	2.0	<2.0	<2.0	3.2 µg/L	---
Ethylene Dibromide								0.05 µg/L	---
Methylene Chloride		✔	1	624	5.0	<5.0	<5.0	4.6 µg/L	---
1,1,1 Trichloroethane		✔	1	624	2.0	<2.0	<2.0	200 µg/L	---
1,1,2 Trichloroethane		✔	1	624	2.0	<2.0	<2.0	5.0 µg/L	---
Trichloroethylene		✔	1	624	2.0	<2.0	<2.0	5.0 µg/L	---
Tetrachloroethylene		✔	1	624	2.0	<2.0	<2.0	5.0 µg/L	
cis-1,2 Dichloroethylene		✔	1	624	2.0	<2.0	<2.0	70 µg/L	---
Vinyl Chloride			1	624	2.0	<2.0	<2.0	2.0 µg/L	---
D. Non-Halogenated SVOCs									
Total Phthalates		✔	1	625	10	<10	<10	190 µg/L	
Diethylhexyl phthalate		✔	1	625	10	<10	<10	101 µg/L	
Total Group I PAHs	✔		1	625	0.202	0.53	0.53	1.0 µg/L	---
Benzo(a)anthracene	✔		1	625	0.051	0.18	0.18	As Total PAHs	0.0038
Benzo(a)pyrene	✔		1	625	0.10	0.15	0.15		0.0038
Benzo(b)fluoranthene	✔		1	625	0.051	0.20	0.20		0.0038
Benzo(k)fluoranthene		✔	1	625	0.20	<0.20	<0.20		
Chrysene		✔	1	625	0.20	<0.20	<0.20		
Dibenzo(a,h)anthracene		✔	1	625	0.20	<0.20	<0.20		
Indeno(1,2,3-cd)pyrene		✔	1	625	0.20	<0.20	<0.20		

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	5.1	<5.1	<5.1	100 µg/L	---
Naphthalene		✔	1	625	5.1	<5.1	<5.1	20 µg/L	---
E. Halogenated SVOCs									
Total PCBs		✔	1	608	0.10	<0.10	<0.10	0.000064 µg/L	---
Pentachlorophenol		✔	1	625	1.0	<1.0	<1.0	1.0 µg/L	---
F. Fuels Parameters									
Total Petroleum Hydrocarbons		✔	1	1664B	1,400	<1,400	<1,400	5.0 mg/L	---
Ethanol	✔		1	624	50	50	50	Report mg/L	---
Methyl-tert-Butyl Ether		✔	1	624	2.0	<2.0	<2.0	70 µg/L	
tert-Butyl Alcohol		✔	1	624	20	<20	<20	120 µg/L in MA 40 µg/L in NH	---
tert-Amyl Methyl Ether		✔	1	624	0.50	<0.50	<0.50	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:									
Influent pH			1			7.4	7.4		
Influent Temperature			1			14.0C	14.0C		
Receiving Water (Sales Creek)									
Salinity	✔		1	2520	0.00100	0.00204	0.00204		
Antimony	✔		1	200.8	1.0	1.0	1.0		
Arsenic	✔		1	200.8	1.0	3.2	3.2		
Copper	✔		1	200.8	1.0	18	18		
Iron	✔		1	200.7	50	2,900	2,900		
Lead	✔		1	200.8	0.50	51	51		
Nickel	✔		1	200.8	5.0	5.3	5.3		
Selenium	✔		1	200.8	5.0	8.6	8.6		
Zinc	✔		1	200.8	20	77	77		
Chromium VI	✔		1	3500	4.0	7.6	7.6		
Ammonia			1	4500	75	253	253		

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.

The system will consist of two (2) weir tanks to settle out solids followed by bag filtration prior to discharge. A contingency carbon treatment system and/or a contingency metals treatment system will be added if effluent concentrations are above the RGP Standards.

Identify each major treatment component (check any that apply):

☐ Fractionation tanks■ Equalization tank ☐ Oil/water separator ☐ Mechanical filter ■ Media filter
☐ Chemical feed tank ☐ Air stripping unit ■ Bag filter ☐ Other; if so, specify:

Indicate if either of the following will occur (check any that apply):

☐ Chlorination ☐ De-chlorination

3. Provide the **design flow capacity** in gallons per minute (gpm) of the most limiting component. Indicate the most limiting component: bag filters Is use of a flow meter feasible? (check one): ■ Yes ☐ No, if so, provide justification:	500
Provide the proposed maximum effluent flow in gpm.	500
Provide the average effluent flow in gpm.	300
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.

See attached cover letter detailing current site conditions and sampling considerations

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

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

J. Certification requirement

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

BMPP certification statement: A BMPP will be developed and maintained that meets the requirements of this permit. The BMPP will be implemented on-site prior to 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. **Notification will be provided upon EPA approval of NOI**	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: Steven Johnson	Date: 11-27-18
Print Name and Title: STEVEN JOHNSON PROJECT MANAGER	

From: Nicholas Rystrom
To: Kim Gravelle
Cc: Don Ciaramella
Subject: RE: 49-54 Revere Beach Parkway, Revere
Date: Wednesday, October 24, 2018 12:24:31 PM

Hi Kim,

I am ok with the discharge location given the following:

1) the water is treated appropriately and consistently with the EPA's discharge general permit (DGP) prior to discharge
2) discharge does not occur during wet weather
3) the system is inspected and confirmed to be clear and able to receive flow
4) a DGP is executed or deemed by the EPA to not be applicable
5) details for dewatering, treatment and discharge are provided for review and approval

Please call or respond should you have any questions. Thank you

Regards,

Nick

Nicholas J. Rystrom, P.E.
City Engineer
City of Revere
281 Broadway
Revere, MA 02151
781-286-8153 o
781-853-9600 c
nrystrom@revere.org

From: Kim Gravelle [mailto:kgravelle@lrt-llc.net]
Sent: Wednesday, October 24, 2018 9:28 AM
To: Nicholas Rystrom
Cc: Don Ciaramella
Subject: FW: 49-54 Revere Beach Parkway, Revere
Importance: High

HI Nick,

I spoke to Donald yesterday regarding the referenced location. He stated that you were the person we should speak with regarding a discharge permit. Can you please review the information below and let me know how we should proceed?

Thank you,

Kim Gravelle, P.G.
Project Manager

Lockwood Remediation Technologies, LLC
89 Crawford Street
Leominster, MA 01453
O: 774-450-7177 x109
F: 888-835-0617
C: 774.479.1048
kgravelle@lrt-llc.net

From: Kim Gravelle
Sent: Friday, October 19, 2018 10:06 AM
To: dciaramella@revere.org; nrystrom@revere.org
Subject: 49-54 Revere Beach Parkway, Revere
Importance: High

Donald / Nick,

Lockwood Remediation Technologies, LLC (LRT) has been contracted by Landmark Construction to perform dewatering and water treatment services at the referenced project location. We are looking for information on who owns the drainage system for our proposed discharge location (catch basin) to ensure sure the appropriate permitting is in place. The attached figure depicts the proposed discharge location. Please review and let me know so that we can apply for the appropriate discharge permit(s).

Thank you,

Kim Gravelle, P.G.
Project Manager

Lockwood Remediation Technologies, LLC
89 Crawford Street
Leominster, MA 01453
O: 774-450-7177 x109
F: 888-835-0617
C: 774.479.1048
kgravelle@lrt-llc.net

Enter number values in green boxes below

Enter values in the units specified

↓

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

Enter a dilution factor, if other than zero

↓

0

Enter values in the units specified

↓

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

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

↓

7.4	pH in **Standard Units**
14	Temperature in **°C**
0.253	Ammonia in **mg/L**
0	Hardness in **mg/L** $CaCO_3$
2.04	Salinity in **ppt**
1	Antimony in **µg/L**
3.2	Arsenic in **µg/L**
0	Cadmium in **µg/L**
0	Chromium III in **µg/L**
7.6	Chromium VI in **µg/L**
18	Copper in **µg/L**
2,900	Iron in **µg/L**
51	Lead in **µg/L**
0	Mercury in **µg/L**
5.3	Nickel in **µg/L**
8.6	Selenium in **µg/L**
0	Silver in **µg/L**
77	Zinc in **µg/L**

Enter **influent** concentrations in the units specified

↓

1,000	TRC in **µg/L**
0.808	Ammonia in **mg/L**
0	Antimony in **µg/L**
3.3	Arsenic in **µg/L**
0.21	Cadmium in **µg/L**
3.9	Chromium III in **µg/L**
0	Chromium VI in **µg/L**
14	Copper in **µg/L**
5,300	Iron in **µg/L**
53	Lead in **µg/L**
0	Mercury in **µg/L**
7.4	Nickel in **µg/L**
1.4	Selenium in **µg/L**
0	Silver in **µg/L**
65	Zinc in **µg/L**
0	Cyanide in **µg/L**
0	Phenol in **µg/L**
0	Carbon Tetrachloride in **µg/L**
0	Tetrachloroethylene in **µg/L**
0	Total Phthalates in **µg/L**
0	Diethylhexylphthalate in **µg/L**
0.18	Benzo(a)anthracene in **µg/L**
0.15	Benzo(a)pyrene in **µg/L**
0.2	Benzo(b)fluoranthene in **µg/L**
0	Benzo(k)fluoranthene in **µg/L**
0	Chrysene in **µg/L**
0	Dibenzo(a,h)anthracene in **µg/L**
0	Indeno(1,2,3-cd)pyrene in **µg/L**
0	Methyl-tert butyl ether in **µg/L**

Notes:

Freshwater: Q_R equal to the 7Q10; enter alternate Q_R if approved by the State; enter 0 if no dilution factor approved
Saltwater (estuarine and marine): enter Q_R if approved by the State; enter 0 if no entry
Discharge flow is equal to the design flow or 1 MGD, whichever is less
Only if approved by State as the entry for Q_R; leave 0 if no entry

Saltwater (estuarine and marine): only if approved by the State
Leave 0 if no entry

Freshwater only

pH, temperature, and ammonia required for all discharges
Hardness required for freshwater
Salinity required for saltwater (estuarine and marine)
Metals required for all discharges if present and if dilution factor is > 1
Enter 0 if non-detect or testing not required

if >1 sample, enter maximum
if >10 samples, may enter 95th percentile
Enter 0 if non-detect or testing not required

Dilution Factor	0.0					
A. Inorganics	TBEL applies if bolded		WQBEL applies if bolded		Compliance Level applies if shown	
Ammonia	**Report**	mg/L	---			
Chloride	**Report**	µg/L	---			
Total Residual Chlorine	0.2	mg/L	**7.5**	µg/L	50	µg/L
Total Suspended Solids	**30**	mg/L	---			
Antimony	**206**	µg/L	640	µg/L		
Arsenic	**104**	µg/L	36	µg/L		
Cadmium	**10.2**	µg/L	8.9	µg/L		
Chromium III	**323**	µg/L	100.0	µg/L		
Chromium VI	**323**	µg/L	50	µg/L		
Copper	242	µg/L	**3.7**	µg/L		
Iron	**5000**	µg/L	---	µg/L		
Lead	160	µg/L	**8.5**	µg/L		
Mercury	**0.739**	µg/L	1.11	µg/L		
Nickel	**1450**	µg/L	8.3	µg/L		
Selenium	**235.8**	µg/L	71	µg/L		
Silver	**35.1**	µg/L	2.2	µg/L		
Zinc	**420**	µg/L	86	µg/L		
Cyanide	**178**	mg/L	1.0	µg/L	---	µg/L
B. Non-Halogenated VOCs						
Total BTEX	**100**	µg/L	---			
Benzene	**5.0**	µg/L	---			
1,4 Dioxane	**200**	µg/L	---			
Acetone	**7.97**	mg/L	---			
Phenol	**1,080**	µg/L	300	µg/L		
C. Halogenated VOCs						
Carbon Tetrachloride	**4.4**		1.6	µg/L		
1,2 Dichlorobenzene	**600**	µg/L	---			
1,3 Dichlorobenzene	**320**	µg/L	---			
1,4 Dichlorobenzene	**5.0**	µg/L	---			
Total dichlorobenzene	**---**	µg/L	---			
1,1 Dichloroethane	**70**	µg/L	---			
1,2 Dichloroethane	**5.0**	µg/L	---			
1,1 Dichloroethylene	**3.2**	µg/L	---			
Ethylene Dibromide	**0.05**	µg/L	---			
Methylene Chloride	**4.6**	µg/L	---			
1,1,1 Trichloroethane	**200**	µg/L	---			
1,1,2 Trichloroethane	**5.0**	µg/L	---			
Trichloroethylene	**5.0**	µg/L	---			
Tetrachloroethylene	**5.0**	µg/L	3.3	µg/L		
cis-1,2 Dichloroethylene	**70**	µg/L	---			
Vinyl Chloride	**2.0**	µg/L	---			

D. Non-Halogenated SVOCs

Total Phthalates	**190**	µg/L	---	µg/L		
Diethylhexyl phthalate	**101**	µg/L	2.2	µg/L		
Total Group I Polycyclic Aromatic Hydrocarbons	**1.0**	µg/L	---			
Benzo(a)anthracene	1.0	µg/L	**0.0038**	µg/L	0.1	µg/L
Benzo(a)pyrene	1.0	µg/L	**0.0038**	µg/L	0.1	µg/L
Benzo(b)fluoranthene	1.0	µg/L	**0.0038**	µg/L	0.1	µg/L
Benzo(k)fluoranthene	**1.0**	µg/L	0.0038	µg/L	---	µg/L
Chrysene	**1.0**	µg/L	0.0038	µg/L	---	µg/L
Dibenzo(a,h)anthracene	**1.0**	µg/L	0.0038	µg/L	---	µg/L
Indeno(1,2,3-cd)pyrene	**1.0**	µg/L	0.0038	µg/L	---	µg/L
Total Group II Polycyclic Aromatic Hydrocarbons	**100**	µg/L	---			
Naphthalene	**20**	µg/L	---			
E. Halogenated SVOCs						
Total Polychlorinated Biphenyls	**0.000064**	µg/L	---		0.5	µg/L
Pentachlorophenol	**1.0**	µg/L	---			
F. Fuels Parameters						
Total Petroleum Hydrocarbons	**5.0**	mg/L	---			
Ethanol	**Report**	mg/L	---			
Methyl-tert-Butyl Ether	**70**	µg/L	20	µg/L		
tert-Butyl Alcohol	**120**	µg/L	---			
tert-Amyl Methyl Ether	**90**	µg/L	---			

Enter your transmittal number → X282018 (Transmittal Number)

Your unique Transmittal Number can be accessed online:
http://www.mass.gov/eea/agencies/massdep/service/approvals/transmittal-form-for-payment.html

Massachusetts Department of Environmental Protection

Transmittal Form for Permit Application and Payment

1. Please type or print. A separate Transmittal Form must be completed for each permit application.

2. Make your check payable to the Commonwealth of Massachusetts and mail it with a copy of this form to: MassDEP, P.O. Box 4062, Boston, MA 02211.

3. Three copies of this form will be needed.

Copy 1 - the original must accompany your permit application. **Copy 2** must accompany your fee payment. **Copy 3** should be retained for your records

4. Both fee-paying and exempt applicants must mail a copy of this transmittal form to:

MassDEP
P.O. Box 4062
Boston, MA
02211

*** Note:**
For BWSC Permits, enter the LSP.

A. Permit Information

1. Permit Code: 4 to 7 character code from permit instructions	2. Name of Permit Category
WM15	

Construction Dewatering
3. Type of Project or Activity

B. Applicant Information – Firm or Individual

JBX Developers Inc.
1. Name of Firm - Or, if party needing this approval is an individual enter name below:

2. **Last Name** of Individual	3. **First Name** of Individual	4. MI

440 William F. McClellan Highway, Suite 105C
5. Street Address

6. City/Town	7. State	8. Zip Code	9. Telephone #	10. Ext. #
East Boston	MA	02128	617-682-2107	

11. Contact Person	12. e-mail address
Steven Johnson	stevenjohnson@jbxdevelopers.net

C. Facility, Site or Individual Requiring Approval

1. Name of Facility, Site Or Individual

2. Street Address

3. City/Town	4. State	5. Zip Code	6. Telephone #	7. Ext. #

8. DEP Facility Number (if Known)	9. Federal I.D. Number (if Known)	10. BWSC Tracking # (if Known)

D. Application Prepared by (if different from Section B)*

Lockwood Remediation Technologies, LLC
1. Name of Firm Or Individual

89 Crawford Street
2. Address

3. City/Town	4. State	5. Zip Code	6. Telephone #	7. Ext. #
Leominster	MA	01453	774-450-7177	

8. Contact Person	9. LSP Number (BWSC Permits only)
Paul Lockwood	

E. Permit - Project Coordination

1. Is this project subject to MEPA review? ☐ yes ☒ no
If yes, enter the project's EOEA file number - assigned when an Environmental Notification Form is submitted to the MEPA unit:

EOEA File Number

F. Amount Due

DEP Use Only

Permit No:

Rec'd Date:

Reviewer:

Special Provisions:

1. ☐ **Fee** Exempt (city, town or municipal housing authority)(state agency if fee is $100 or less).
There are no fee exemptions for BWSC permits, regardless of applicant status.
2. ☐ Hardship Request - payment extensions according to 310 CMR 4.04(3)(c).
3. ☐ Alternative Schedule Project (according to 310 CMR 4.05 and 4.10).
4. ☐ Homeowner (according to 310 CMR 4.02).

Check Number	Dollar Amount	Date
1771	$500.00	11/28/18

Appendix B

Laboratory Data

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

November 14, 2018

Tammie Hagie
Lockwood Remediation Technologies, LLC
89 Crawford Street
Leominster, MA 01453

Project Location: 49-54 Revere Beach Boulevard, Revere, MA
Client Job Number:
Project Number: 2-1759
Laboratory Work Order Number: 18K0452

Enclosed are results of analyses for samples received by the laboratory on November 9, 2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kerry K. McGee
Project Manager

Table of Contents

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

Lockwood Remediation Technologies, LLC
89 Crawford Street
Leominster, MA 01453
ATTN: Tammie Hagie

REPORT DATE: 11/14/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: 2-1759

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18K0452

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

PROJECT LOCATION: 49-54 Revere Beach Boulevard, Revere, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
INFLUENT	18K0452-01	Ground Water		EPA 1664B	
				EPA 200.7	
				EPA 200.8	
				EPA 245.1	
				EPA 300.0	
				EPA 608.3	
				EPA 624.1	
				EPA 625	
				EPA 625.1	
				SM19-22 4500 NH3 C	MA M-MA-086/CT PH-0574/NY11148
				SM21-22 2540D	
				SM21-22 3500 Cr B	
				SM21-22 4500 CL G	
				SM21-22 4500 CN E	MA M-MA-086/CT PH-0574/NY11148
				Tri Chrome Calc.	

con-test® ANALYTICAL LABORATORY

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

CASE NARRATIVE SUMMARY

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

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

EPA 200.7

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:

Iron
B216991-BS1

EPA 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:

Benzidine
18K0452-01[INFLUENT], B216915-BLK1, B216915-BS1, B216915-BSD1

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
18K0452-01[INFLUENT], B216915-BLK1, B216915-BS1, B216915-BSD1

V-05

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

Analyte & Samples(s) Qualified:

Benzidine
18K0452-01[INFLUENT], B216915-BLK1, B216915-BS1, B216915-BSD1

V-06

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

Analyte & Samples(s) Qualified:

2-Methylphenol
B216915-BS1, B216915-BSD1

3/4-Methylphenol
B216915-BS1, B216915-BSD1

Bis(2-chloroethyl)ether
B216915-BS1, B216915-BSD1

Bis(2-chloroisopropyl)ether
B216915-BS1, B216915-BSD1

N-Nitrosodimethylamine
B216915-BS1, B216915-BSD1

N-Nitrosodi-n-propylamine
B216915-BS1, B216915-BSD1

V-20

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

Analyte & Samples(s) Qualified:

2-Methylphenol
18K0452-01[INFLUENT], B216915-BLK1

3/4-Methylphenol
18K0452-01[INFLUENT], B216915-BLK1

Bis(2-chloroethyl)ether
18K0452-01[INFLUENT], B216915-BLK1

Bis(2-chloroisopropyl)ether
18K0452-01[INFLUENT], B216915-BLK1

N-Nitrosodimethylamine
18K0452-01[INFLUENT], B216915-BLK1

N-Nitrosodi-n-propylamine
18K0452-01[INFLUENT], B216915-BLK1

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

SM21-22 3500 Cr B

Qualifications:

H-03

Sample received after recommended holding time was exceeded.

Analyte & Samples(s) Qualified:

Hexavalent Chromium
18K0452-01[INFLUENT], B216896-DUP1

SM21-22 4500 CL G

Qualifications:

H-03

Sample received after recommended holding time was exceeded.

Analyte & Samples(s) Qualified:

Chlorine, Residual
18K0452-01[INFLUENT]

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

Lisa A. Worthington
Project Manager

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

Project Location: 49-54 Revere Beach Boulevard, R Sample Description: Work Order: 18K0452

Date Received: 11/9/2018

Field Sample #: INFLUENT Sampled: 11/8/2018 16:30

Sample ID: 18K0452-01

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	4.4	50	1.7	µg/L	1	J	EPA 624.1	11/12/18	11/12/18 12:35	LBD
tert-Amyl Methyl Ether (TAME)	ND	0.50	0.28	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
Benzene	ND	1.0	0.34	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
Bromodichloromethane	0.69	2.0	0.48	µg/L	1	J	EPA 624.1	11/12/18	11/12/18 12:35	LBD
Bromoform	ND	2.0	0.28	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
Bromomethane	ND	2.0	0.44	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
tert-Butyl Alcohol (TBA)	ND	20	2.9	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
Carbon Tetrachloride	ND	2.0	0.39	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
Chlorobenzene	ND	2.0	0.30	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
Chlorodibromomethane	ND	2.0	0.27	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
Chloroethane	ND	2.0	0.38	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
Chloroform	2.4	2.0	0.33	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
Chloromethane	ND	2.0	0.30	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
1,2-Dichlorobenzene	ND	2.0	0.31	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
1,3-Dichlorobenzene	ND	2.0	0.33	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
1,4-Dichlorobenzene	ND	2.0	0.39	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
1,2-Dichloroethane	ND	2.0	0.28	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
1,1-Dichloroethane	ND	2.0	0.33	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
1,1-Dichloroethylene	ND	2.0	0.25	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
trans-1,2-Dichloroethylene	ND	2.0	0.40	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
1,2-Dichloropropane	ND	2.0	0.31	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
cis-1,3-Dichloropropene	ND	2.0	0.47	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
1,4-Dioxane	ND	50	26	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
trans-1,3-Dichloropropene	ND	2.0	0.37	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
Ethanol	50	50	28	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
Ethylbenzene	0.44	2.0	0.37	µg/L	1	J	EPA 624.1	11/12/18	11/12/18 12:35	LBD
Methyl tert-Butyl Ether (MTBE)	ND	2.0	0.24	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
Methylene Chloride	ND	5.0	0.42	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
1,1,2,2-Tetrachloroethane	ND	2.0	0.27	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
Tetrachloroethylene	ND	2.0	0.32	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
Toluene	2.1	1.0	0.35	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
1,1,1-Trichloroethane	ND	2.0	0.25	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
1,1,2-Trichloroethane	ND	2.0	0.22	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
Trichloroethylene	ND	2.0	0.41	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
Trichlorofluoromethane (Freon 11)	ND	2.0	0.27	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
Vinyl Chloride	ND	2.0	0.30	µg/L	1		EPA 624.1	11/12/18	11/12/18 12:35	LBD
m+p Xylene	1.6	2.0	0.65	µg/L	1	J	EPA 624.1	11/12/18	11/12/18 12:35	LBD
o-Xylene	0.84	2.0	0.35	µg/L	1	J	EPA 624.1	11/12/18	11/12/18 12:35	LBD

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
1,2-Dichloroethane-d4	102	70-130		11/12/18 12:35
Toluene-d8	101	70-130		11/12/18 12:35
4-Bromofluorobenzene	103	70-130		11/12/18 12:35

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

Project Location: 49-54 Revere Beach Boulevard, R Sample Description: Work Order: 18K0452

Date Received: 11/9/2018

Field Sample #: INFLUENT Sampled: 11/8/2018 16:30

Sample ID: 18K0452-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Benzo(a)anthracene (SIM)	0.18	0.051	µg/L	1		EPA 625	11/11/18	11/14/18 12:21	IMR
Benzo(a)pyrene (SIM)	0.15	0.10	µg/L	1		EPA 625	11/11/18	11/14/18 12:21	IMR
Benzo(b)fluoranthene (SIM)	0.20	0.051	µg/L	1		EPA 625	11/11/18	11/14/18 12:21	IMR
Benzo(k)fluoranthene (SIM)	ND	0.20	µg/L	1		EPA 625	11/11/18	11/14/18 12:21	IMR
Bis(2-ethylhexyl)phthalate (SIM)	ND	1.0	µg/L	1		EPA 625	11/11/18	11/14/18 12:21	IMR
Chrysene (SIM)	ND	0.20	µg/L	1		EPA 625	11/11/18	11/14/18 12:21	IMR
Dibenz(a,h)anthracene (SIM)	ND	0.20	µg/L	1		EPA 625	11/11/18	11/14/18 12:21	IMR
Indeno(1,2,3-cd)pyrene (SIM)	ND	0.20	µg/L	1		EPA 625	11/11/18	11/14/18 12:21	IMR
Pentachlorophenol (SIM)	ND	1.0	µg/L	1		EPA 625	11/11/18	11/14/18 12:21	IMR

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol (SIM)	33.5	15-110		11/14/18 12:21
Phenol-d6 (SIM)	24.4	15-110		11/14/18 12:21
Nitrobenzene-d5	74.8	30-130		11/14/18 12:21
2-Fluorobiphenyl	53.1	30-130		11/14/18 12:21
2,4,6-Tribromophenol (SIM)	85.9	15-110		11/14/18 12:21
p-Terphenyl-d14	66.4	30-130		11/14/18 12:21

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Project Location: 49-54 Revere Beach Boulevard, R Sample Description: Work Order: 18K0452

Date Received: 11/9/2018

Field Sample #: INFLUENT Sampled: 11/8/2018 16:30

Sample ID: 18K0452-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Acenaphthene	ND	5.1	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
Acenaphthylene	ND	5.1	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
Anthracene	ND	5.1	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
Benzidine	ND	20	µg/L	1	V-04, V-05, L-04	EPA 625.1	11/11/18	11/13/18 19:36	CDT
Benzo(g,h,i)perylene	ND	5.1	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
4-Bromophenylphenylether	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
Butylbenzylphthalate	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
4-Chloro-3-methylphenol	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
Bis(2-chloroethyl)ether	ND	10	µg/L	1	V-20	EPA 625.1	11/11/18	11/13/18 19:36	CDT
Bis(2-chloroisopropyl)ether	ND	10	µg/L	1	V-20	EPA 625.1	11/11/18	11/13/18 19:36	CDT
2-Chloronaphthalene	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
2-Chlorophenol	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
4-Chlorophenylphenylether	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
Di-n-butylphthalate	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
1,3-Dichlorobenzene	ND	5.1	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
1,4-Dichlorobenzene	ND	5.1	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
1,2-Dichlorobenzene	ND	5.1	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
3,3-Dichlorobenzidine	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
2,4-Dichlorophenol	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
Diethylphthalate	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
2,4-Dimethylphenol	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
Dimethylphthalate	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
4,6-Dinitro-2-methylphenol	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
2,4-Dinitrophenol	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
2,4-Dinitrotoluene	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
2,6-Dinitrotoluene	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
Di-n-octylphthalate	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
1,2-Diphenylhydrazine/Azobenzene	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
Fluoranthene	ND	5.1	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
Fluorene	ND	5.1	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
Hexachlorobenzene	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
Hexachlorobutadiene	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
Hexachlorocyclopentadiene	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
Hexachloroethane	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
Isophorone	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
Naphthalene	ND	5.1	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
Nitrobenzene	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
2-Nitrophenol	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
4-Nitrophenol	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
N-Nitrosodimethylamine	ND	10	µg/L	1	V-20	EPA 625.1	11/11/18	11/13/18 19:36	CDT
N-Nitrosodiphenylamine/Diphenylamine	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
N-Nitrosodi-n-propylamine	ND	10	µg/L	1	V-20	EPA 625.1	11/11/18	11/13/18 19:36	CDT
2-Methylnaphthalene	ND	5.1	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT

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Project Location: 49-54 Revere Beach Boulevard, R Sample Description: Work Order: 18K0452

Date Received: 11/9/2018

Field Sample #: INFLUENT Sampled: 11/8/2018 16:30

Sample ID: 18K0452-01

Sample Matrix: Ground Water

Semivolatile Organic Compounds by - GC/MS

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Phenanthrene	ND	5.1	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
2-Methylphenol	ND	10	µg/L	1	V-20	EPA 625.1	11/11/18	11/13/18 19:36	CDT
Phenol	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
3/4-Methylphenol	ND	10	µg/L	1	V-20	EPA 625.1	11/11/18	11/13/18 19:36	CDT
Pyrene	ND	5.1	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
1,2,4-Trichlorobenzene	ND	5.1	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT
2,4,6-Trichlorophenol	ND	10	µg/L	1		EPA 625.1	11/11/18	11/13/18 19:36	CDT

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
2-Fluorophenol	39.7	15-110		11/13/18 19:36
Phenol-d6	25.0	15-110		11/13/18 19:36
Nitrobenzene-d5	84.5	30-130		11/13/18 19:36
2-Fluorobiphenyl	67.9	30-130		11/13/18 19:36
2,4,6-Tribromophenol	97.5	15-110		11/13/18 19:36
p-Terphenyl-d14	98.8	30-130		11/13/18 19:36

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

Project Location: 49-54 Revere Beach Boulevard, R Sample Description: Work Order: 18K0452

Date Received: 11/9/2018

Field Sample #: INFLUENT Sampled: 11/8/2018 16:30

Sample ID: 18K0452-01

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]	ND	0.10	0.092	µg/L	1		EPA 608.3	11/10/18	11/13/18 11:20	TG
Aroclor-1221 [1]	ND	0.10	0.080	µg/L	1		EPA 608.3	11/10/18	11/13/18 11:20	TG
Aroclor-1232 [1]	ND	0.10	0.10	µg/L	1		EPA 608.3	11/10/18	11/13/18 11:20	TG
Aroclor-1242 [1]	ND	0.10	0.086	µg/L	1		EPA 608.3	11/10/18	11/13/18 11:20	TG
Aroclor-1248 [1]	ND	0.10	0.095	µg/L	1		EPA 608.3	11/10/18	11/13/18 11:20	TG
Aroclor-1254 [1]	ND	0.10	0.052	µg/L	1		EPA 608.3	11/10/18	11/13/18 11:20	TG
Aroclor-1260 [1]	ND	0.10	0.098	µg/L	1		EPA 608.3	11/10/18	11/13/18 11:20	TG

Surrogates	% Recovery	Recovery Limits	Flag/Qual	
Decachlorobiphenyl [1]	72.5	30-150		11/13/18 11:20
Decachlorobiphenyl [2]	76.0	30-150		11/13/18 11:20
Tetrachloro-m-xylene [1]	77.6	30-150		11/13/18 11:20
Tetrachloro-m-xylene [2]	74.5	30-150		11/13/18 11:20

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

Project Location: 49-54 Revere Beach Boulevard, R Sample Description: Work Order: 18K0452

Date Received: 11/9/2018

Field Sample #: INFLUENT Sampled: 11/8/2018 16:30

Sample ID: 18K0452-01

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	11/13/18	11/14/18 12:11	WSD
Arsenic	3.3	1.0		µg/L	1		EPA 200.8	11/13/18	11/14/18 12:11	WSD
Cadmium	0.21	0.20		µg/L	1		EPA 200.8	11/13/18	11/14/18 12:11	WSD
Chromium	ND	10		µg/L	1		EPA 200.8	11/13/18	11/14/18 12:11	WSD
Chromium, Trivalent	0.0039			mg/L	1		Tri Chrome Calc.	11/13/18	11/14/18 12:59	WSD
Copper	14	1.0		µg/L	1		EPA 200.8	11/13/18	11/14/18 12:11	WSD
Iron	5.3	0.050		mg/L	1		EPA 200.7	11/12/18	11/13/18 14:49	QNW
Lead	53	0.50		µg/L	1		EPA 200.8	11/13/18	11/14/18 12:11	WSD
Mercury	ND	0.00010		mg/L	1		EPA 245.1	11/12/18	11/12/18 15:09	EJB
Nickel	7.4	5.0		µg/L	1		EPA 200.8	11/13/18	11/14/18 12:11	WSD
Selenium	1.4	5.0	1.4	µg/L	1	J	EPA 200.8	11/13/18	11/14/18 12:11	WSD
Silver	ND	0.20		µg/L	1		EPA 200.8	11/13/18	11/14/18 12:11	WSD
Zinc	65	20		µg/L	1		EPA 200.8	11/13/18	11/14/18 12:11	WSD
Hardness	260			mg/L	1		EPA 200.7	11/12/18	11/13/18 14:49	QNW

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Project Location: 49-54 Revere Beach Boulevard, R Sample Description: Work Order: 18K0452

Date Received: 11/9/2018

Field Sample #: INFLUENT Sampled: 11/8/2018 16:30

Sample ID: 18K0452-01

Sample Matrix: Ground Water

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Chloride	280	25		mg/L	25		EPA 300.0	11/10/18	11/10/18 16:38	IS
Chlorine, Residual	1.0	0.020		mg/L	1	H-03	SM21-22 4500 CL G	11/9/18	11/9/18 17:48	LED
Hexavalent Chromium	ND	0.0040		mg/L	1	H-03	SM21-22 3500 Cr B	11/9/18	11/9/18 20:37	LED
Total Suspended Solids	84	3.1		mg/L	1		SM21-22 2540D	11/12/18	11/12/18 12:00	LL
Silica Gel Treated HEM (SGT-HEM)	ND	1.4		mg/L	1		EPA 1664B	11/13/18	11/13/18 11:00	LL

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Project Location: 49-54 Revere Beach Boulevard, R Sample Description: Work Order: 18K0452

Date Received: 11/9/2018

Field Sample #: INFLUENT Sampled: 11/8/2018 16:30

Sample ID: 18K0452-01

Sample Matrix: Ground Water

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	0.808	0.375	0.12	mg/L	5		SM19-22 4500 NH3 C		11/13/18 21:19	AAL
Cyanide	ND	0.005	0.001	mg/L	1		SM21-22 4500 CN E		11/13/18 14:47	AAL

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Sample Extraction Data

EPA 1664B

Lab Number [Field ID]	Batch	Initial [mL]	Date
18K0452-01 [INFLUENT]	B217044	1000	11/13/18

Prep Method: EPA 200.7-EPA 200.7

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18K0452-01 [INFLUENT]	B216991	50.0	50.0	11/12/18
18K0452-01 [INFLUENT]	B216991	50.0		11/12/18

Prep Method: EPA 200.8-EPA 200.8

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18K0452-01RE1 [INFLUENT]	B217136	50.0	50.0	11/13/18

Prep Method: EPA 245.1-EPA 245.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18K0452-01 [INFLUENT]	B216964	6.00	6.00	11/12/18

Prep Method: EPA 300.0-EPA 300.0

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18K0452-01 [INFLUENT]	B217172	10.0	10.0	11/10/18

Prep Method: SW-846 3510C-EPA 608.3

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18K0452-01 [INFLUENT]	B216911	1000	5.00	11/10/18

Prep Method: SW-846 5030B-EPA 624.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18K0452-01 [INFLUENT]	B216933	5	5.00	11/12/18

Prep Method: SW-846 3510C-EPA 625

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18K0452-01 [INFLUENT]	B217087	980	1.00	11/11/18

Prep Method: SW-846 3510C-EPA 625.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18K0452-01 [INFLUENT]	B216915	980	1.00	11/11/18

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

Sample Extraction Data

SM21-22 2540D

Lab Number [Field ID]	Batch	Initial [mL]	Date
18K0452-01 [INFLUENT]	B216941	160	11/12/18

SM21-22 3500 Cr B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18K0452-01 [INFLUENT]	B216896	50.0	50.0	11/09/18

SM21-22 4500 CL G

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18K0452-01 [INFLUENT]	B216895	100	100	11/09/18

Prep Method: EPA 200.8-Tri Chrome Calc.

Lab Number [Field ID]	Batch	Initial [mL]	Date
18K0452-01RE1 [INFLUENT]	B217136	50.0	11/13/18

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

QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B216933 - SW-846 5030B										
Blank (B216933-BLK1)				Prepared & Analyzed: 11/12/18						
Acetone	ND	50	µg/L							
tert-Amyl Methyl Ether (TAME)	ND	0.50	µg/L							
Benzene	ND	1.0	µg/L							
Bromodichloromethane	ND	2.0	µg/L							
Bromoform	ND	2.0	µg/L							
Bromomethane	ND	2.0	µg/L							
tert-Butyl Alcohol (TBA)	ND	20	µg/L							
Carbon Tetrachloride	ND	2.0	µg/L							
Chlorobenzene	ND	2.0	µg/L							
Chlorodibromomethane	ND	2.0	µg/L							
Chloroethane	ND	2.0	µg/L							
Chloroform	ND	2.0	µg/L							
Chloromethane	ND	2.0	µg/L							
1,2-Dichlorobenzene	ND	2.0	µg/L							
1,3-Dichlorobenzene	ND	2.0	µg/L							
1,4-Dichlorobenzene	ND	2.0	µg/L							
1,2-Dichloroethane	ND	2.0	µg/L							
1,1-Dichloroethane	ND	2.0	µg/L							
1,1-Dichloroethylene	ND	2.0	µg/L							
trans-1,2-Dichloroethylene	ND	2.0	µg/L							
1,2-Dichloropropane	ND	2.0	µg/L							
cis-1,3-Dichloropropene	ND	2.0	µg/L							
1,4-Dioxane	ND	50	µg/L							
trans-1,3-Dichloropropene	ND	2.0	µg/L							
Ethanol	ND	50	µg/L							
Ethylbenzene	ND	2.0	µg/L							
Methyl tert-Butyl Ether (MTBE)	ND	2.0	µg/L							
Methylene Chloride	ND	5.0	µg/L							
1,1,2,2-Tetrachloroethane	ND	2.0	µg/L							
Tetrachloroethylene	ND	2.0	µg/L							
Toluene	ND	1.0	µg/L							
1,1,1-Trichloroethane	ND	2.0	µg/L							
1,1,2-Trichloroethane	ND	2.0	µg/L							
Trichloroethylene	ND	2.0	µg/L							
Trichlorofluoromethane (Freon 11)	ND	2.0	µg/L							
Xylenes (total)	ND	3.0	µg/L							
Vinyl Chloride	ND	2.0	µg/L							
m+p Xylene	ND	2.0	µg/L							
o-Xylene	ND	2.0	µg/L							
Surrogate: 1,2-Dichloroethane-d4	*25.7*		µg/L	25.0		103	70-130			
Surrogate: Toluene-d8	*25.1*		µg/L	25.0		100	70-130			
Surrogate: 4-Bromofluorobenzene	*25.0*		µg/L	25.0		99.8	70-130			

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QUALITY CONTROL

Volatile Organic Compounds by GC/MS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B216933 - SW-846 5030B										
LCS (B216933-BS1)				Prepared & Analyzed: 11/12/18						
Acetone	202	50	µg/L	200		101	70-160			†
tert-Amyl Methyl Ether (TAME)	20.5	0.50	µg/L	20.0		103	70-130			
Benzene	20.2	1.0	µg/L	20.0		101	65-135			
Bromodichloromethane	20.4	2.0	µg/L	20.0		102	65-135			
Bromoform	21.1	2.0	µg/L	20.0		105	70-130			
Bromomethane	14.3	2.0	µg/L	20.0		71.4	15-185			
tert-Butyl Alcohol (TBA)	193	20	µg/L	200		96.5	40-160			†
Carbon Tetrachloride	21.2	2.0	µg/L	20.0		106	70-130			
Chlorobenzene	20.6	2.0	µg/L	20.0		103	65-135			
Chlorodibromomethane	22.6	2.0	µg/L	20.0		113	70-135			
Chloroethane	18.0	2.0	µg/L	20.0		89.8	40-160			
Chloroform	20.2	2.0	µg/L	20.0		101	70-135			
Chloromethane	14.1	2.0	µg/L	20.0		70.3	20-205			
1,2-Dichlorobenzene	19.8	2.0	µg/L	20.0		99.0	65-135			
1,3-Dichlorobenzene	20.0	2.0	µg/L	20.0		99.8	70-130			
1,4-Dichlorobenzene	19.3	2.0	µg/L	20.0		96.5	65-135			
1,2-Dichloroethane	21.1	2.0	µg/L	20.0		106	70-130			
1,1-Dichloroethane	20.4	2.0	µg/L	20.0		102	70-130			
1,1-Dichloroethylene	19.2	2.0	µg/L	20.0		96.1	50-150			
trans-1,2-Dichloroethylene	20.6	2.0	µg/L	20.0		103	70-130			
1,2-Dichloropropane	19.8	2.0	µg/L	20.0		98.8	35-165			
cis-1,3-Dichloropropene	21.0	2.0	µg/L	20.0		105	25-175			
1,4-Dioxane	232	50	µg/L	200		116	40-130			†
trans-1,3-Dichloropropene	21.6	2.0	µg/L	20.0		108	50-150			
Ethanol	183	50	µg/L	200		91.4	40-160			
Ethylbenzene	19.7	2.0	µg/L	20.0		98.6	60-140			
Methyl tert-Butyl Ether (MTBE)	20.6	2.0	µg/L	20.0		103	70-130			
Methylene Chloride	18.8	5.0	µg/L	20.0		93.8	60-140			
1,1,2,2-Tetrachloroethane	21.0	2.0	µg/L	20.0		105	60-140			
Tetrachloroethylene	21.5	2.0	µg/L	20.0		107	70-130			
Toluene	20.2	1.0	µg/L	20.0		101	70-130			
1,1,1-Trichloroethane	20.5	2.0	µg/L	20.0		103	70-130			
1,1,2-Trichloroethane	20.6	2.0	µg/L	20.0		103	70-130			
Trichloroethylene	20.8	2.0	µg/L	20.0		104	65-135			
Trichlorofluoromethane (Freon 11)	19.7	2.0	µg/L	20.0		98.6	50-150			
Vinyl Chloride	16.2	2.0	µg/L	20.0		80.8	5-195			
m+p Xylene	39.7	2.0	µg/L	40.0		99.3	70-130			
o-Xylene	20.0	2.0	µg/L	20.0		100	70-130			
Surrogate: 1,2-Dichloroethane-d4	*25.0*		µg/L	25.0		99.8	70-130			
Surrogate: Toluene-d8	*25.4*		µg/L	25.0		101	70-130			
Surrogate: 4-Bromofluorobenzene	*26.1*		µg/L	25.0		104	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 B217087 - SW-846 3510C										
Blank (B217087-BLK2)				Prepared: 11/11/18 Analyzed: 11/14/18						
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	0.20	µg/L							
Indeno(1,2,3-cd)pyrene (SIM)	ND	0.20	µg/L							
Pentachlorophenol (SIM)	ND	1.0	µg/L							
Surrogate: 2-Fluorophenol (SIM)	*79.3*		µg/L	200		39.7	15-110			
Surrogate: Phenol-d6 (SIM)	*59.6*		µg/L	200		29.8	15-110			
Surrogate: Nitrobenzene-d5	*75.5*		µg/L	100		75.5	30-130			
Surrogate: 2-Fluorobiphenyl	*54.5*		µg/L	100		54.5	30-130			
Surrogate: 2,4,6-Tribromophenol (SIM)	*163*		µg/L	200		81.5	15-110			
Surrogate: p-Terphenyl-d14	*72.9*		µg/L	100		72.9	30-130			
LCS (B217087-BS2)				Prepared: 11/11/18 Analyzed: 11/14/18						
Benzo(a)anthracene (SIM)	38.6	1.2	µg/L	50.0		77.3	40-140			
Benzo(a)pyrene (SIM)	42.0	2.5	µg/L	50.0		84.0	40-140			
Benzo(b)fluoranthene (SIM)	42.2	1.2	µg/L	50.0		84.3	40-140			
Benzo(k)fluoranthene (SIM)	41.3	5.0	µg/L	50.0		82.6	40-140			
Bis(2-ethylhexyl)phthalate (SIM)	48.8	25	µg/L	50.0		97.5	40-140			
Chrysene (SIM)	37.3	5.0	µg/L	50.0		74.6	40-140			
Dibenz(a,h)anthracene (SIM)	44.9	5.0	µg/L	50.0		89.8	40-140			
Indeno(1,2,3-cd)pyrene (SIM)	45.2	5.0	µg/L	50.0		90.3	40-140			
Pentachlorophenol (SIM)	29.8	25	µg/L	50.0		59.6	40-140			
Surrogate: 2-Fluorophenol (SIM)	*66.6*		µg/L	200		33.3	15-110			
Surrogate: Phenol-d6 (SIM)	*64.3*		µg/L	200		32.1	15-110			
Surrogate: Nitrobenzene-d5	*78.9*		µg/L	100		78.9	30-130			
Surrogate: 2-Fluorobiphenyl	*57.8*		µg/L	100		57.8	30-130			
Surrogate: 2,4,6-Tribromophenol (SIM)	*185*		µg/L	200		92.3	15-110			
Surrogate: p-Terphenyl-d14	*63.7*		µg/L	100		63.7	30-130			
LCS Dup (B217087-BSD2)				Prepared: 11/11/18 Analyzed: 11/14/18						
Benzo(a)anthracene (SIM)	36.6	1.2	µg/L	50.0		73.2	40-140	5.38	20	
Benzo(a)pyrene (SIM)	39.7	2.5	µg/L	50.0		79.4	40-140	5.57	20	
Benzo(b)fluoranthene (SIM)	40.0	1.2	µg/L	50.0		80.0	40-140	5.30	20	
Benzo(k)fluoranthene (SIM)	39.2	5.0	µg/L	50.0		78.4	40-140	5.22	20	
Bis(2-ethylhexyl)phthalate (SIM)	46.1	25	µg/L	50.0		92.2	40-140	5.59	20	
Chrysene (SIM)	35.4	5.0	µg/L	50.0		70.8	40-140	5.23	20	
Dibenz(a,h)anthracene (SIM)	43.2	5.0	µg/L	50.0		86.4	40-140	3.80	20	
Indeno(1,2,3-cd)pyrene (SIM)	43.6	5.0	µg/L	50.0		87.1	40-140	3.61	20	‡
Pentachlorophenol (SIM)	26.0	25	µg/L	50.0		52.0	40-140	13.6	20	
Surrogate: 2-Fluorophenol (SIM)	*71.3*		µg/L	200		35.6	15-110			
Surrogate: Phenol-d6 (SIM)	*56.4*		µg/L	200		28.2	15-110			
Surrogate: Nitrobenzene-d5	*71.2*		µg/L	100		71.2	30-130			
Surrogate: 2-Fluorobiphenyl	*55.8*		µg/L	100		55.8	30-130			
Surrogate: 2,4,6-Tribromophenol (SIM)	*161*		µg/L	200		80.3	15-110			
Surrogate: p-Terphenyl-d14	*58.2*		µg/L	100		58.2	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 B216915 - SW-846 3510C										
Blank (B216915-BLK1)				Prepared: 11/11/18 Analyzed: 11/13/18						
Acenaphthene	ND	5.0	µg/L							
Acenaphthylene	ND	5.0	µg/L							
Anthracene	ND	5.0	µg/L							
Benzidine	ND	20	µg/L							L-04, V-04, V-05
Benzo(g,h,i)perylene	ND	5.0	µg/L							
4-Bromophenylphenylether	ND	10	µg/L							
Butylbenzylphthalate	ND	10	µg/L							
4-Chloro-3-methylphenol	ND	10	µg/L							
Bis(2-chloroethyl)ether	ND	10	µg/L							V-20
Bis(2-chloroisopropyl)ether	ND	10	µg/L							V-20
2-Chloronaphthalene	ND	10	µg/L							
2-Chlorophenol	ND	10	µg/L							
4-Chlorophenylphenylether	ND	10	µg/L							
Di-n-butylphthalate	ND	10	µg/L							
1,3-Dichlorobenzene	ND	5.0	µg/L							
1,4-Dichlorobenzene	ND	5.0	µg/L							
1,2-Dichlorobenzene	ND	5.0	µg/L							
3,3-Dichlorobenzidine	ND	10	µg/L							
2,4-Dichlorophenol	ND	10	µg/L							
Diethylphthalate	ND	10	µg/L							
2,4-Dimethylphenol	ND	10	µg/L							
Dimethylphthalate	ND	10	µg/L							
4,6-Dinitro-2-methylphenol	ND	10	µg/L							
2,4-Dinitrophenol	ND	10	µg/L							
2,4-Dinitrotoluene	ND	10	µg/L							
2,6-Dinitrotoluene	ND	10	µg/L							
Di-n-octylphthalate	ND	10	µg/L							
1,2-Diphenylhydrazine/Azobenzene	ND	10	µg/L							
Bis(2-Ethylhexyl)phthalate	ND	10	µg/L							
Fluoranthene	ND	5.0	µg/L							
Fluorene	ND	5.0	µg/L							
Hexachlorobenzene	ND	10	µg/L							
Hexachlorobutadiene	ND	10	µg/L							
Hexachlorocyclopentadiene	ND	10	µg/L							
Hexachloroethane	ND	10	µg/L							
Isophorone	ND	10	µg/L							
Naphthalene	ND	5.0	µg/L							
Nitrobenzene	ND	10	µg/L							
2-Nitrophenol	ND	10	µg/L							
4-Nitrophenol	ND	10	µg/L							
N-Nitrosodimethylamine	ND	10	µg/L							V-20
N-Nitrosodiphenylamine/Diphenylamine	ND	10	µg/L							
N-Nitrosodi-n-propylamine	ND	10	µg/L							V-20
2-Methylnaphthalene	ND	5.0	µg/L							
Phenanthrene	ND	5.0	µg/L							
2-Methylphenol	ND	10	µg/L							V-20
Phenol	ND	10	µg/L							
3/4-Methylphenol	ND	10	µg/L							V-20
Pyrene	ND	5.0	µg/L							
1,2,4-Trichlorobenzene	ND	5.0	µg/L							
2,4,6-Trichlorophenol	ND	10	µg/L							
Surrogate: 2-Fluorophenol	*97.4*		µg/L	200		48.7	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 B216915 - SW-846 3510C											
Blank (B216915-BLK1)				Prepared: 11/11/18 Analyzed: 11/13/18							
Surrogate: Phenol-d6	*64.3*		µg/L	200		32.2		15-110			
Surrogate: Nitrobenzene-d5	*86.4*		µg/L	100		86.4		30-130			
Surrogate: 2-Fluorobiphenyl	*70.5*		µg/L	100		70.5		30-130			
Surrogate: 2,4,6-Tribromophenol	*207*		µg/L	200		103		15-110			
Surrogate: p-Terphenyl-d14	*107*		µg/L	100		107		30-130			
LCS (B216915-BS1)				Prepared: 11/11/18 Analyzed: 11/13/18							
Acenaphthene	39.0	5.0	µg/L	50.0		78.0		47-145			
Acenaphthylene	40.3	5.0	µg/L	50.0		80.7		33-145			
Anthracene	44.5	5.0	µg/L	50.0		89.1		27-133			
Benzidine	14.7	20	µg/L	50.0		**29.5**	*	40-140			V-04, V-05, L-04
Benzo(g,h,i)perylene	40.4	5.0	µg/L	50.0		80.7		10-219			
4-Bromophenylphenylether	46.8	10	µg/L	50.0		93.6		53-127			
Butylbenzylphthalate	46.3	10	µg/L	50.0		92.7		10-152			
4-Chloro-3-methylphenol	40.5	10	µg/L	50.0		81.0		22-147			
Bis(2-chloroethyl)ether	46.4	10	µg/L	50.0		92.9		12-158			V-06
Bis(2-chloroisopropyl)ether	50.3	10	µg/L	50.0		101		36-166			V-06
2-Chloronaphthalene	36.9	10	µg/L	50.0		73.9		60-120			
2-Chlorophenol	38.2	10	µg/L	50.0		76.3		23-134			
4-Chlorophenylphenylether	42.0	10	µg/L	50.0		83.9		25-158			
Di-n-butylphthalate	45.0	10	µg/L	50.0		89.9		10-120			
1,3-Dichlorobenzene	35.5	5.0	µg/L	50.0		71.1		10-172			
1,4-Dichlorobenzene	36.2	5.0	µg/L	50.0		72.4		20-124			
1,2-Dichlorobenzene	37.6	5.0	µg/L	50.0		75.3		32-129			
3,3-Dichlorobenzidine	48.4	10	µg/L	50.0		96.7		10-262			
2,4-Dichlorophenol	40.8	10	µg/L	50.0		81.5		39-135			
Diethylphthalate	41.3	10	µg/L	50.0		82.6		10-120			
2,4-Dimethylphenol	35.7	10	µg/L	50.0		71.3		32-120			
Dimethylphthalate	42.0	10	µg/L	50.0		84.1		10-120			
4,6-Dinitro-2-methylphenol	41.1	10	µg/L	50.0		82.3		10-181			
2,4-Dinitrophenol	34.9	10	µg/L	50.0		69.7		10-191			
2,4-Dinitrotoluene	39.6	10	µg/L	50.0		79.3		39-139			
2,6-Dinitrotoluene	41.9	10	µg/L	50.0		83.9		50-158			
Di-n-octylphthalate	44.6	10	µg/L	50.0		89.2		4-146			
1,2-Diphenylhydrazine/Azobenzene	51.1	10	µg/L	50.0		102		40-140			
Bis(2-Ethylhexyl)phthalate	45.5	10	µg/L	50.0		91.0		8-158			
Fluoranthene	44.0	5.0	µg/L	50.0		88.0		26-137			
Fluorene	40.6	5.0	µg/L	50.0		81.2		59-121			
Hexachlorobenzene	46.6	10	µg/L	50.0		93.1		10-152			
Hexachlorobutadiene	38.1	10	µg/L	50.0		76.2		24-120			
Hexachlorocyclopentadiene	33.4	10	µg/L	50.0		66.8		40-140			
Hexachloroethane	38.4	10	µg/L	50.0		76.9		40-120			
Isophorone	48.2	10	µg/L	50.0		96.3		21-196			
Naphthalene	42.2	5.0	µg/L	50.0		84.4		21-133			
Nitrobenzene	43.1	10	µg/L	50.0		86.2		35-180			
2-Nitrophenol	41.3	10	µg/L	50.0		82.6		29-182			
4-Nitrophenol	18.4	10	µg/L	50.0		36.8		10-132			
N-Nitrosodimethylamine	25.0	10	µg/L	50.0		49.9		40-140			V-06
N-Nitrosodiphenylamine/Diphenylamine	55.6	10	µg/L	50.0		111		40-140			
N-Nitrosodi-n-propylamine	43.4	10	µg/L	50.0		86.8		10-230			V-06
2-Methylnaphthalene	44.6	5.0	µg/L	50.0		89.3		40-140			
Phenanthrene	44.5	5.0	µg/L	50.0		89.1		54-120			

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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 B216915 - SW-846 3510C										
LCS (B216915-BS1)				Prepared: 11/11/18 Analyzed: 11/13/18						
2-Methylphenol	36.2	10	µg/L	50.0		72.3	40-140			V-06
Phenol	17.3	10	µg/L	50.0		34.6	5-120			
3/4-Methylphenol	32.1	10	µg/L	50.0		64.2	40-140			V-06
Pyrene	40.7	5.0	µg/L	50.0		81.4	52-120			
1,2,4-Trichlorobenzene	39.4	5.0	µg/L	50.0		78.9	44-142			
2,4,6-Trichlorophenol	41.8	10	µg/L	50.0		83.7	37-144			
Surrogate: 2-Fluorophenol	*104*		µg/L	200		52.1	15-110			
Surrogate: Phenol-d6	*73.6*		µg/L	200		36.8	15-110			
Surrogate: Nitrobenzene-d5	*96.1*		µg/L	100		96.1	30-130			
Surrogate: 2-Fluorobiphenyl	*79.7*		µg/L	100		79.7	30-130			
Surrogate: 2,4,6-Tribromophenol	*215*		µg/L	200		108	15-110			
Surrogate: p-Terphenyl-d14	*95.1*		µg/L	100		95.1	30-130			
LCS Dup (B216915-BSD1)				Prepared: 11/11/18 Analyzed: 11/13/18						
Acenaphthene	37.7	5.0	µg/L	50.0		75.4	47-145	3.36	48	
Acenaphthylene	38.9	5.0	µg/L	50.0		77.9	33-145	3.53	74	
Anthracene	42.9	5.0	µg/L	50.0		85.8	27-133	3.77	66	
Benzidine	17.6	20	µg/L	50.0		**35.3**	* 40-140	17.9		L-04, V-04, V-05
Benzo(g,h,i)perylene	41.5	5.0	µg/L	50.0		83.0	10-219	2.81	97	
4-Bromophenylphenylether	44.5	10	µg/L	50.0		89.1	53-127	4.93	43	
Butylbenzylphthalate	45.1	10	µg/L	50.0		90.3	10-152	2.62	60	
4-Chloro-3-methylphenol	39.4	10	µg/L	50.0		78.9	22-147	2.63	73	
Bis(2-chloroethyl)ether	43.0	10	µg/L	50.0		85.9	12-158	7.83	108	V-06
Bis(2-chloroisopropyl)ether	46.4	10	µg/L	50.0		92.9	36-166	8.00	76	V-06
2-Chloronaphthalene	35.6	10	µg/L	50.0		71.1	60-120	3.81	24	
2-Chlorophenol	36.1	10	µg/L	50.0		72.2	23-134	5.55	61	
4-Chlorophenylphenylether	40.2	10	µg/L	50.0		80.4	25-158	4.31	61	
Di-n-butylphthalate	43.9	10	µg/L	50.0		87.8	10-120	2.36	47	
1,3-Dichlorobenzene	34.4	5.0	µg/L	50.0		68.8	10-172	3.29		
1,4-Dichlorobenzene	34.8	5.0	µg/L	50.0		69.6	20-124	3.92		
1,2-Dichlorobenzene	35.8	5.0	µg/L	50.0		71.7	32-129	4.87		
3,3-Dichlorobenzidine	46.2	10	µg/L	50.0		92.3	10-262	4.65	108	
2,4-Dichlorophenol	39.2	10	µg/L	50.0		78.3	39-135	4.00	50	
Diethylphthalate	40.2	10	µg/L	50.0		80.5	10-120	2.67	100	
2,4-Dimethylphenol	38.5	10	µg/L	50.0		76.9	32-120	7.56	58	
Dimethylphthalate	40.2	10	µg/L	50.0		80.4	10-120	4.52	183	
4,6-Dinitro-2-methylphenol	40.6	10	µg/L	50.0		81.3	10-181	1.20	203	
2,4-Dinitrophenol	34.7	10	µg/L	50.0		69.4	10-191	0.460	132	
2,4-Dinitrotoluene	38.6	10	µg/L	50.0		77.3	39-139	2.53	42	
2,6-Dinitrotoluene	40.3	10	µg/L	50.0		80.5	50-158	4.09	48	
Di-n-octylphthalate	43.2	10	µg/L	50.0		86.3	4-146	3.33	69	
1,2-Diphenylhydrazine/Azobenzene	48.1	10	µg/L	50.0		96.2	40-140	6.01		
Bis(2-Ethylhexyl)phthalate	43.7	10	µg/L	50.0		87.4	8-158	3.99	82	
Fluoranthene	42.2	5.0	µg/L	50.0		84.5	26-137	4.08	66	
Fluorene	39.4	5.0	µg/L	50.0		78.7	59-121	3.05	38	
Hexachlorobenzene	45.1	10	µg/L	50.0		90.2	10-152	3.19	55	
Hexachlorobutadiene	36.5	10	µg/L	50.0		73.1	24-120	4.18	62	
Hexachlorocyclopentadiene	32.4	10	µg/L	50.0		64.9	40-140	2.98		
Hexachloroethane	36.4	10	µg/L	50.0		72.9	40-120	5.40	52	
Isophorone	46.6	10	µg/L	50.0		93.2	21-196	3.31	93	
Naphthalene	39.4	5.0	µg/L	50.0		78.9	21-133	6.76	65	
Nitrobenzene	40.7	10	µg/L	50.0		81.5	35-180	5.68	62	

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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 B216915 - SW-846 3510C										
LCS Dup (B216915-BSD1)				Prepared: 11/11/18 Analyzed: 11/13/18						
2-Nitrophenol	39.7	10	µg/L	50.0		79.4	29-182	4.00	55	
4-Nitrophenol	17.6	10	µg/L	50.0		35.2	10-132	4.50	131	
N-Nitrosodimethylamine	23.8	10	µg/L	50.0		47.6	40-140	4.71		V-06
N-Nitrosodiphenylamine/Diphenylamine	53.8	10	µg/L	50.0		108	40-140	3.38		
N-Nitrosodi-n-propylamine	40.6	10	µg/L	50.0		81.3	10-230	6.55	87	V-06
2-Methylnaphthalene	42.8	5.0	µg/L	50.0		85.5	40-140	4.28	30	
Phenanthrene	43.3	5.0	µg/L	50.0		86.6	54-120	2.80	39	
2-Methylphenol	33.6	10	µg/L	50.0		67.2	40-140	7.28	30	V-06
Phenol	16.3	10	µg/L	50.0		32.6	5-120	5.83	64	
3/4-Methylphenol	30.2	10	µg/L	50.0		60.4	40-140	6.20	30	V-06
Pyrene	40.1	5.0	µg/L	50.0		80.2	52-120	1.39	49	
1,2,4-Trichlorobenzene	37.3	5.0	µg/L	50.0		74.5	44-142	5.71	50	
2,4,6-Trichlorophenol	40.0	10	µg/L	50.0		79.9	37-144	4.55	58	
Surrogate: 2-Fluorophenol	*98.4*		µg/L	200		49.2	15-110			
Surrogate: Phenol-d6	*69.7*		µg/L	200		34.8	15-110			
Surrogate: Nitrobenzene-d5	*91.1*		µg/L	100		91.1	30-130			
Surrogate: 2-Fluorobiphenyl	*76.2*		µg/L	100		76.2	30-130			
Surrogate: 2,4,6-Tribromophenol	*211*		µg/L	200		105	15-110			
Surrogate: p-Terphenyl-d14	*95.1*		µg/L	100		95.1	30-130			

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QUALITY CONTROL

Polychlorinated Biphenyls By GC/ECD - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B216911 - SW-846 3510C										
Blank (B216911-BLK1)				Prepared: 11/10/18 Analyzed: 11/13/18						
Aroclor-1016	ND	0.10	µg/L							
Aroclor-1016 [2C]	ND	0.10	µg/L							
Aroclor-1221	ND	0.10	µg/L							
Aroclor-1221 [2C]	ND	0.10	µg/L							
Aroclor-1232	ND	0.10	µg/L							
Aroclor-1232 [2C]	ND	0.10	µg/L							
Aroclor-1242	ND	0.10	µg/L							
Aroclor-1242 [2C]	ND	0.10	µg/L							
Aroclor-1248	ND	0.10	µg/L							
Aroclor-1248 [2C]	ND	0.10	µg/L							
Aroclor-1254	ND	0.10	µg/L							
Aroclor-1254 [2C]	ND	0.10	µg/L							
Aroclor-1260	ND	0.10	µg/L							
Aroclor-1260 [2C]	ND	0.10	µg/L							
Surrogate: Decachlorobiphenyl	*1.86*		µg/L	2.00		93.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.95*		µg/L	2.00		97.5	30-150			
Surrogate: Tetrachloro-m-xylene	*1.56*		µg/L	2.00		78.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.59*		µg/L	2.00		79.7	30-150			
LCS (B216911-BS1)				Prepared: 11/10/18 Analyzed: 11/13/18						
Aroclor-1016	0.47	0.20	µg/L	0.500		93.3	50-140			
Aroclor-1016 [2C]	0.49	0.20	µg/L	0.500		97.8	50-140			
Aroclor-1260	0.48	0.20	µg/L	0.500		96.3	8-140			
Aroclor-1260 [2C]	0.50	0.20	µg/L	0.500		101	8-140			
Surrogate: Decachlorobiphenyl	*1.87*		µg/L	2.00		93.3	30-150			
Surrogate: Decachlorobiphenyl [2C]	*1.97*		µg/L	2.00		98.3	30-150			
Surrogate: Tetrachloro-m-xylene	*1.68*		µg/L	2.00		84.0	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.75*		µg/L	2.00		87.6	30-150			
LCS Dup (B216911-BSD1)				Prepared: 11/10/18 Analyzed: 11/13/18						
Aroclor-1016	0.44	0.20	µg/L	0.500		87.6	50-140	6.30		
Aroclor-1016 [2C]	0.48	0.20	µg/L	0.500		95.9	50-140	1.97		
Aroclor-1260	0.47	0.20	µg/L	0.500		94.6	8-140	1.78		
Aroclor-1260 [2C]	0.50	0.20	µg/L	0.500		100	8-140	0.102		
Surrogate: Decachlorobiphenyl	*1.90*		µg/L	2.00		95.2	30-150			
Surrogate: Decachlorobiphenyl [2C]	*2.01*		µg/L	2.00		100	30-150			
Surrogate: Tetrachloro-m-xylene	*1.64*		µg/L	2.00		82.2	30-150			
Surrogate: Tetrachloro-m-xylene [2C]	*1.71*		µg/L	2.00		85.6	30-150			

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QUALITY CONTROL

Metals Analyses (Total) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC		%REC Limits	RPD	RPD Limit	Notes
Batch B216964 - EPA 245.1											
Blank (B216964-BLK1)				Prepared & Analyzed: 11/12/18							
Mercury	ND	0.00010	mg/L								
LCS (B216964-BS1)				Prepared & Analyzed: 11/12/18							
Mercury	0.00207	0.00010	mg/L	0.00200		103		85-115			
LCS Dup (B216964-BSD1)				Prepared & Analyzed: 11/12/18							
Mercury	0.00205	0.00010	mg/L	0.00200		103		85-115	0.799	20	
Batch B216991 - EPA 200.7											
Blank (B216991-BLK1)				Prepared: 11/12/18 Analyzed: 11/13/18							
Iron	ND	0.050	mg/L								
LCS (B216991-BS1)				Prepared: 11/12/18 Analyzed: 11/13/18							
Iron	4.79	0.050	mg/L	4.00		**120**	*	85-115			L-07
LCS Dup (B216991-BSD1)				Prepared: 11/12/18 Analyzed: 11/13/18							
Iron	4.51	0.050	mg/L	4.00		113		85-115	6.02	20	
Batch B216993 - EPA 200.8											
Blank (B216993-BLK1)				Prepared: 11/12/18 Analyzed: 11/13/18							
Antimony	ND	1.0	µg/L								
Arsenic	ND	1.0	µg/L								
Cadmium	ND	0.20	µg/L								
Chromium	ND	10	µg/L								
Chromium, Trivalent	0.0		mg/L								
Copper	ND	1.0	µg/L								
Lead	ND	0.50	µg/L								
Nickel	ND	5.0	µg/L								
Selenium	ND	5.0	µg/L								
Silver	ND	0.20	µg/L								
Zinc	ND	20	µg/L								
LCS (B216993-BS1)				Prepared: 11/12/18 Analyzed: 11/13/18							
Antimony	578	10	µg/L	500		**116**	*	85-115			
Arsenic	572	10	µg/L	500		114		85-115			
Cadmium	576	2.0	µg/L	500		115		85-115			
Chromium	611	100	µg/L	500		**122**	*	85-115			
Copper	1180	10	µg/L	1000		**118**	*	85-115			
Lead	545	5.0	µg/L	500		109		85-115			
Nickel	599	50	µg/L	500		**120**	*	85-115			
Selenium	567	50	µg/L	500		113		85-115			
Silver	544	2.0	µg/L	500		109		85-115			
Zinc	1180	200	µg/L	1000		**118**	*	85-115			

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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 B216993 - EPA 200.8											
LCS Dup (B216993-BSD1)				Prepared: 11/12/18 Analyzed: 11/13/18							
Antimony	580	10	µg/L	500		**116**	*	85-115	0.337	20	
Arsenic	572	10	µg/L	500		114		85-115	0.132	20	
Cadmium	575	2.0	µg/L	500		115		85-115	0.174	20	
Chromium	602	100	µg/L	500		**120**	*	85-115	1.49	20	
Copper	1160	10	µg/L	1000		**116**	*	85-115	1.62	20	
Lead	549	5.0	µg/L	500		110		85-115	0.742	20	
Nickel	598	50	µg/L	500		**120**	*	85-115	0.324	20	
Selenium	567	50	µg/L	500		113		85-115	0.0553	20	
Silver	549	2.0	µg/L	500		110		85-115	1.02	20	
Zinc	1170	200	µg/L	1000		**117**	*	85-115	1.44	20	
Batch B217136 - EPA 200.8											
Blank (B217136-BLK1)				Prepared: 11/13/18 Analyzed: 11/14/18							
Antimony	ND	1.0	µg/L								
Arsenic	ND	1.0	µg/L								
Cadmium	ND	0.20	µg/L								
Chromium	ND	10	µg/L								
Copper	ND	1.0	µg/L								
Lead	ND	0.50	µg/L								
Nickel	ND	5.0	µg/L								
Selenium	ND	5.0	µg/L								
Silver	ND	0.20	µg/L								
Zinc	ND	20	µg/L								
LCS (B217136-BS1)				Prepared: 11/13/18 Analyzed: 11/14/18							
Antimony	502	10	µg/L	500		100		85-115			
Arsenic	516	10	µg/L	500		103		85-115			
Cadmium	515	2.0	µg/L	500		103		85-115			
Chromium	528	100	µg/L	500		106		85-115			
Copper	966	10	µg/L	1000		96.6		85-115			
Lead	490	5.0	µg/L	500		97.9		85-115			
Nickel	523	50	µg/L	500		105		85-115			
Selenium	504	50	µg/L	500		101		85-115			
Silver	510	2.0	µg/L	500		102		85-115			
Zinc	1070	200	µg/L	1000		107		85-115			
LCS Dup (B217136-BSD1)				Prepared: 11/13/18 Analyzed: 11/14/18							
Antimony	508	10	µg/L	500		102		85-115	1.20	20	
Arsenic	511	10	µg/L	500		102		85-115	0.890	20	
Cadmium	516	2.0	µg/L	500		103		85-115	0.263	20	
Chromium	523	100	µg/L	500		105		85-115	0.928	20	
Copper	958	10	µg/L	1000		95.8		85-115	0.842	20	
Lead	493	5.0	µg/L	500		98.6		85-115	0.721	20	
Nickel	520	50	µg/L	500		104		85-115	0.490	20	
Selenium	501	50	µg/L	500		100		85-115	0.434	20	
Silver	513	2.0	µg/L	500		103		85-115	0.475	20	
Zinc	1030	200	µg/L	1000		103		85-115	4.22	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 B216895 - SM21-22 4500 CL G										
Blank (B216895-BLK1)				Prepared & Analyzed: 11/09/18						
Chlorine, Residual	ND	0.020	mg/L							
LCS (B216895-BS1)				Prepared & Analyzed: 11/09/18						
Chlorine, Residual	1.5	0.020	mg/L	1.32		110	76-135			
LCS Dup (B216895-BSD1)				Prepared & Analyzed: 11/09/18						
Chlorine, Residual	1.6	0.020	mg/L	1.32		119	76-135	7.35	7.41	
Batch B216896 - SM21-22 3500 Cr B										
Blank (B216896-BLK1)				Prepared & Analyzed: 11/09/18						
Hexavalent Chromium	ND	0.0040	mg/L							
LCS (B216896-BS1)				Prepared & Analyzed: 11/09/18						
Hexavalent Chromium	0.094	0.0040	mg/L	0.100		93.9	83.2-114			
LCS Dup (B216896-BSD1)				Prepared & Analyzed: 11/09/18						
Hexavalent Chromium	0.097	0.0040	mg/L	0.100		96.7	83.2-114	2.88	7.51	
Duplicate (B216896-DUP1)		**Source: 18K0452-01**		Prepared & Analyzed: 11/09/18						
Hexavalent Chromium	ND	0.0040	mg/L		ND			NC	56.3	H-03
Matrix Spike (B216896-MS1)		**Source: 18K0452-01**		Prepared & Analyzed: 11/09/18						
Hexavalent Chromium	0.12	0.0040	mg/L	0.100	0.0021	114	10.8-151			
Batch B216941 - SM21-22 2540D										
Blank (B216941-BLK1)				Prepared & Analyzed: 11/12/18						
Total Suspended Solids	ND	2.5	mg/L							
LCS (B216941-BS1)				Prepared & Analyzed: 11/12/18						
Total Suspended Solids	204	10	mg/L	200		102	64.3-117			
Batch B217044 - EPA 1664B										
Blank (B217044-BLK1)				Prepared & Analyzed: 11/13/18						
Silica Gel Treated HEM (SGT-HEM)	ND	1.4	mg/L							
LCS (B217044-BS1)				Prepared & Analyzed: 11/13/18						
Silica Gel Treated HEM (SGT-HEM)	8.5		mg/L	10.0		85.0	64-132			

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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 B217044 - EPA 1664B										
Duplicate (B217044-DUP1)	**Source: 18K0452-01**			Prepared & Analyzed: 11/13/18						
Silica Gel Treated HEM (SGT-HEM)	ND	1.4	mg/L		ND			NC	18	
Batch B217172 - EPA 300.0										
Blank (B217172-BLK1)				Prepared & Analyzed: 11/10/18						
Chloride	ND	1.0	mg/L							
LCS (B217172-BS1)				Prepared & Analyzed: 11/10/18						
Chloride	10	1.0	mg/L	10.0		101	90-110			
LCS Dup (B217172-BSD1)				Prepared & Analyzed: 11/10/18						
Chloride	10	1.0	mg/L	10.0		101	90-110	0.214	20	

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

EPA 608.3

LCS

Lab Sample ID: B216911-BS1 Date(s) Analyzed: 11/13/2018 11/13/2018

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.47	
	2	0.000	0.000	0.000	0.49	4.2
Aroclor-1260	1	0.000	0.000	0.000	0.48	
	2	0.000	0.000	0.000	0.50	4.1

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IDENTIFICATION SUMMARY FOR SINGLE COMPONENT ANALYTES

EPA 608.3

LCS Dup

Lab Sample ID: B216911-BSD1 Date(s) Analyzed: 11/13/2018 11/13/2018

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

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

ANALYTE	COL	RT	RT WINDOW		CONCENTRATION	%RPD
			FROM	TO		
Aroclor-1016	1	0.000	0.000	0.000	0.44	
	2	0.000	0.000	0.000	0.48	8.7
Aroclor-1260	1	0.000	0.000	0.000	0.47	
	2	0.000	0.000	0.000	0.50	6.2

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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.
H-03	Sample received after recommended holding time was exceeded.
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.
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 did not meet method specifications and was biased on the low side for this compound.
V-06	Continuing calibration did not meet method specifications and was biased on the high side for this compound.
V-20	Continuing calibration did not meet method specifications and was biased on the high side. Data validation is not affected since sample result was "not detected" for this compound.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 200.7 in Water	
Iron	CT,MA,NH,NY,RI,NC,ME,VA
Hardness	CT,MA,NH,NY,RI,VA
EPA 200.8 in Water	
Antimony	CT,MA,NH,NY,RI,NC,ME,VA
Arsenic	CT,MA,NH,NY,RI,NC,ME,VA
Cadmium	CT,MA,NH,NY,RI,NC,ME,VA
Chromium	CT,MA,NH,NY,RI,NC,ME,VA
Copper	CT,MA,NH,NY,RI,NC,ME,VA
Lead	CT,MA,NH,NY,RI,NC,ME,VA
Nickel	CT,MA,NH,NY,RI,NC,ME,VA
Selenium	CT,MA,NH,NY,RI,NC,ME,VA
Silver	CT,MA,NH,NY,RI,NC,ME,VA
Zinc	CT,MA,NH,NY,RI,NC,ME,VA
EPA 245.1 in Drinking Water	
Mercury	CT,MA,NH,NY,RI,ME,VA
EPA 245.1 in Water	
Mercury	CT,MA,NH,RI,NY,NC,ME,VA
EPA 300.0 in Water	
Chloride	NC,NY,MA,VA,ME,NH,CT,RI
EPA 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
EPA 624.1 in Water	
Acetone	CT,NY,MA,NH
tert-Amyl Methyl Ether (TAME)	MA
Benzene	CT,NY,RI,NC,MA,NH
Bromodichloromethane	CT,NY,RI,NC,MA,NH
Bromoform	CT,NY,RI,NC,MA,NH
Bromomethane	CT,NY,RI,NC,MA,NH
tert-Butyl Alcohol (TBA)	MA
Carbon Tetrachloride	CT,NY,RI,NC,MA,NH
Chlorobenzene	CT,NY,RI,NC,MA,NH
Chlorodibromomethane	CT,NY,RI,NC,MA,NH

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 624.1 in Water	
Chloroethane	CT,NY,RI,NC,MA,NH
Chloroform	CT,NY,RI,NC,MA,NH
Chloromethane	CT,NY,RI,NC,MA,NH
1,2-Dichlorobenzene	CT,NY,RI,NC,MA,NH
1,3-Dichlorobenzene	CT,NY,RI,NC,MA,NH
1,4-Dichlorobenzene	CT,NY,RI,NC,MA,NH
1,2-Dichloroethane	CT,NY,RI,NC,MA,NH
1,1-Dichloroethane	CT,NY,RI,NC,MA,NH
1,1-Dichloroethylene	CT,NY,RI,NC,MA,NH
trans-1,2-Dichloroethylene	CT,NY,RI,NC,MA,NH
1,2-Dichloropropane	CT,NY,RI,NC,MA,NH
cis-1,3-Dichloropropene	CT,NY,RI,NC,MA,NH
1,4-Dioxane	MA
trans-1,3-Dichloropropene	CT,NY,RI,NC,MA,NH
Ethanol	MA
Ethylbenzene	CT,NY,RI,NC,MA,NH
Methyl tert-Butyl Ether (MTBE)	NY,NC,MA,NH
Methylene Chloride	CT,NY,RI,NC,MA,NH
Naphthalene	NC,MA
1,1,2,2-Tetrachloroethane	CT,NY,RI,NC,MA,NH
Tetrachloroethylene	CT,NY,RI,NC,MA,NH
Toluene	CT,NY,RI,NC,MA,NH
1,2,4-Trichlorobenzene	NC,MA
1,1,1-Trichloroethane	CT,NY,RI,NC,MA,NH
1,1,2-Trichloroethane	CT,NY,RI,NC,MA,NH
Trichloroethylene	CT,NY,RI,NC,MA,NH
Trichlorofluoromethane (Freon 11)	CT,NY,RI,NC,MA,NH
Vinyl Chloride	CT,NY,RI,NC,MA,NH
m+p Xylene	CT,NY,RI,NC,MA,NH
o-Xylene	CT,NY,RI,NC,MA,NH
EPA 625 in Water	
2-Fluorophenol	NC,VA
Phenol-d6	VA
Nitrobenzene-d5	VA
EPA 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

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 625.1 in Water	
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
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
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
SM21-22 4500 CN E in Water	
Cyanide	CT,MA,NH,NY,RI,NC,ME,VA

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

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

KKM 18K0452

con-test ANALYTICAL LABORATORY

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Email: info@contestlabs.com

https://www.contestlabs.com

Doc # 381 Rev 0 5 8 2015

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Page _____ of _____

Company Name:	Lockwood Remediation Technologies, LLC
Address:	89 Crawford Street, Leominster, MA
Phone:	774-450-7177
Project Name:	Revere Beach Hotel
Project Location:	49-54 Revere Beach Boulevard, Revere, MA
Project Number:	2-1759
Project Manager:	Tammie Hagie
Con-Test Bid:	
Invoice Recipient:	Tammie Hagie
Sampled By:	Jason Overgaard

Requested Turnaround Time
7-Day ☐ 10-Day ☐
Other:

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

Data Delivery
Format: PDF ☑ EXCEL ☐
Other:
Enhanced Data Package Required: ☐
Email To: thagie@lrt-llc.net
Fax To #:

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1]Matrix Code	Conc Code	TSS	Ammonia	Chloride and TRC	Sb, As, Cd, Cr III, Cr VI, Cu, Fe, Pb, Hg, Ni, Se, Ag and Zn by 200.8	Cyanide	VOCs by 624	SVOCs by 625/625 Low	Hardness	PCBs by 608	TPH by 1664	Ethanol by 624
								ANALYSIS REQUESTED										
	INFLUENT 1	11/8/18 1630	11/8/18 1630		X	GW	M/L	X	X	X	X	X	X	X	X	X	X	X

		# of Containers	1	1	2	1	1	3	2	2	2	2	3
		[2] Preservation Code	I	S	I	N	X	H	I	I/N	I	S	H
		[3] Container Code	P	P	P	P	P	V	A	P	A	A	V

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/Solid
SL = Sludge
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)

Comments:

Sample pH: 7.4

Sample Temp: 14.0°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

	Date/Time:
Relinquished by: (signature)	11/9/18 10:20
Received by: (signature)	11/9/18 1020
Relinquished by: (signature)	11/9/18 1850
Received by: (signature)	11/9/2018 1850
Relinquished by: (signature)	
Received by: (signature)	

Detection Limit Requirements
MA:
GT:
Other: 2017 NPDES RGP Standards

Program Information

○ MCP Analytical Certification Form Required
○ RCP Analysis Certification Form Required
○ MA State DW Form Required
PWSID # _____

NELAC and AIHA-LAP, LLC Accredited

TURNAROUND TIME (BUSINESS DAYS) STARTS AT 9:00 AM THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON THIS CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME CANNOT START UNTIL ALL QUESTIONS HAVE BEEN ANSWERED.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

Table of Contents

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

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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 Lockwood Remediation

Received By TJ Date 11/09/2018 Time 1850

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

Direct from Sampling _____ Ambient _____ Melted Ice _____

Were samples within Temperature? 2-6°C T By Gun # 1 Actual Temp - 3.8

By Blank # _____ Actual Temp - _____

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

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

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

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

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

Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

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

Are there Rushes? F Who was notified? _____

Are there Short Holds? F or T Who was notified? Luke

Is there enough Volume? T

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

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

Were trip blanks received? F On COC? F

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

Vials	#	Containers:	#		#		#
Unp-		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-		Flashpoint		Col./Bacteria		2oz Amb/Clear	
DI-		Other Glass		Other Plastic		Encore	
Thiosulfate-		SOC Kit		Plastic Bag		Frozen:	
Sulfuric-		Perchlorate		Ziplock			

Unused Media

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

Comments:

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November 14, 2018

Tammie Hagie
Lockwood Remediation Technologies, LLC
89 Crawford Street
Leominster, MA 01453

Project Location: 49-54 Revere Beach Boulevard, Revere, MA
Client Job Number:
Project Number: [none]
Laboratory Work Order Number: 18K0451

Enclosed are results of analyses for samples received by the laboratory on November 9, 2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kerry K. McGee
Project Manager

Table of Contents

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Lockwood Remediation Technologies, LLC
89 Crawford Street
Leominster, MA 01453
ATTN: Tammie Hagie

REPORT DATE: 11/14/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18K0451

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

PROJECT LOCATION: 49-54 Revere Beach Boulevard, Revere, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Sales Creek	18K0451-01	Surface Water		EPA 200.7	
				EPA 200.8	
				EPA 245.1	
				SM19-22 4500 NH3 C	MA M-MA-086/CT PH-0574/NY11148
				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.

EPA 200.7

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:

Iron
B216991-BS1

SM21-22 3500 Cr B

Qualifications:

H-03

Sample received after recommended holding time was exceeded.

Analyte & Samples(s) Qualified:

Hexavalent Chromium
18K0451-01[Sales Creek]

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

Tod E. Kopyscinski
Laboratory Director

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Project Location: 49-54 Revere Beach Boulevard, R Sample Description: Work Order: 18K0451

Date Received: 11/9/2018

Field Sample #: Sales Creek Sampled: 11/8/2018 16:45

Sample ID: 18K0451-01

Sample Matrix: Surface Water

Metals Analyses (Total)

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Antimony	1.0	1.0		µg/L	1		EPA 200.8	11/13/18	11/14/18 12:08	WSD
Arsenic	3.2	1.0		µg/L	1		EPA 200.8	11/13/18	11/14/18 12:08	WSD
Cadmium	ND	0.20		µg/L	1		EPA 200.8	11/13/18	11/14/18 12:08	WSD
Chromium	ND	10		µg/L	1		EPA 200.8	11/13/18	11/14/18 12:08	WSD
Chromium, Trivalent	0.0			mg/L	1		Tri Chrome Calc.	11/13/18	11/14/18 12:08	WSD
Copper	18	1.0		µg/L	1		EPA 200.8	11/13/18	11/14/18 12:08	WSD
Iron	2.9	0.050		mg/L	1		EPA 200.7	11/12/18	11/13/18 14:42	QNW
Lead	51	0.50		µg/L	1		EPA 200.8	11/13/18	11/14/18 12:08	WSD
Mercury	ND	0.00010		mg/L	1		EPA 245.1	11/12/18	11/12/18 15:07	EJB
Nickel	5.3	5.0		µg/L	1		EPA 200.8	11/13/18	11/14/18 12:08	WSD
Selenium	8.6	5.0	1.4	µg/L	1		EPA 200.8	11/13/18	11/14/18 12:08	WSD
Silver	ND	0.20		µg/L	1		EPA 200.8	11/13/18	11/14/18 12:08	WSD
Zinc	77	20		µg/L	1		EPA 200.8	11/13/18	11/14/18 12:08	WSD
Hardness	430			mg/L	1		EPA 200.7	11/12/18	11/13/18 14:42	QNW

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Project Location: 49-54 Revere Beach Boulevard, R Sample Description: Work Order: 18K0451

Date Received: 11/9/2018

Field Sample #: Sales Creek Sampled: 11/8/2018 16:45

Sample ID: 18K0451-01

Sample Matrix: Surface 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
Hexavalent Chromium	0.0076	0.0040		mg/L	1	H-03	SM21-22 3500 Cr B	11/9/18	11/9/18 20:37	LED

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

Project Location: 49-54 Revere Beach Boulevard, R Sample Description: Work Order: 18K0451

Date Received: 11/9/2018

Field Sample #: Sales Creek Sampled: 11/8/2018 16:45

Sample ID: 18K0451-01

Sample Matrix: Surface Water

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

Analyte	Results	RL	DL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Ammonia as N	0.253	0.075	0.024	mg/L	1		SM19-22 4500 NH3 C		11/13/18 21:23	AAL

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Sample Extraction Data

Prep Method: EPA 200.7-EPA 200.7

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18K0451-01 [Sales Creek]	B216991	50.0	50.0	11/12/18
18K0451-01 [Sales Creek]	B216991	50.0		11/12/18

Prep Method: EPA 200.8-EPA 200.8

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18K0451-01RE1 [Sales Creek]	B217136	50.0	50.0	11/13/18

Prep Method: EPA 245.1-EPA 245.1

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18K0451-01 [Sales Creek]	B216964	6.00	6.00	11/12/18

SM21-22 3500 Cr B

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18K0451-01 [Sales Creek]	B216896	50.0	50.0	11/09/18

Prep Method: EPA 200.8-Tri Chrome Calc.

Lab Number [Field ID]	Batch	Initial [mL]	Final [mL]	Date
18K0451-01RE1 [Sales Creek]	B217136	50.0		11/13/18

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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 B216964 - EPA 245.1											
Blank (B216964-BLK1)				Prepared & Analyzed: 11/12/18							
Mercury	ND	0.00010	mg/L								
LCS (B216964-BS1)				Prepared & Analyzed: 11/12/18							
Mercury	0.00207	0.00010	mg/L	0.00200		103		85-115			
LCS Dup (B216964-BSD1)				Prepared & Analyzed: 11/12/18							
Mercury	0.00205	0.00010	mg/L	0.00200		103		85-115	0.799	20	
Batch B216991 - EPA 200.7											
Blank (B216991-BLK1)				Prepared: 11/12/18 Analyzed: 11/13/18							
Iron	ND	0.050	mg/L								
LCS (B216991-BS1)				Prepared: 11/12/18 Analyzed: 11/13/18							
Iron	4.79	0.050	mg/L	4.00		**120**	*	85-115			L-07
LCS Dup (B216991-BSD1)				Prepared: 11/12/18 Analyzed: 11/13/18							
Iron	4.51	0.050	mg/L	4.00		113		85-115	6.02	20	
Batch B216993 - EPA 200.8											
Blank (B216993-BLK1)				Prepared: 11/12/18 Analyzed: 11/13/18							
Antimony	ND	1.0	µg/L								
Arsenic	ND	1.0	µg/L								
Cadmium	ND	0.20	µg/L								
Chromium	ND	10	µg/L								
Chromium, Trivalent	0.0		mg/L								
Copper	ND	1.0	µg/L								
Lead	ND	0.50	µg/L								
Nickel	ND	5.0	µg/L								
Selenium	ND	5.0	µg/L								
Silver	ND	0.20	µg/L								
Zinc	ND	20	µg/L								
LCS (B216993-BS1)				Prepared: 11/12/18 Analyzed: 11/13/18							
Antimony	578	10	µg/L	500		**116**	*	85-115			
Arsenic	572	10	µg/L	500		114		85-115			
Cadmium	576	2.0	µg/L	500		115		85-115			
Chromium	611	100	µg/L	500		**122**	*	85-115			
Copper	1180	10	µg/L	1000		**118**	*	85-115			
Lead	545	5.0	µg/L	500		109		85-115			
Nickel	599	50	µg/L	500		**120**	*	85-115			
Selenium	567	50	µg/L	500		113		85-115			
Silver	544	2.0	µg/L	500		109		85-115			
Zinc	1180	200	µg/L	1000		**118**	*	85-115			

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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 B216993 - EPA 200.8											
LCS Dup (B216993-BSD1)				Prepared: 11/12/18 Analyzed: 11/13/18							
Antimony	580	10	µg/L	500		**116**	*	85-115	0.337	20	
Arsenic	572	10	µg/L	500		114		85-115	0.132	20	
Cadmium	575	2.0	µg/L	500		115		85-115	0.174	20	
Chromium	602	100	µg/L	500		**120**	*	85-115	1.49	20	
Copper	1160	10	µg/L	1000		**116**	*	85-115	1.62	20	
Lead	549	5.0	µg/L	500		110		85-115	0.742	20	
Nickel	598	50	µg/L	500		**120**	*	85-115	0.324	20	
Selenium	567	50	µg/L	500		113		85-115	0.0553	20	
Silver	549	2.0	µg/L	500		110		85-115	1.02	20	
Zinc	1170	200	µg/L	1000		**117**	*	85-115	1.44	20	
Batch B217136 - EPA 200.8											
Blank (B217136-BLK1)				Prepared: 11/13/18 Analyzed: 11/14/18							
Antimony	ND	1.0	µg/L								
Arsenic	ND	1.0	µg/L								
Cadmium	ND	0.20	µg/L								
Chromium	ND	10	µg/L								
Copper	ND	1.0	µg/L								
Lead	ND	0.50	µg/L								
Nickel	ND	5.0	µg/L								
Selenium	ND	5.0	µg/L								
Silver	ND	0.20	µg/L								
Zinc	ND	20	µg/L								
LCS (B217136-BS1)				Prepared: 11/13/18 Analyzed: 11/14/18							
Antimony	502	10	µg/L	500		100		85-115			
Arsenic	516	10	µg/L	500		103		85-115			
Cadmium	515	2.0	µg/L	500		103		85-115			
Chromium	528	100	µg/L	500		106		85-115			
Copper	966	10	µg/L	1000		96.6		85-115			
Lead	490	5.0	µg/L	500		97.9		85-115			
Nickel	523	50	µg/L	500		105		85-115			
Selenium	504	50	µg/L	500		101		85-115			
Silver	510	2.0	µg/L	500		102		85-115			
Zinc	1070	200	µg/L	1000		107		85-115			
LCS Dup (B217136-BSD1)				Prepared: 11/13/18 Analyzed: 11/14/18							
Antimony	508	10	µg/L	500		102		85-115	1.20	20	
Arsenic	511	10	µg/L	500		102		85-115	0.890	20	
Cadmium	516	2.0	µg/L	500		103		85-115	0.263	20	
Chromium	523	100	µg/L	500		105		85-115	0.928	20	
Copper	958	10	µg/L	1000		95.8		85-115	0.842	20	
Lead	493	5.0	µg/L	500		98.6		85-115	0.721	20	
Nickel	520	50	µg/L	500		104		85-115	0.490	20	
Selenium	501	50	µg/L	500		100		85-115	0.434	20	
Silver	513	2.0	µg/L	500		103		85-115	0.475	20	
Zinc	1030	200	µg/L	1000		103		85-115	4.22	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 B216896 - SM21-22 3500 Cr B										
Blank (B216896-BLK1)				Prepared & Analyzed: 11/09/18						
Hexavalent Chromium	ND	0.0040	mg/L							
LCS (B216896-BS1)				Prepared & Analyzed: 11/09/18						
Hexavalent Chromium	0.094	0.0040	mg/L	0.100		93.9	83.2-114			
LCS Dup (B216896-BSD1)				Prepared & Analyzed: 11/09/18						
Hexavalent Chromium	0.097	0.0040	mg/L	0.100		96.7	83.2-114	2.88	7.51	

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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.
H-03	Sample received after recommended holding time was exceeded.
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.

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CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications
EPA 200.7 in Water	
Iron	CT,MA,NH,NY,RI,NC,ME,VA
Hardness	CT,MA,NH,NY,RI,VA
EPA 200.8 in Water	
Antimony	CT,MA,NH,NY,RI,NC,ME,VA
Arsenic	CT,MA,NH,NY,RI,NC,ME,VA
Cadmium	CT,MA,NH,NY,RI,NC,ME,VA
Chromium	CT,MA,NH,NY,RI,NC,ME,VA
Copper	CT,MA,NH,NY,RI,NC,ME,VA
Lead	CT,MA,NH,NY,RI,NC,ME,VA
Nickel	CT,MA,NH,NY,RI,NC,ME,VA
Selenium	CT,MA,NH,NY,RI,NC,ME,VA
Silver	CT,MA,NH,NY,RI,NC,ME,VA
Zinc	CT,MA,NH,NY,RI,NC,ME,VA
EPA 245.1 in Drinking Water	
Mercury	CT,MA,NH,NY,RI,ME,VA
EPA 245.1 in Water	
Mercury	CT,MA,NH,RI,NY,NC,ME,VA
SM19-22 4500 NH3 C in Water	
Ammonia as N	NY,MA,CT,RI,VA,NC,ME
SM21-22 3500 Cr B in Water	
Hexavalent Chromium	NY,CT,NH,RI,ME,VA,NC

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

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

KKM 18K0451

con-test ANALYTICAL LABORATORY
Phone: 413-525-2332
Fax: 413-525-6405
Email: info@contestlabs.com

http://www.contestlabs.com Doc # 381 Rev 0 5 8 2015

CHAIN OF CUSTODY RECORD

39 Spruce Street
East Longmeadow, MA 01028

Page _____ of _____

Company Name:	Lockwood Remediation Technologies, LLC
Address:	89 Crawford Street, Leominster, MA
Phone:	774-450-7177
Project Name:	Revere Beach Hotel
Project Location:	49-54 Revere Beach Boulevard, Revere, MA
Project Number:	2-1759
Project Manager:	Tammie Hagie
Con-Test Bid:	
Invoice Recipient:	Tammie Hagie
Sampled By:	Jason Overgaard

Requested Turnaround Time
7-Day ☐ 10-Day ☐
Other:

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

Data Delivery
Format: PDF ☑ EXCEL ☐
Other:
Enhanced Data Package Required: ☐
Email To: thagie@lrt-llc.net
Fax To #:

ANALYSIS REQUESTED

Con-Test Work Order#	Client Sample ID / Description	Beginning Date/Time	Ending Date/Time	Composite	Grab	[1]Matrix Code	Conc Code	Hardness	Ammonia	Total Recoverable Metals: Sb, As, Cd, Cr III, Cr VI, Cu, Fe, Pb, Hg, Ni, Se, Ag and Zn	Salinity	# of Containers	[2] Preservation Code	[3] Container Code
								2	1	1	1			
								I/N	S	N	I			
								P	P	P	P			
1	Sales Creek	1645 11/8/18	1645 11/8/18		X	O	L	X	X	X	X			

Salinity on separate work order

-KKM 11/14/18

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/Solid
SL = Sludge
O = Surface Water

[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)

Comments:

Sample pH: 7.5 Sample Temp: 13.3°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

Relinquished by: (signature)	Date/Time: 11/9/18 10:20	
Received by: (signature)	Date/Time: 11/9/18 10	
Relinquished by: (signature)	Date/Time: 11/9/18 185	
ived by: (signature)	Date/Time: 11/09/18 1850	
quished by: (signature)	Date/Time:	
ived by: (signature)	Date/Time:	

Detection Limit Requirements
MA
Other: 2017 NPDES RGP Standards

Program Information

○ MCP Analytical Certification Form Required
○ RCP Analysis Certification Form Required
○ MA State DW Form Required
PWSID # _____

NELAC and AIHA-LAP, LLC Accredited

TURNAROUND TIME (BUSINESS DAYS) STARTS AT 9:00 AM THE DAY AFTER SAMPLE RECEIPT UNLESS THERE ARE QUESTIONS ON THIS CHAIN. IF THIS FORM IS NOT FILLED OUT COMPLETELY OR IS INCORRECT, TURNAROUND TIME CANNOT START UNTIL ALL QUESTIONS HAVE BEEN ANSWERED.

PLEASE BE CAREFUL NOT TO CONTAMINATE THIS DOCUMENT

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 Lockwood Remediation ~~Test~~ TS Technologies

Received By TS Date 11/09/2018 Time 1850

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

Direct from Sampling _____ Ambient _____ Melted Ice _____

By Gun # 1 Actual Temp - 3.8

Were samples within Temperature? 2-6°C T By Blank # _____ Actual Temp - _____

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

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

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

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

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

Project T ID's T Collection Dates/Times T

Are Sample labels filled out and legible? T

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

Are there Rushes? F Who was notified? _____

Are there Short Holds? F Who was notified? _____

Is there enough Volume? T

Is there Headspace where applicable? NA 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? ~~NA~~ TS Acid T Base _____

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

Unused Media

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

Comments:

Sample received out of hold for hexa chrome analysis

con-test® ANALYTICAL LABORATORY
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November 16, 2018

Tammie Hagie
Lockwood Remediation Technologies, LLC
89 Crawford Street
Leominster, MA 01453

Project Location: 49-54 Revere Beach Boulevard, Revere, MA
Client Job Number:
Project Number: [none]
Laboratory Work Order Number: 18K0682

Enclosed are results of analyses for samples received by the laboratory on November 14, 2018. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kerry K. McGee
Project Manager

Table of Contents

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Lockwood Remediation Technologies, LLC
89 Crawford Street
Leominster, MA 01453
ATTN: Tammie Hagie

REPORT DATE: 11/16/2018

PURCHASE ORDER NUMBER:

PROJECT NUMBER: [none]

ANALYTICAL SUMMARY

WORK ORDER NUMBER: 18K0682

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

PROJECT LOCATION: 49-54 Revere Beach Boulevard, Revere, MA

FIELD SAMPLE #	LAB ID:	MATRIX	SAMPLE DESCRIPTION	TEST	SUB LAB
Sales Creek	18K0682-01	Surface Water		SM2520B	NY11393/MA-MAI138/MA1110

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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.

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

Lisa A. Worthington
Project Manager

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

Project Location: 49-54 Revere Beach Boulevard, R Sample Description: Work Order: 18K0682

Date Received: 11/14/2018

Field Sample #: Sales Creek Sampled: 11/8/2018 16:45

Sample ID: 18K0682-01

Sample Matrix: Surface Water

SM 2520 (01)

Analyte	Results	RL	Units	Dilution	Flag/Qual	Method	Date Prepared	Date/Time Analyzed	Analyst
Salinity	2.04	1.00	ppt (1000)	1		wc-Salinity-SM2520	11/15/18	11/15/18 11:54	ESA

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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.

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

CERTIFICATIONS

Certified Analyses included in this Report

Analyte	Certifications

No certified Analyses included in this Report

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

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

Appendix C

Water Treatment System

8” Wellpoint Pump

APPLICATIONS:

Construction

Wellpoint

Sock Dewatering

Remediation

Recharge

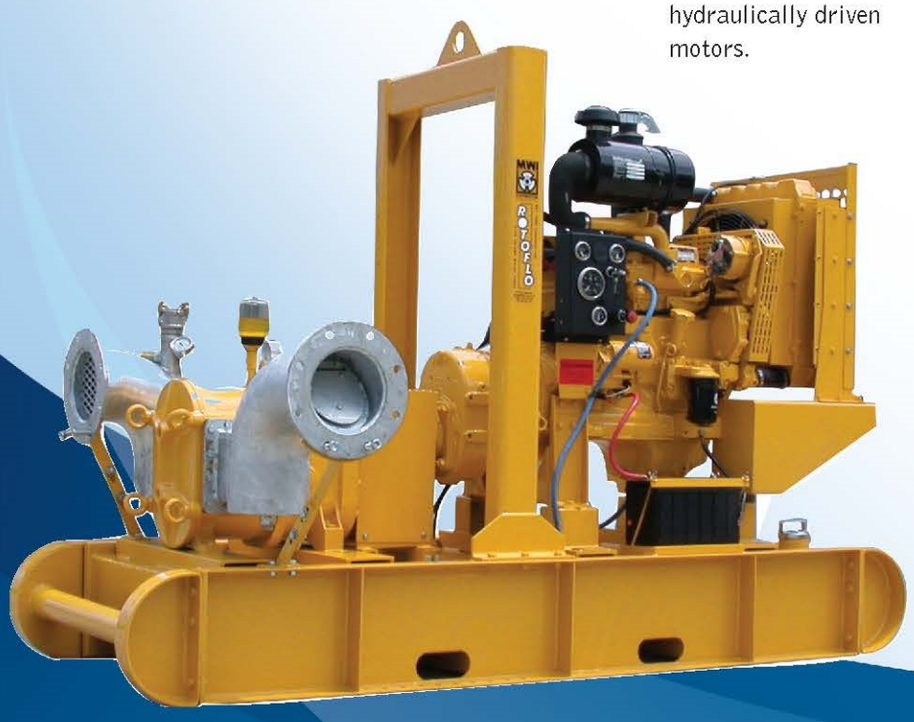
Multiple Fluid Transfer Capabilities

The Rotoflo™ is the perfect pump for construction dewatering. Whether you are using a wellpoint or sock system, the air/water handling capabilities of the Rotoflo™ will work on your site trouble free - and with minimum use of fuel.The simple design eliminates the need for complicated vacuum priming, floats and air/water separation systems known for failures.

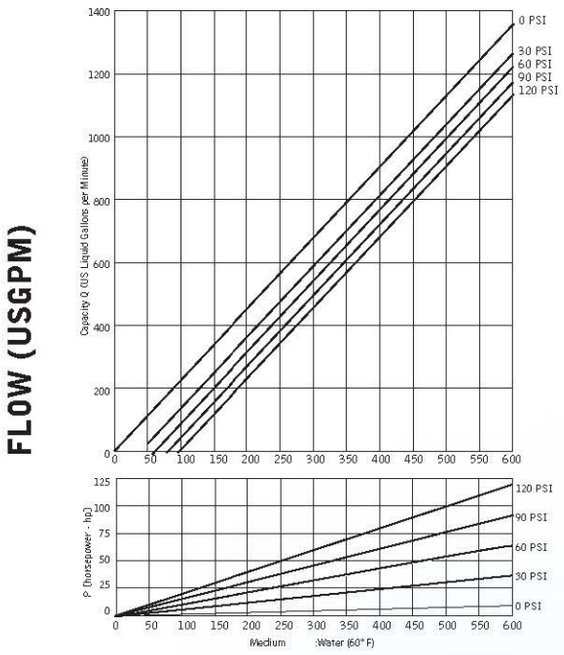
Downtime is reduced thanks to the Maintenance In Place design, which allows for on-site repairs with no special tools or requirements. The 100% bolt-together design adds flexibility to your operations. A few simple steps will convert your skid into a full DOT or off-road trailer. MWI offers a complete line of accessories for your wellpoint and construction dewatering needs. including swing-joints, header pipe, wellpoints and jetting equipment.

FEATURES

- High performance (1650 GPM & 210 FT. TDH)
- Dry running mechanical seals
- Pumps slurries and brackish waters
- Choice of diesel engines, electric, or hydraulically driven motors.
- Integral 94 gallon fuel tank with gauge and lockable fuel cap
- Fuel efficient
- Pulsation free design
- Skid or trailer available
- Rotary lobes, wear plates and seals are easily replaceable on site
- Silent enclosures available (67dB @ 23 Feet) for residential areas



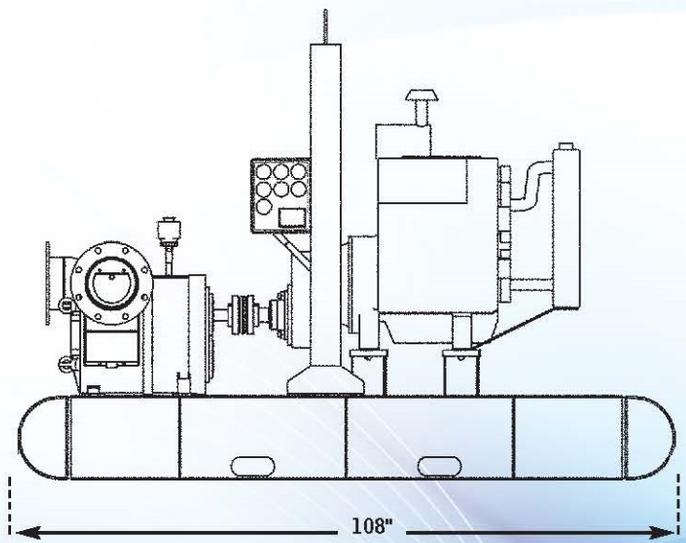
PERFORMANCE

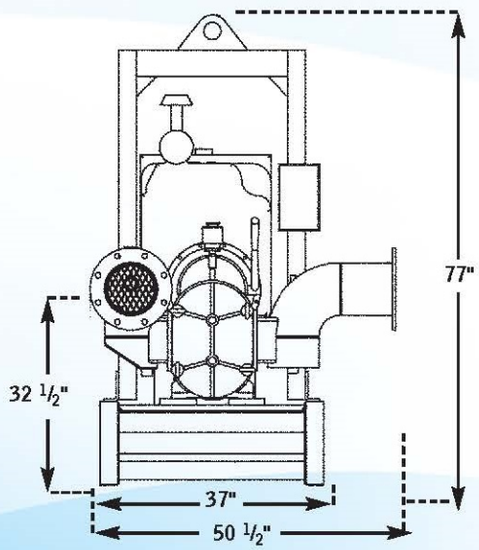


Test conducted on water.

MATERIALS & SPECIFICATIONS

- Pump casing: Cast iron. Special hardened ductile cast iron and stainless steel are available.
- Rotary lobes: Standard bronze body with encapsulated tips with wear and age resistant Buna. Other coating materials available.
- Wear liner: Stainless steel
- Shaft: Stainless steel
- Discharge: 8" Flapper check valve
- Mechanical seal: Oil bath, dry running seal, with abrasion resistant silicon carbide faces.
- Diesel Engine Panel: Tach and hour meter, including shutdowns for: low oil pressure, high coolant temperature and overspeed
- Electric Panel: Full or reduced starter. Variable frequency drive (VFD) optional.
- Weight: 3400 lbs

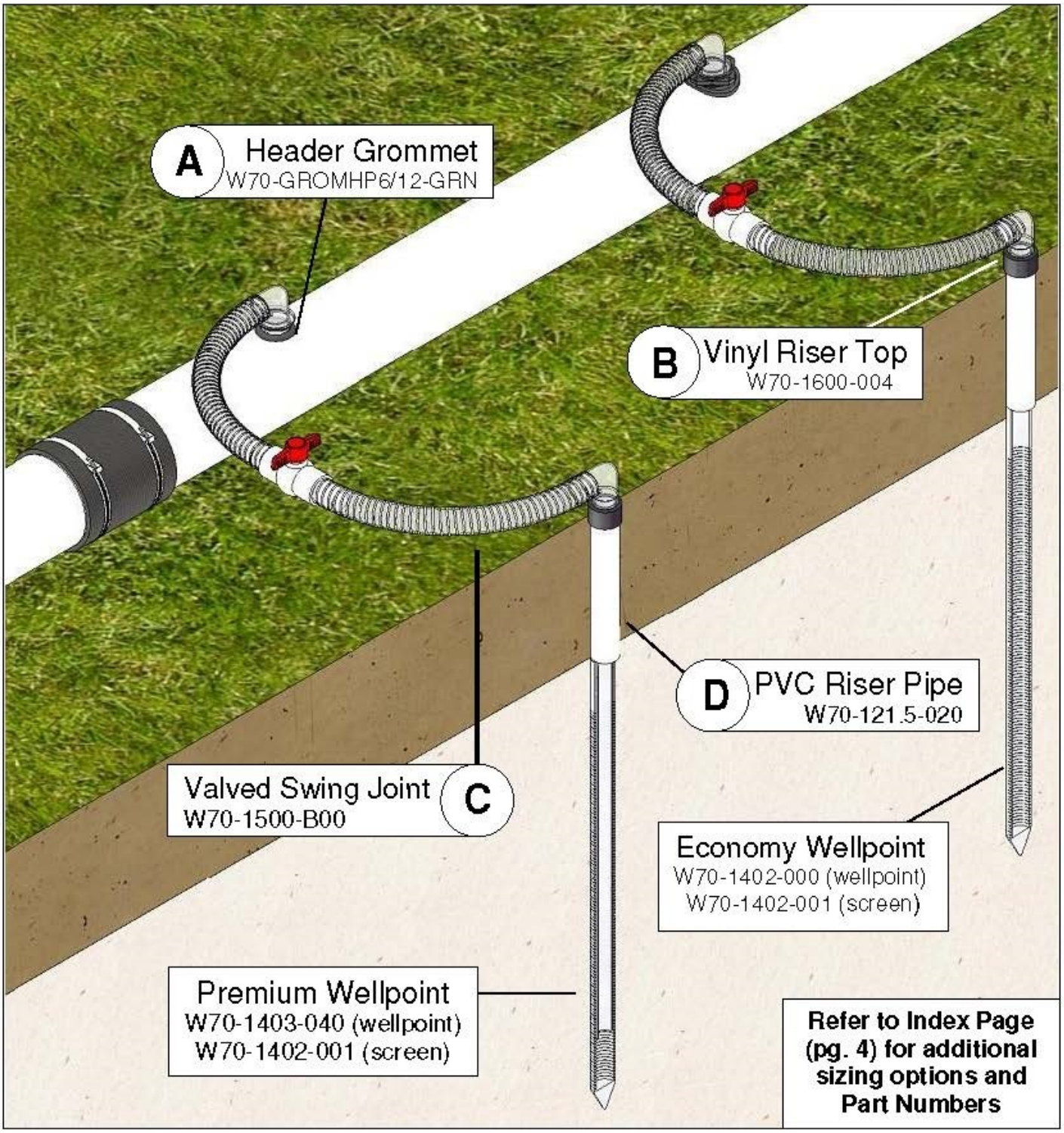




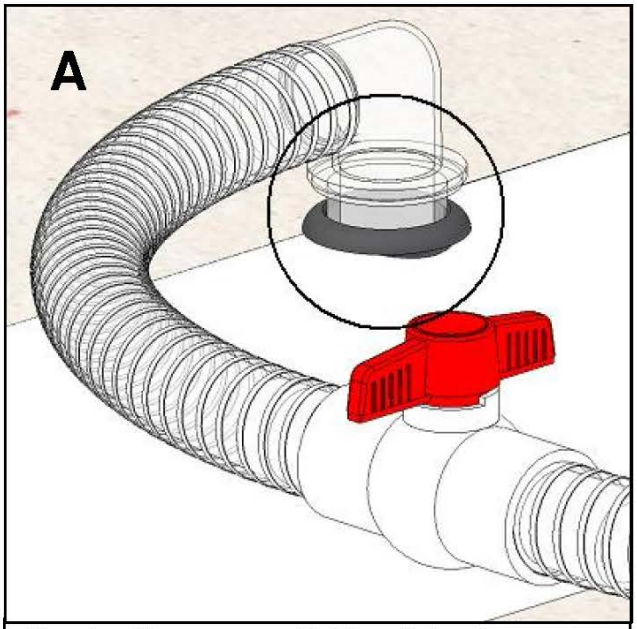
Model	Size	Max. Capacity (GPM)	Max CFM	Max Head (FT)
RWP008	8"/8"	1650	221	227

Ask us about the Silent Partner™ for your RotoFlo™ pump - a great addition for quiet pump operation.

Wellpoint Systems and Accessories

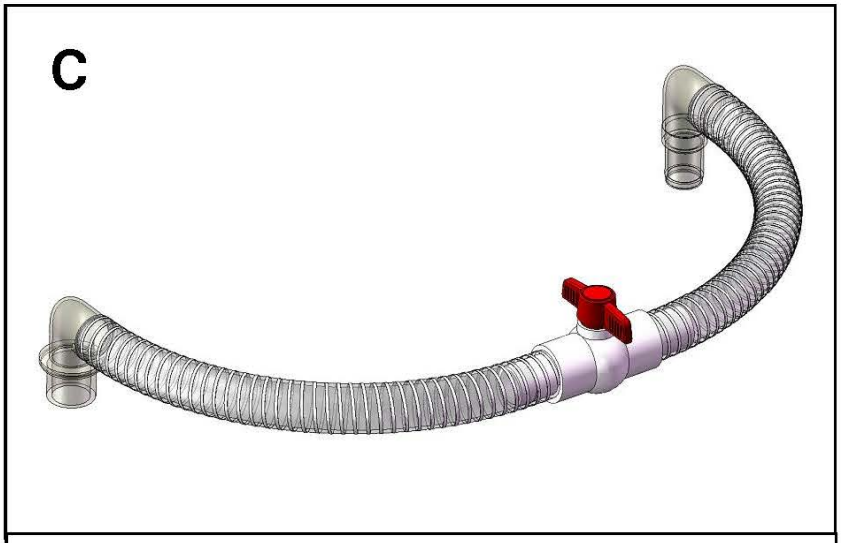


Optional Wellpoint Components



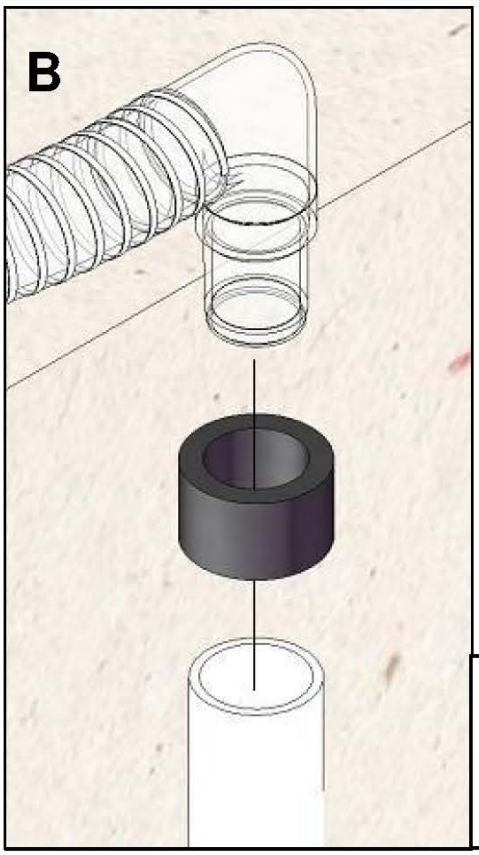
Header Grommet – Rubber fitting for creating a seal between the header pipe and the swing. The lack of a valve is supplemented by integral valves in the swings.

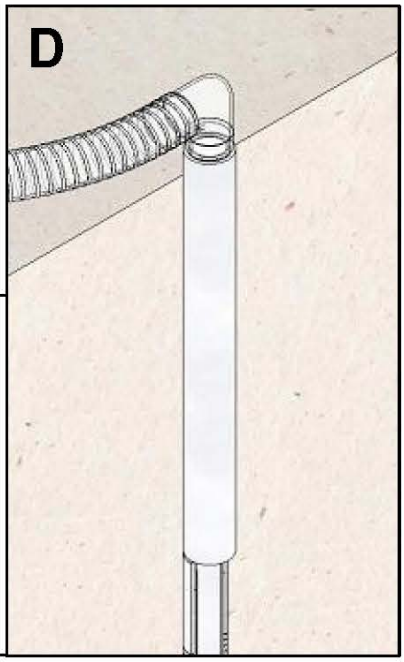
P#: W70-GROMHP6/12-GRN (6-12")



Valved Swing Joint – Swing joint with an integral ball valve fitted in the center, which can supplement the header valves by controlling the flow of air and water to the header pipe from the wellpoints.

P#: W70-1500-B00





PVC Riser Pipe – Used to lengthen the wellpoint to achieve a desired depth. Riser pipes are available in PVC and galvanized steel - typically between 8' and 21' in length, depending on the application (shown smaller for illustrative purposes).

P#: W70-121.5-020 (1.5" x20')

Vinyl Riser Top – Rubber cap for the PVC riser pipe that helps create an air tight seal between the swing and the riser pipe.

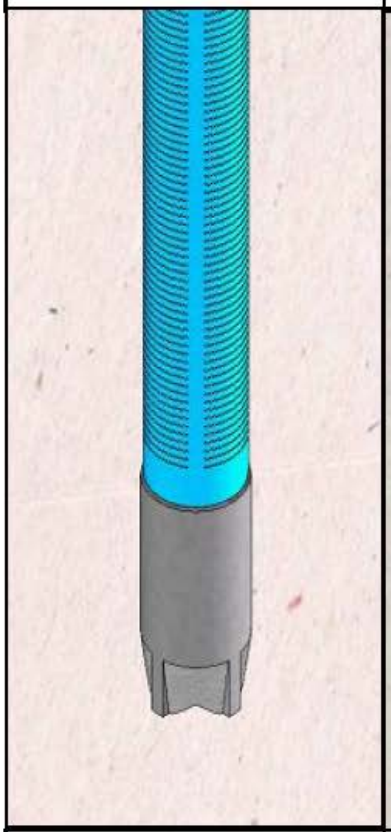
P#: W70-1600-004

Wellpoints

The screen within the wellpoint is the quintessential component of the wellpoint system. The steel, self-jetting wellpoint is the standard, but other options include both the premium and economy PVC models.

Self-Jetting Steel Wellpoint

The standard, self-jetting wellpoint uses a combination of both aluminum and PVC. It features a drop tube which is inserted inside the screen, enabling the wellpoint to draw water from the bottom end of the screen, achieving the maximum draw-down in any given situation. Also, the addition of galvanized "teeth" at the bottom makes the wellpoint "self-jetting", or capable of jetting its own installation point.

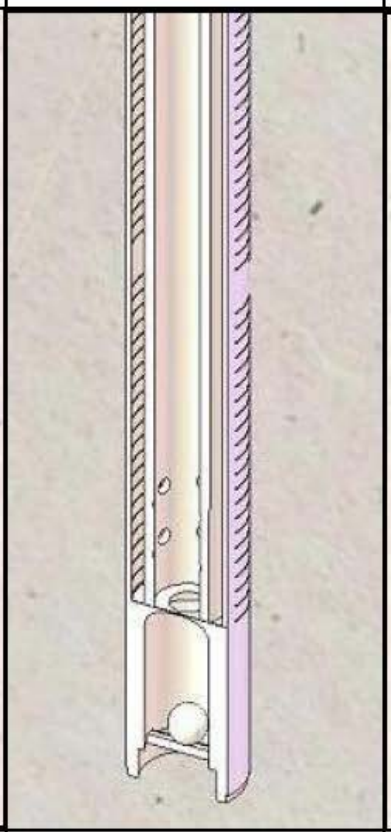


P#: W70-1408-000-IND

Standard

GAT Wellpoint

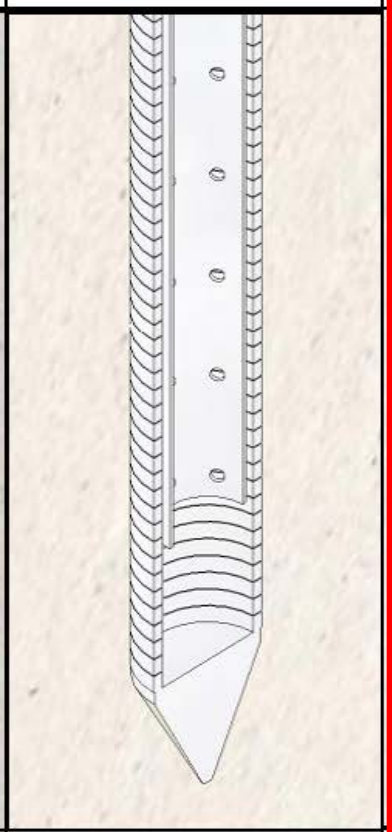
The GAT wellpoint is made entirely of PVC and features a a 1" drop tube which is inserted inside the screen, which enables the wellpoint to draw water from the bottom end of the screen, achieving the maximum draw-down in any given situation. Also, it has a unique "self-jetting" head which enables self-installation in certain soils.



P#: W70-1405-000

Premium PVC Wellpoint

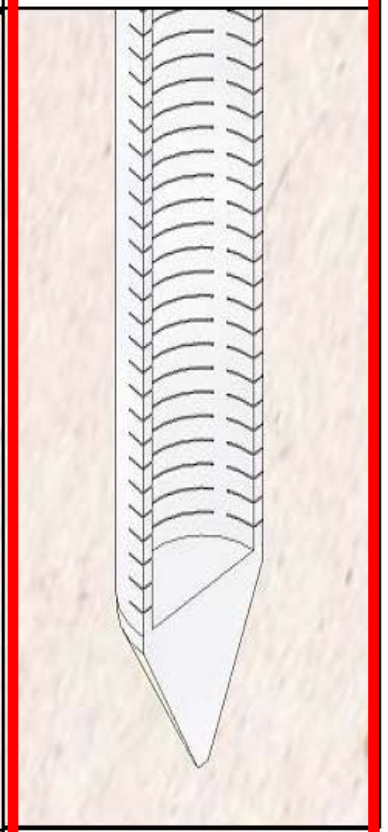
The Premium Wellpoint is the top of the line in PVC wellpoints. Like the self-jetting steel model, the premium PVC wellpoint features a 1" drop tube inserted within the screen, which enables the wellpoint to draw water from the bottom end of the screen, achieving the maximum draw-down in any given situation.



P#: W70-1403-040

Economy PVC Wellpoint

The screen of the economy wellpoint maintains structural integrity while reducing dewatering costs and providing high labor productivity. Flexibility is the key to dewatering efficiency with the economy wellpoint from Thompson Pump.



P#: W70-1402-000

Optional

Optional Wellpoint Components Index

Economy PVC Wellpoint - The screen of the economy wellpoint maintains structural integrity while reducing dewatering costs and providing high labor productivity. Flexibility is the key to dewatering efficiency with the economy wellpoint from Thompson Pump.

- WELLPOINT, PVC 1.5" ECONOMY / CLASS160 WITHOUT DROPTUBE
  P#: W70-1402-000

GAT Wellpoint –

- WELLPOINT, PVC 1.5" GAT / SELF JETTING WITH DROPTUBE
  P#: W70-1405-000

Header Grommet - Rubber fitting for creating a seal between the header pipe and the swing. The lack of a valve is supplemented by integral valves in the swings.

- GROMMET, HEADER 6"-12" PIPE **P#: W70-GROMHP6/12-GRN**

Premium PVC Wellpoint - The Premium Wellpoint is the top of the line in PVC wellpoints. Like the self-jetting steel model, the premium PVC wellpoint features a 1" drop tube inserted within the screen, which enables the wellpoint to draw water from the bottom end of the screen, achieving the maximum draw-down in any given situation.

- WELLPOINT, PREMIUM PVC 1.5" / SCH40 WITH DROPTUBE
  P#: W70-1403-040

PVC Riser Pipe – Used to lengthen the wellpoint to achieve a desired depth. Riser pipes are available in PVC and galvanized steel - typically between 8' and 21' in length, depending on the application.

Item Number Description

- PIPE, RISER PVC 1.25" CLASS160 **P#: W70-121.25-020**
- PIPE, RISER PVC 1.5" X 20' **P#: W70-121.5-020**
- PIPE, RISER PVC 1.5" X 20' **P#: W70-121.5-020A**
- PIPE, RISER PVC 1.5" SCH40 **P#: W70-12.5-020**
- PIPE, RISER PVC 2"x 20' SCH 80 **P#: W70-1303-020**
- PIPE, RISER PVC 3' X 1.5" 160 **P#: W70-1320-003**
- PIPE, RISER PVC 6' X 1.5" 160 **P#: W70-1320-006**
- PIPE, RISER PVC 9'x1.5" 160 **P#: W70-1320-009**
- PIPE, RISER PVC 10'x1.5" 160 **P#: W70-1320-010**
- PIPE, RISER PVC 12'x1.5" 160 **P#: W70-1320-012**
- PIPE, RISER PVC 15'x1.5" 160 **P#: W70-1320-015**
- PIPE, RISER PVC 18'x1.5" 160 **P#: W70-1320-018**
- PIPE, RISER PVC 20'x1.5" 160 **P#: W70-1320-020**
- PIPE, RISER PVC 20' X 2" 160 **P#: W70-1320-020-02**

Sock Tape – Used to connect sections of sock together like a Header Coupling would for standard pipe.

- TAPE, SOCK 2" / ROLL **P#: W70-GP70**

Vinyl Riser Top – Rubber cap for the PVC riser pipe that helps create an air tight seal between the swing and the riser pipe.

- TOP, RISER VINYL 1.5" **P#: W70-1600-004**

Valved Swing Joint – Swing joint with an integral ball valve fitted in the center, which can supplement the header valves by controlling the flow of air and water to the header pipe from the wellpoints.

- SWING, 3' X 1.5" W/BALL VALVE / SWING END TO RISER **P#: W70-1500-B00**
- SWING, 7' X 1.5 W/BALL VALVE / W/BALL VALVE **P#: W70-1501-B00**

Wellpoint Sand – Once the hole is jetted for the wellpoint, the rest of the area around the hole is filled in with this fine sine, creating a better vacuum and acting as a screen to filter out unwanted silt and debris.

- SAND, WELLPOINT **P#: W70-WELLPOINT-SAND**

Wellpoint Clay – Used to patch and seal minor leaks or cracks in various parts of the wellpoint system, such as cracks in a header pipe, sealing the base of a swing to the valve, etc.

- CLAY, WELLPOINT 1LB WRAPPED **P#: C89-WLCLA-01**

Centrifugal - Single Phase

Motor Protection

All models provide built-in thermal overload protection that shuts down the pump when operating temperature becomes too high, and automatically restarts once the motor cools and a proper temperature is met.

Quality and Safety

ST Series Single Phase Pumps are in accordance with ISO9001 Quality Management System standard. Also, all Single Phase models carry the Underwriters Laboratories (UL) Listing for compliance with both U.S. or Canadian electrical safety codes.

YELLSUB

1 1/4" Discharge
33 GPM - 15' HEAD

The Yellow Submarine is MQ's most lightweight, compact submersible pump. A great choice for common household moving water applications. One piece polymer pump casing body resists corrosion and heat. Includes internal thermal overload protection, dual shaft seals, and positive direct drive thermoplastic impeller secured with stainless steel fittings.

SS233

2" Discharge
60 GPM - 20' HEAD

This lightweight, compact submersible pump is the first choice for many applications: flooded rooms, flat roofs, fill tanks, basins, fountains and waterfalls. Hardy thermoplastic pump casing body resists corrosion and heat. Further, the SS233 incorporates internal thermal overload protection, dual shaft seals, and positive direct drive thermoplastic impeller secured with stainless steel fittings.

ST2038P

2" Discharge
60 GPM - 38' HEAD

This lightweight, compact submersible pump is ideal for moving water in multiple confined and open area applications. The unique casing design permits it to draw water to a level of 1/16" without having to place the pump in any kind of sump. The ST2038P incorporates a rugged cast aluminum housing, internal thermal overload protection, and sealed dual shaft seals and bearings .

ST2037

2" Discharge
73 GPM - 37' HEAD

The ST2037 incorporates a rugged cast aluminum housing, internal thermal overload protection, dual shaft seals, sealed ball bearings impeller and molded 25' Power Cable with strain relief. This is a powerful, versatile, low maintenance pump that is perfect for a wide range of operations supporting Contractors Service Utilities, Municipalities, and Homeowners.

ST2047

2" Discharge
87 GPM - 47' HEAD

A compact, powerful pump that tackles tough dewatering jobs. Perfect for Contractors, Service Utilities, Municipalities, and Homeowners. The ST2047 incorporates a rugged cast aluminum housing, internal thermal overload protection, dual shaft seals, sealed ball bearings impeller and molded 50' Power Cable with strain relief.

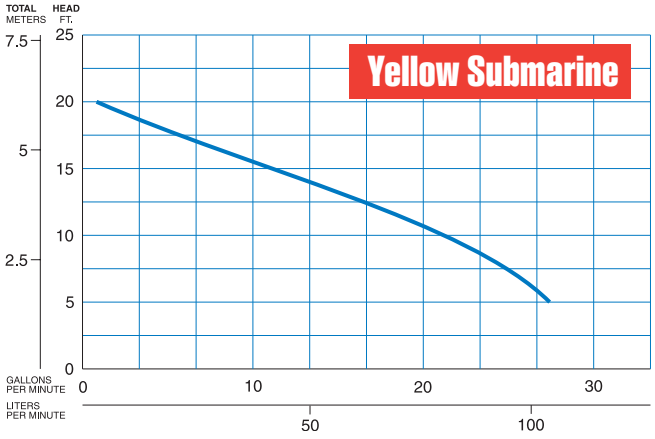
ST3020BCUL

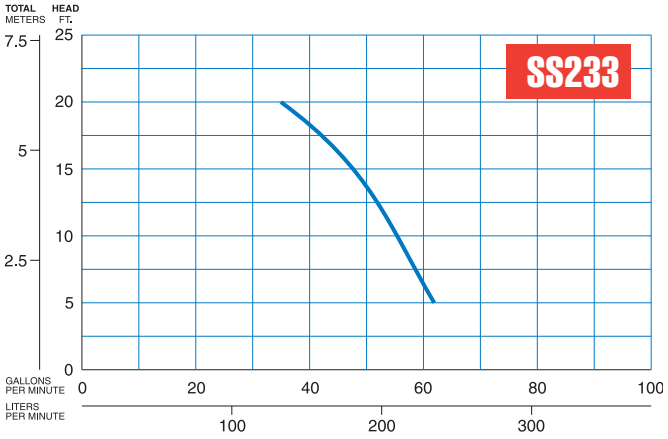
3" Discharge
170 GPM - 72' HEAD

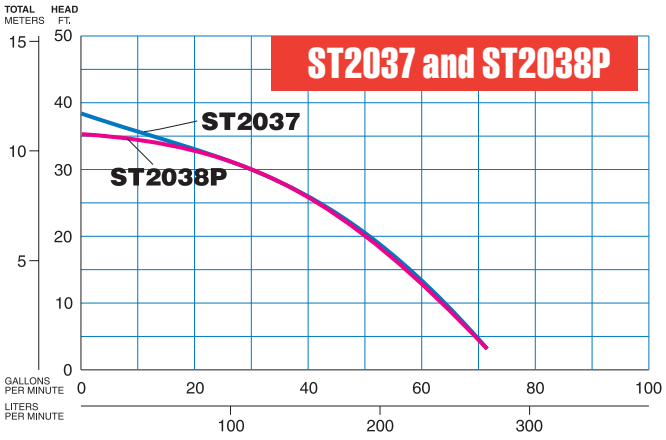
This is a rugged 2HP 230V pump with a heat conducting cast iron/steel motor casing. Pumps liquid up to 120° and de-waters surfaces up to 1/2. The ST3020BCUL incorporates reliable double mechanical oil-filled seals, internal thermal overload protection, sealed ball bearings, Ductile Iron impeller, carrying handle, and molded 50' Power Cable with strain relief. The 6.7" diameter design permits the pump to fit into tight spaces & conduits.

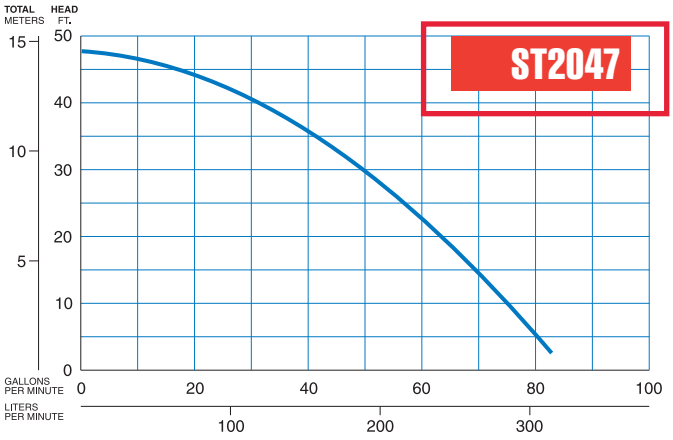
*** All Multiquip single phase submersible pumps do not require a Control Box for safe, efficient operations. However, a Control Box may be desired if operations call for a manual ON/OFF Switch option.**

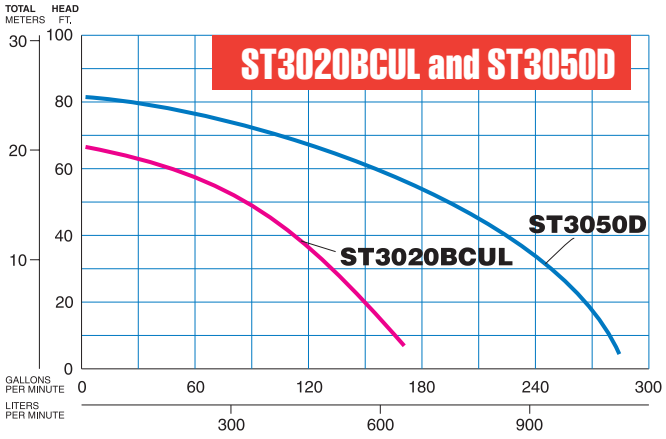
Pump Performance Curves

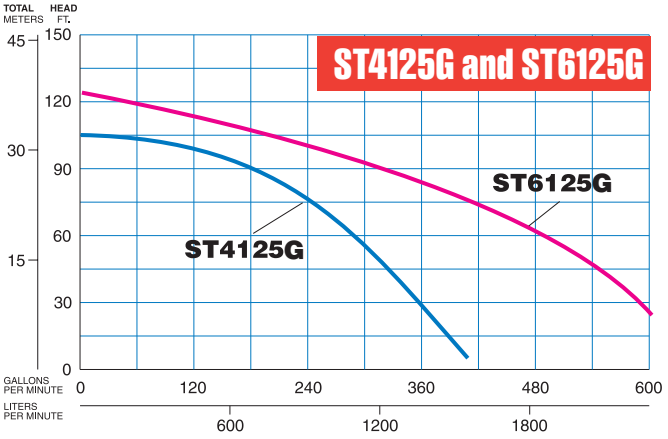


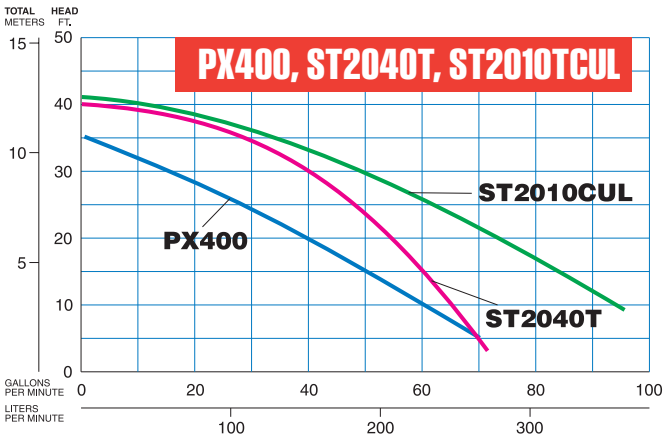












Multiquip Electric Submersible Pumps — Specifications

Model	Impeller	Disc. Size in. (mm)	Max. Solids in. (mm)	Total Head ft. (m)	Capacity GPM (lpm)	HP (kw)‡	Voltage; Phase	Starting Amp.	Running Amp.	Cable Length ft. (m)	Diameter in. (mm)	Height in. (mm)	Weight lb (kg)
CENTRIFUGAL													
YELLSUB*	Heavy Polymer	1¼ (31.7)	–	15 (4.6)	33 (125)	0.25 (.185)	115V 1Ø	11.5	2.5	9 (2.7)	6.25 (159)	9.5 (24)	6 (2.72)
SS233*	Heavy Polymer	2 (50)	–	20 (6.1)	60 (227)	0.5 (0.37)	115V 1Ø	30	6	20 (6.1)	8.1 (206)	14.5 (36.8)	15.5 (7.0)
ST2038P*	Neoprene Rubber over Cast Iron	2 (50)	–	38 (11.5)	60 (227)	1 (0.75)	115V 1Ø	56	8	25 (7.8)	7.7 (196)	15.4 (391)	31 (14)
ST2037*	Neoprene Rubber over Cast Iron	2 (50)	–	37 (11.3)	73 (276)	1 (0.75)	115V 1Ø	34.5	6.9	25 (7.8)	7.4 (188)	15.4 (391)	31 (14)
ST2047*	Neoprene Rubber over Cast Iron	2 (50)	–	47 (14.3)	87 (329)	1 (0.75)	115V 1Ø	49	9.8	50 (15.2)	7.4 (188)	15.4 (391)	33 (15)
ST3020BCUL*	Cast Ductile Iron	3 (75)	–	72 (22)	170 (644)	2 (1.5)	230V 1Ø	52	10.5	50 (15.2)	6.7 (170)	28.5 (720)	67 (30)
ST3050D	Cast Ductile Iron	3 (75)	–	86 (26)	264 (999)	5 (3.75)	230/460V 3Ø	77 (230V) 39 (460V)	14.2 (230V) 7.1 (460V)	50 (15.2)	10.2 (259)	26.8 (680)	120 (54)
ST4125G	Cast Ductile Iron	4 (100)	–	111 (33.8)	360 (1362)	10 (7.5)	230/460V 3Ø	180 (230V) 90 (460V)	24 (230V) 12 (460V)	50 (15.2)	14 (35.6)	33.5 (851)	344 (156)
ST6125G	Cast Ductile Iron	6 (150)	–	112 (34)	706 (2684)	15 (11)	230/460V 3Ø	262 (230V) 131 (460V)	35 (230V) 18 (460V)	50 (15.2)	14.2 (361)	38.8 (986)	390 (177)
TRASH PUMPS													
PX400*	Urethene Resin	2 (50)	1 (25)	34 (10.3)	72 (273)	0.5 (0.37)	115V 1Ø	37	6.2	19 (5.6)	10 (254)	17 (430)	25 (11)
ST2040T*	Neoprene Rubber over Cast Iron	2 (50)	1 (25)	40 (12.2)	79 (299)	1 (0.75)	115V 1Ø	34	6.8	25 (7.8)	10.3 (267)	16.8 (427)	34 (15.4)
ST2010TCUL*	Cast Ductile Iron	2 (50)	1 (25)	45 (13.7)	95 (360)	1 (0.75)	115V 1Ø	53	9.4	50 (15.2)	10.3 (267)	24.5 (622)	77 (35)

Note: Models ST3050D, ST4125G, and ST6125G are 230V/460V pumps that come factory pre-set for 230V operations. If 460V orientation is required, the request must be made at the time of the order.

* Complies with UL and Canadian Electrical Standards.

Note: All Multiquip 3-phase submersible pumps require a control box to provide it with all of the operation safety shut-downs and to use with float switches (if required). If these pumps are ordered to replace a unit in an existing application where a control box is already installed then the existing control box may be sufficient. If the pump is part of a new application where a control box is not already present then a control box needs to be ordered with the 3-phase submersible pump. A control box is needed specifically to provide the 3-phase submersible pump with the voltage overload and thermal overload shutdowns, as well as a connection point for the use of float switches.

‡ Engine power ratings are calculated by the individual engine manufacturer and the rating method may vary among engine manufacturers. Multiquip Inc. and its subsidiary companies makes no claim, representation or warranty as to the power rating of the engine on this equipment and disclaims any responsibility or liability of any kind whatsoever with respect to the accuracy of the engine power rating. Users are advised to consult the engine manufacturer's owners manual and its website for specific information regarding the engine power rating.

All features and specifications are subject to change without notice.
Version (11-11_BD)

Connect with us on

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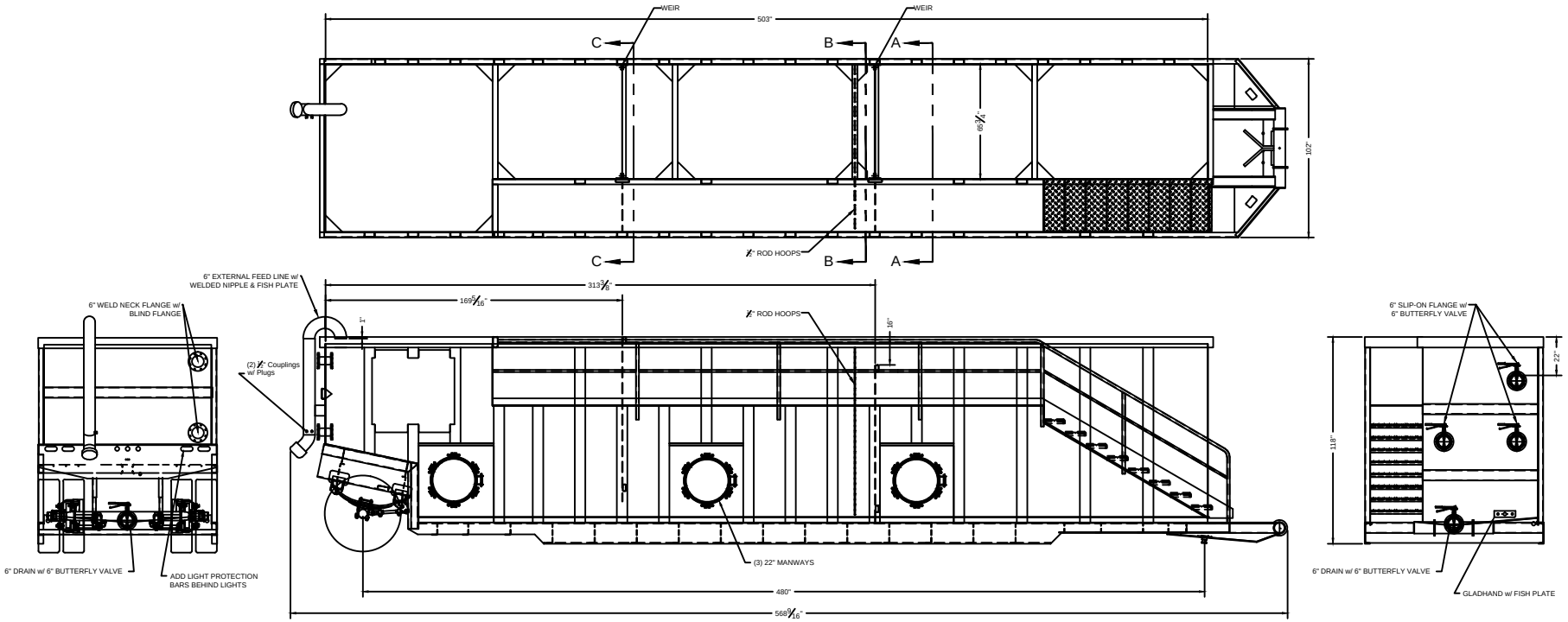
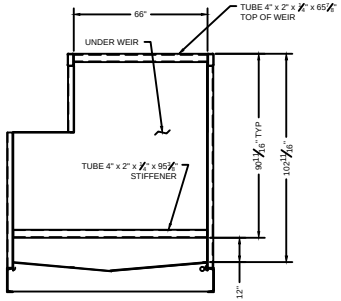
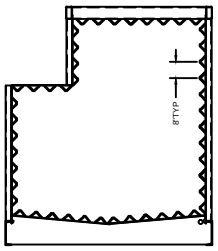


STANDARD SPECIFICATION

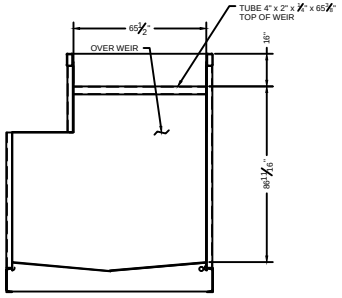
CAPACITY: .... 18,480 GALLONS (440 BBL)
SIDE SHEETS: .... 1/4" A36 PLATE
FRONT SHEET: .... 1/4" A36 PLATE
REAR SHEET: .... 1/4" A36 PLATE
FLOOR: .... 1/4" A36 PLATE
MAIN FLOOR RAILS: .... 12" x 20.7# STRUCTURAL CHANNEL
FLOOR CROSSMEMBERS: .... 1/4" A36 PLATE
SIDE STAKES: .... ONE PIECE 3/16" A36 PLATE
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)
BLAST: .... (INTERIOR) SSPC-SP-10 (NEAR WHITE)
(EXTERIOR) SSPC-SP-6 (COMMERCIAL BLAST)
PAINT: .... (INTERIOR) EPOXYPHENOLIC 100% SOLID 20.0 MILS D.F.T.
(EXTERIOR) FINISH COAT POLURETHANE 4.0 TO 5.0 D.F.T.



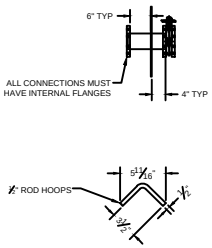
SECTION VIEW "C-C"



SECTION VIEW "B-B"



SECTION VIEW "A-A"



18,000 Gal. Weir Tank

Lockwood Remediation Technologies, LLC

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

Basic Pedestal

Standard Centrifugal Pump

Model VGH5B31-B

Size 6” x 5”

PUMP SPECIFICATIONS

Size: 6” x 5” (152 mm x 127 mm) Raised Face Flanges.

Casing: Ductile Iron.
Maximum Operating Pressure 110 psi (662 kPa).*

Enclosed Type, Six Vane Impeller: Gray Iron 40.
Handles 7/8” (23 mm) Diameter Spherical Solids.

Impeller Shaft: Steel 1045.

Two Replaceable Wear Rings: Gray Iron 25.

Seal Plate: Ductile Iron.

Bypass Flush Piping.

Bearing Housing: Gray Iron 25.

Radial Bearing: Open Cylindrical Roller.

Thrust Bearing: Open Double Row Ball.
Bearing Lubrication: SAE 30 Non-Detergent Oil.

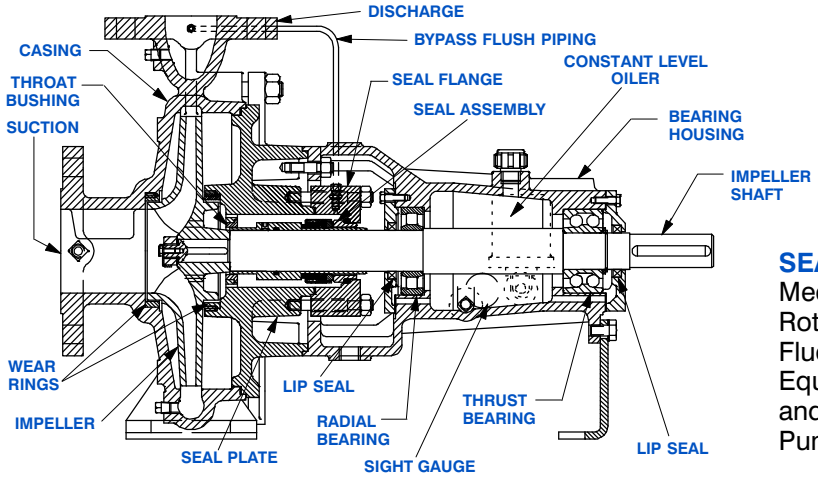
Gaskets: Nitrile Rubber.

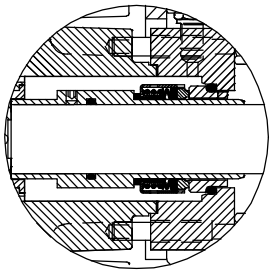
Hardware: Standard Plated Steel.

Bearing Housing Level Oiler.

Optional Equipment: Strainer. NPT Suction and Discharge Flanges. Discharge Check Valve. Consult Factory for Optional Seals.

**Consult Factory for Applications Exceeding Maximum Pressure and/or Temperature Indicated.*





SEAL DETAIL

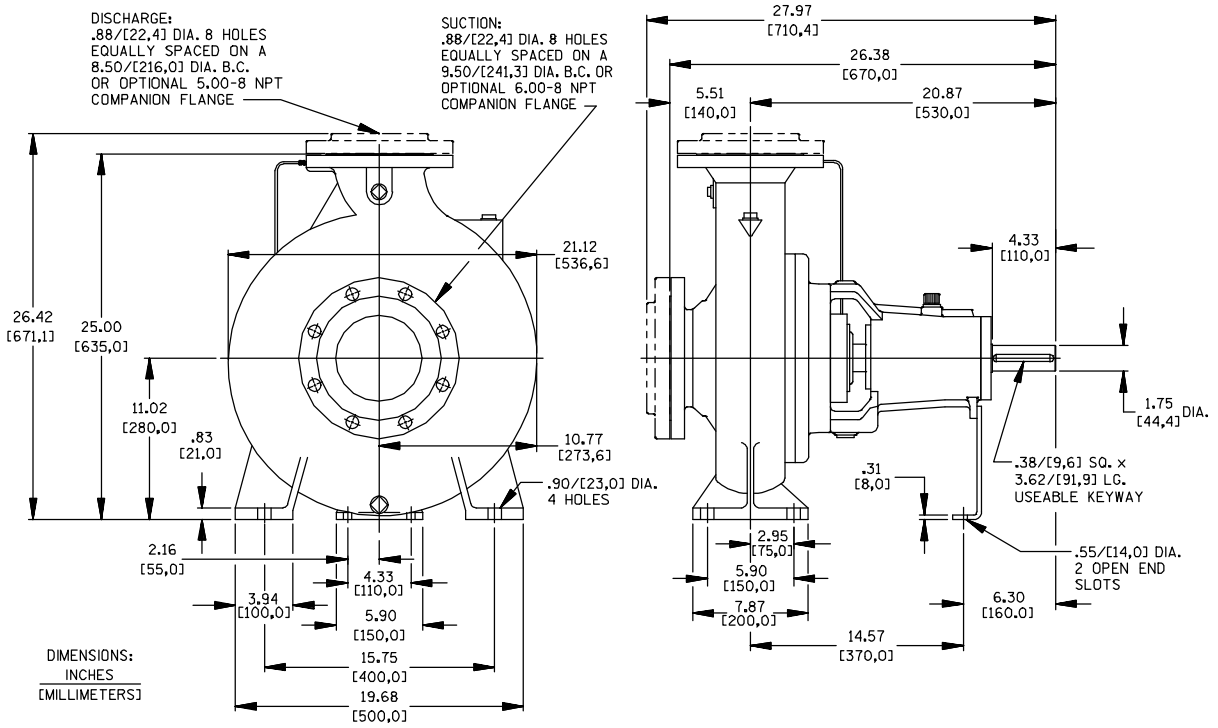
Mechanical, Self-Lubricated. Silicon Carbide Rotating and Stationary Faces. Fluorocarbon Elastomers (DuPont Viton® or Equivalent). Stainless Steel 316 Shaft Sleeve and Spring. Maximum Temperature of Liquid Pumped, 160°F (71°C).*

Specification Data

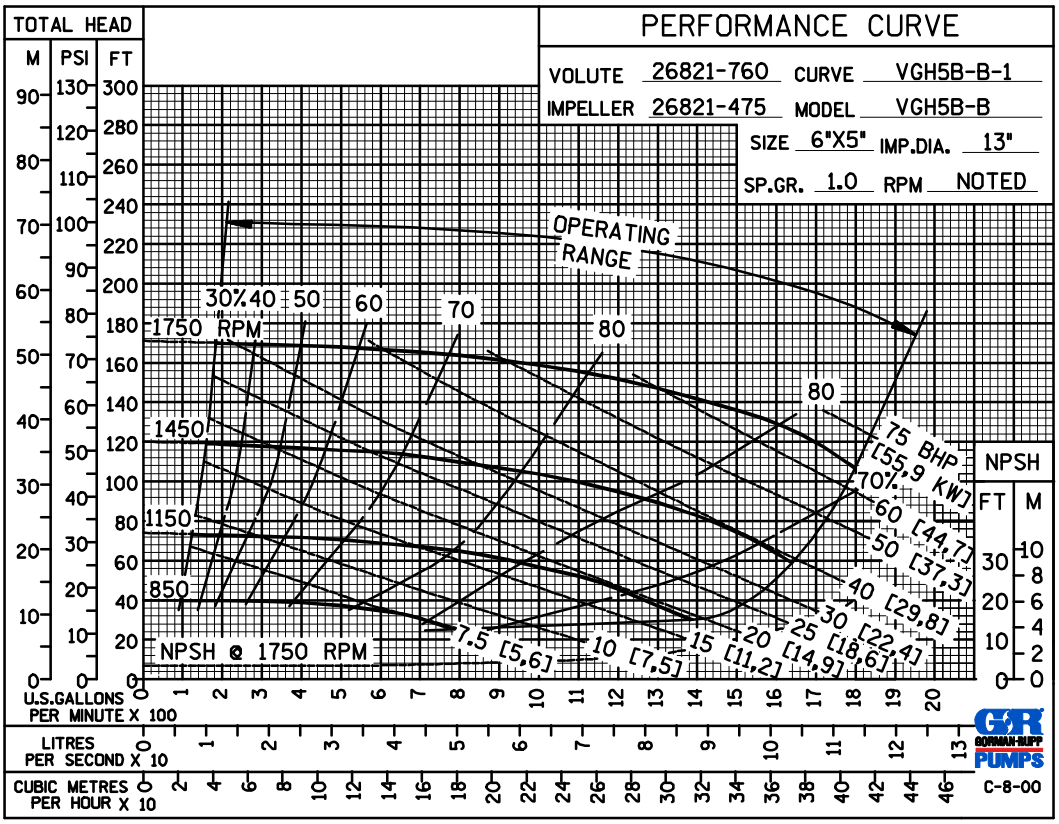
SECTION 70, PAGE 976

APPROXIMATE
DIMENSIONS and WEIGHTS

NET WEIGHT: 366 LBS. (166 KG.)
SHIPPING WEIGHT: 386 LBS. (175 KG.)
EXPORT CRATE: 17 CU. FT. (0,5 CU. M.)



PERFORMANCE BASED ON WATER



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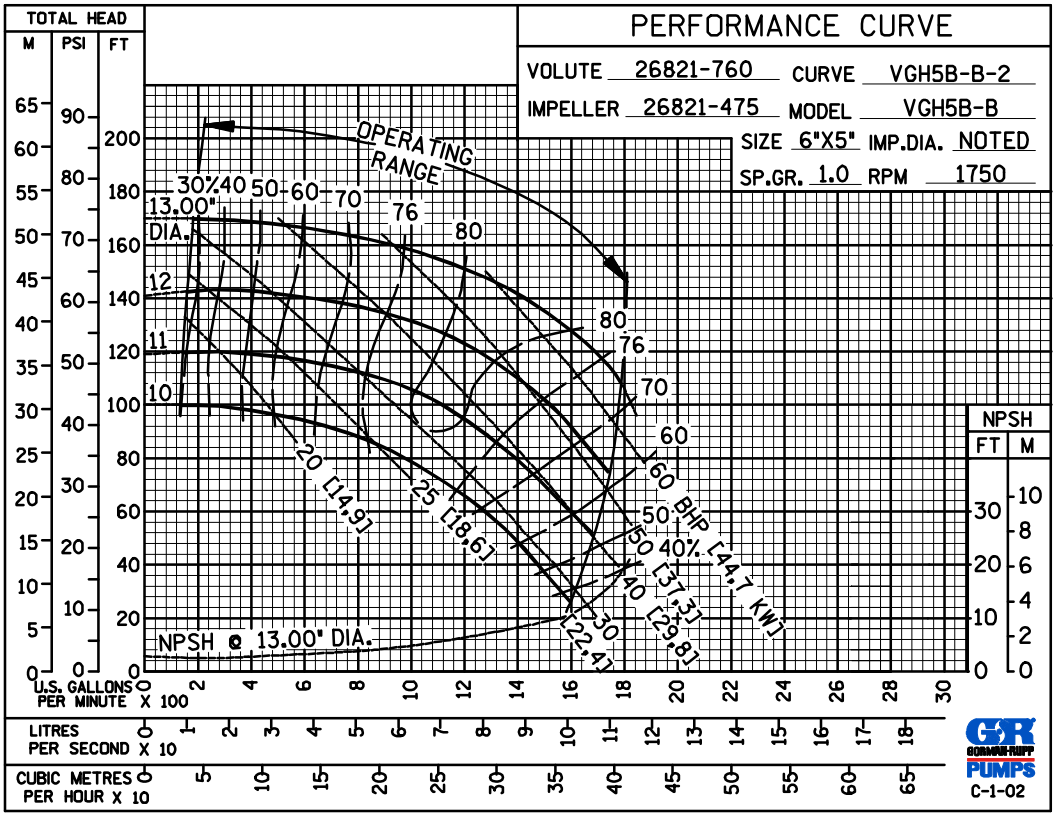
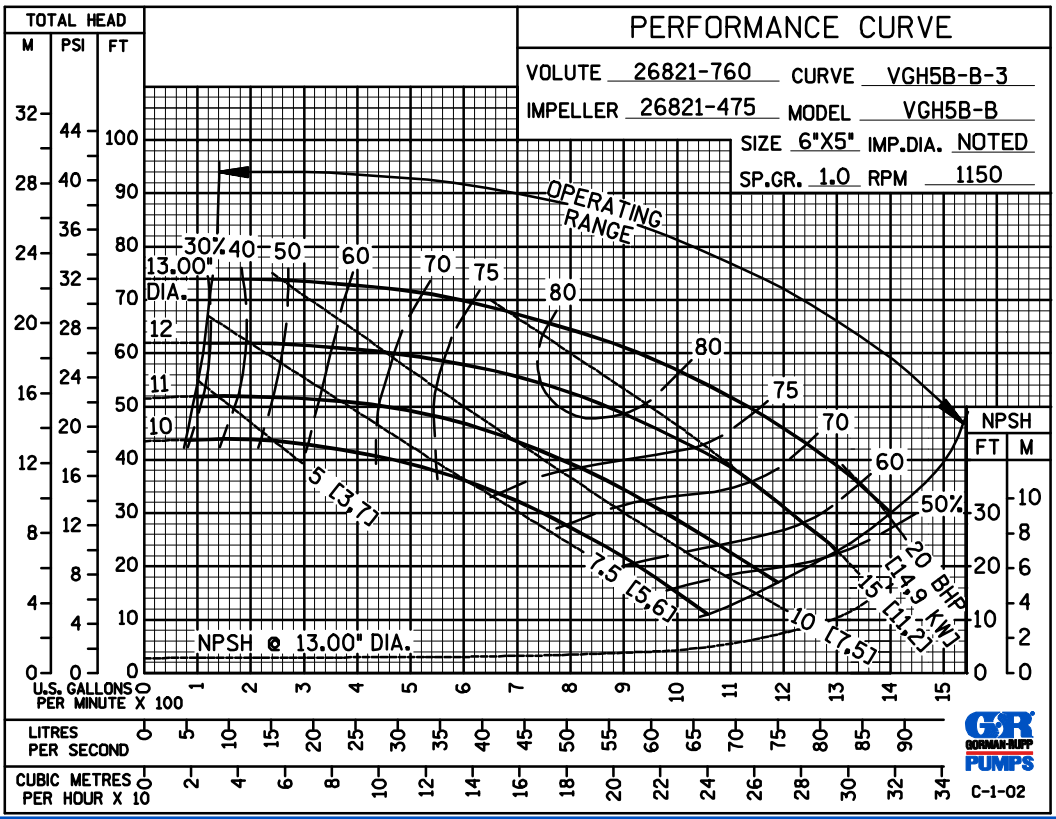
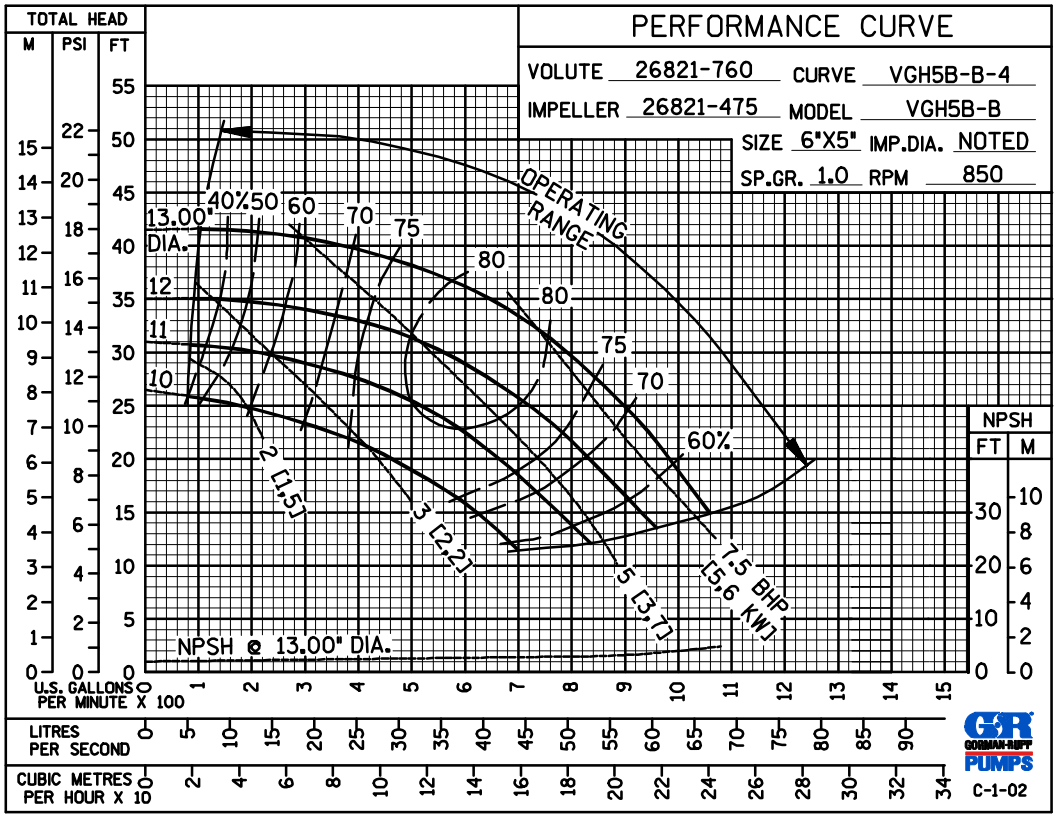


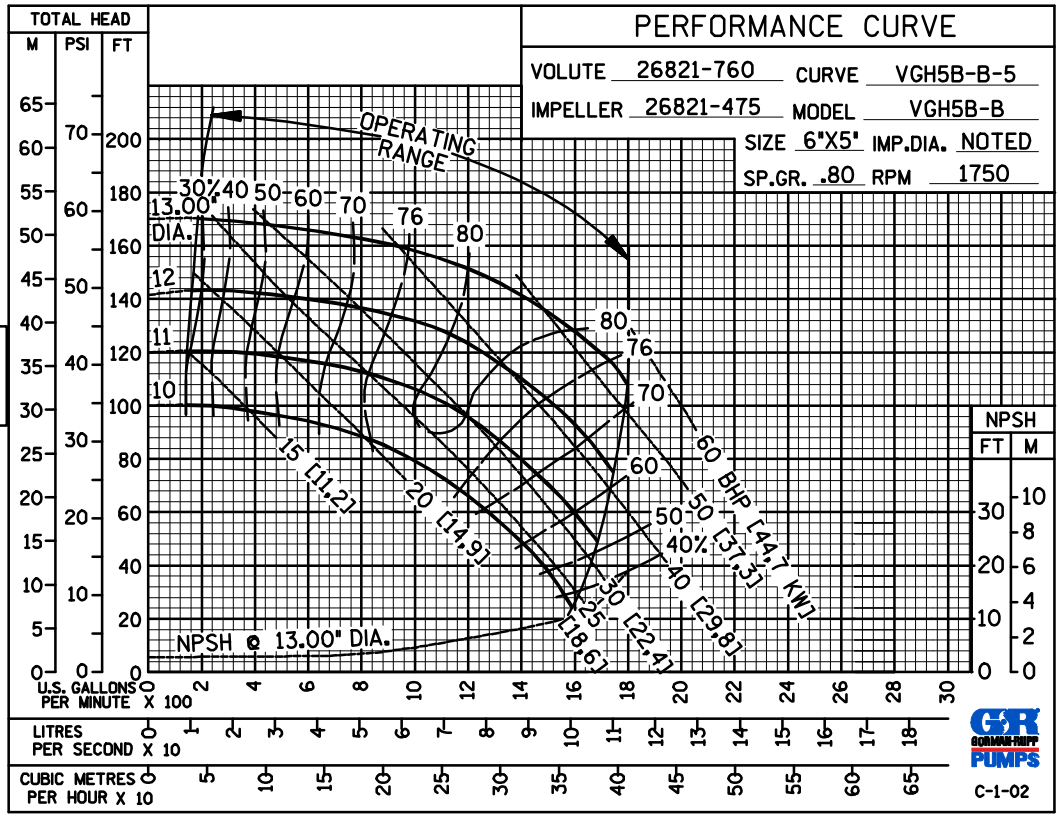
PERFORMANCE BASED ON WATER

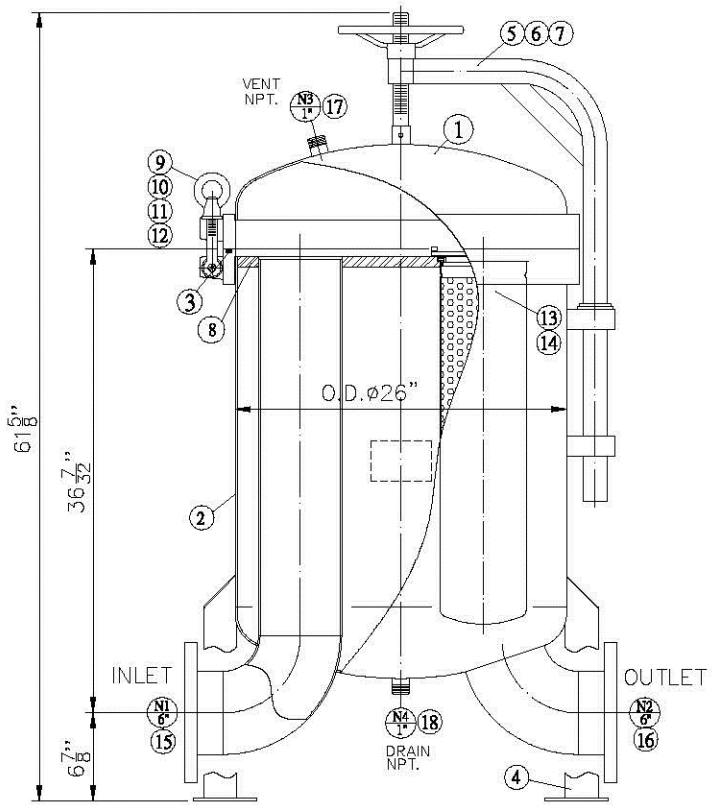


PERFORMANCE BASED ON WATER

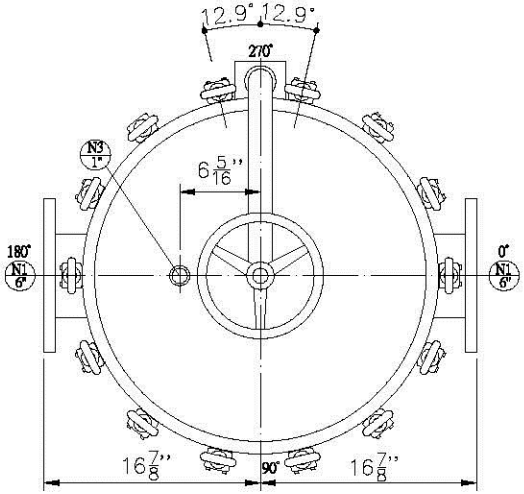


PERFORMANCE BASED ON PETROLEUM

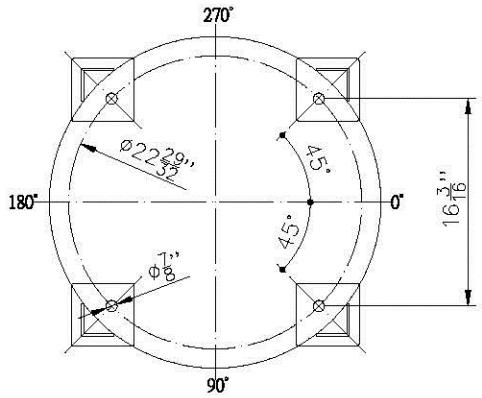




SIDE VIEW



TOP VIEW



ANCHOR

BILL OF MATERIALS
(QUANTITY PER UNIT)

PROD ORDER_____S.O_____ MFG. SERIAL NO._____

CUSTOMER_____ DESIGN __150__ PSIG __90__ °C

DESTINATION_____ MAX. A.W.P._150__ PSIG __90__ °C

CUST. P.O._____ HYDROSTATIC TESTED _225_ PSIG

CUST.EQUIP_____ CODE _____

CODE STAMP_____ N.B._____

NO OF UNITS _____ SCH SHIP DATE _____

WEIGHT EMPTY _____ KG. FULL _____ KG

NO.	DESCRIPTION	MATERIAL	UNIT	QUAN.	PART NO.
1	FILTER COVER	304		1	
2	FILTER SHELL	304		1	
3	GASKET	EPDM		1	
4	LEG WELDMENT	304		4	
5	DAVIT HANDWHEEL	304		1	
6	DAVIT SCREW	304		1	
7	DAVIT ARM	304		1	
8	SEPARATE PLATE	304		1	
9	EYENUT	304		14	
10	WASHER	304		14	
11	EYEBOLT	304		14	
12	BOLT SUPPORT	304		14	
13	BASKET	304		6	
14	BAG-LOCK DEVICE	304		6	
15	INLET 6" ANSI 150B RF	304		1	
16	OUTLET 6" ANSI 150B RF	304		1	
17	VENT NPT 1"	304		1	
18	DRAIN NPT 1"	304		1	

Lockwood Remediation Technologies, LLC
89 Crawford Street
Leominster, MA

NAME	REV: A
Multi-Bag Filter Vessel	SCALE: NONE

PROJECT NO.	ORDER NO.	ITEM NO.

DATE: UNIT: INCH

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

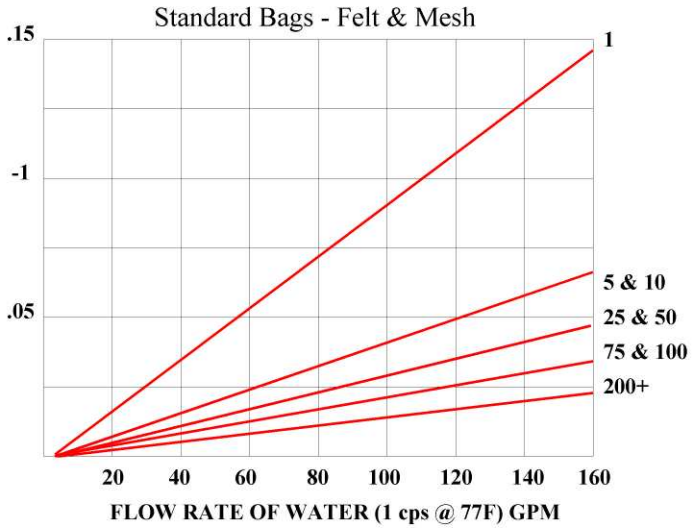
Optional Filter Media

Felt: Nomex, Polyester, Polypropylene

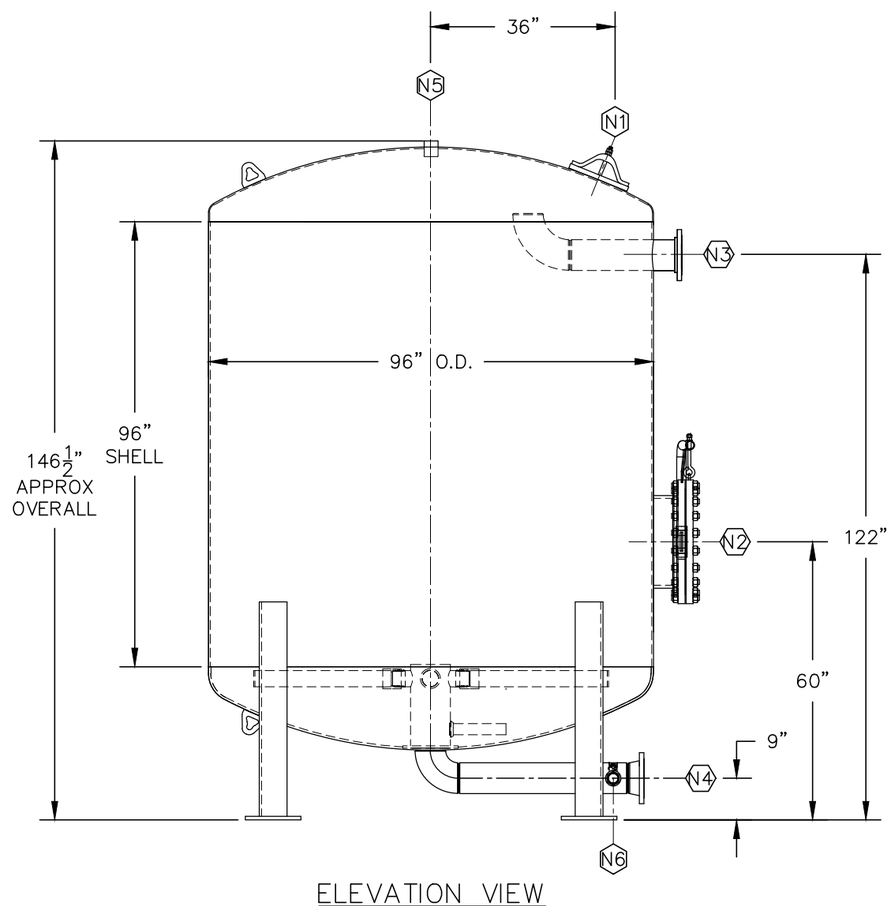
Monofilament: Nylon, Polyester, Polypropylene

Multifilament: Nylon, Polyester

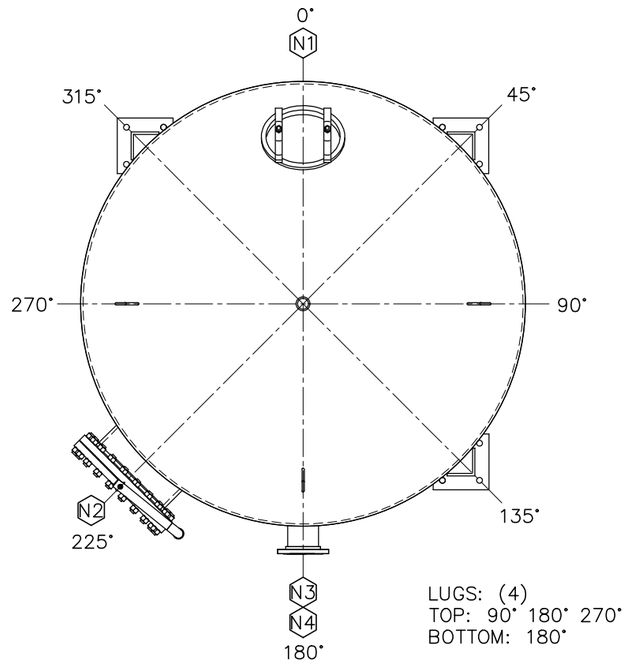
Polypropylene: Oil Removal



SCHEDULE OF OPENINGS		
ID	*DESCRIPTION*	*SERVICE*
N1	14" x 18" ELLIPTICAL MANWAY	UPPER BED ACCESS
N2	20" CIRCULAR MANWAY w/ DAVIT	LOWER BED ACCESS
N3	6" 150# RFSO FLANGE	PROCESS INFLUENT
N4	6" 150# RFSO FLANGE	PROCESS EFFLUENT
N5	1" 3000# FNPT FULL COUPLING	VENT w/ PILOT
N6	2" 3000# FNPT FULL COUPLING	DRAIN w/ BALL VALVE



ELEVATION VIEW
NOT TRUE ORIENTATION



LUGS: (4)
TOP: 90° 180° 270°
BOTTOM: 180°

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)	497.09 CUBIC Ft
INTERNAL DESIGN TEMP.	140 DEG. F	SHIPPING WEIGHT (EMPTY)	5500 Lbs
EXTERNAL DESIGN PRESSURE	ATMOSPHERIC	OPERATIONAL WEIGHT	38662 Lbs
OPERATING PRESSURE	N/A	SHELL 1 MATERIAL	SA-36 ROLLED PLATE NOM. TH. = 0.3125"
OPERATING TEMP.	N/A	SHELL 2 MATERIAL	N/A
MIN. DESIGN METAL TEMP.	-20 DEG. F @ 75 PSIG	TOP HEAD MATERIAL	SA-516-70 HOT FORMED NOM. TH. = 0.50"
MAWP (NEW & COLD)	103.52 PSI (LMTD BY HEADS)	BOTTOM HEAD MATERIAL	SA-516-70 HOT FORMED NOM. TH. = 0.50"
MAWP (HOT & CORRODED)	103.52 PSI (LMTD BY HEADS)	NOZZLES NECKS/FLANGES	SA-106-B, SA-105, SA-312-TP304
HYDROSTATIC TEST PRESSURE	130.00 PSI	GASKETS	BUNA-N
HYDROSTATIC TEST MEDIUM	WATER	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 3-5 MILS DFT (BLUE)

10,000 lb. High Pressure Liquid Media Vessel

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

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

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

SAFETY DATA SHEET

Revision Date: 11/11

1.1 IDENTIFICATION OF PRODUCT.

Designation: - Activated carbon

1.2 COMPANY.

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

Phone: 774-450-7177
Fax: 888-835-0617

2 HAZARDOUS AND OTHER INGREDIENTS.

Exposure limits may vary. It is recommended that information about locally applicable exposure limits be obtained.

%w/w	Compound	CAS No	MAK mg/m^3 (Germany)	TLV mg/m^3 (ACGIH)	PEL mg/m^3 (OSHA)
100	Bituminous Carbon	7440-44-0	T Dust	T dust	15 mg/m3

3 PHYSICAL DATA.

State:	Solid
Appearance:	Black granule, extradite, or powder
pH:	Not applicable
Boiling point or range:	Sublimes
Melting point or range:	3550 C (6422 F)
Vapor pressure:	1 @3586 C (6487 F)
Vapor density:	0.4
Density relative to water:	1.5 – 1.8 Specific gravity
Solubility in water:	Insoluble in water
Partition coefficient: (n-octanol/water):	
Other data:	odorless

4 FIRE AND EXPLOSION HAZARD DATA.

Fire, explosion and reactivity hazards:	Flammable.
Flammability and flammability limits:	Flammable.
Autoflammability:	Not applicable.
Explosive properties:	Non explosive.
Oxidizing properties:	Non oxidizing.

Fire fighting measures:
As with most organic solids, fire is possible at elevated temperatures or by contact with an ignition source.

Explosion:
Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Minimum explosible concentration 0.140 g/l.

Fire Extinguishing Media:
Water or water spray.

Unusual Fire and Explosion Hazards:
Contact with strong oxidize such as ozone, liquid oxygen, chlorine, permanganate, etc., may result in fire.

Special Information:
In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

5 STABILITY AND REACTIVITY DATA.

The product is stable under normal handling and storage conditions.

Conditions to avoid:	Incompatibilities.
Materials to avoid:	Liquid air and oxidizing materials. Strong oxidizers such as ozone, liquid oxygen, chlorine, permanganate, etc
Hazardous decomposition products:	Involvement in a fire causes formation of carbon dioxide and carbon monoxide.

Emergency Overview

WARNING! FLAMMABLE SOLID. ACTIVATED CARBON AFFECTS THE RESPIRATORY AND CARDIOVASCULAR SYSTEMS.

CAUTION!!! Wet activated carbon removes oxygen from air causing a severe hazard to workers inside carbon vessels and enclosed or confined spaces. Before entering such an area, sampling and work procedures for low oxygen levels should be taken to ensure ample oxygen availability, observing all local, state, and federal regulations.

J.T. Baker SAF-T-DATA(tm) Ratings (Provided here for your convenience)

Health Rating: 1 - Slight
Flammability Rating: 3 - Severe (Flammable)
Reactivity Rating: 1 - Slight
Contact Rating: 1 - Slight
Lab Protective Equip: GOGGLES; LAB COAT; CLASS B EXTINGUISHER
Storage Color Code: Orange (General Storage)

Potential Health Effects

Inhalation:
May cause mild irritation to the respiratory tract. The acute inhalation LC50 (Rat) is >64.4 mg/l (nominal concentration) for activated carbon.

Ingestion:
No adverse effects expected. May cause mild irritation to the gastrointestinal tract. The acute oral LD50 (Rat) is >10g/kg.

Skin Contact:
Not expected to be a health hazard from skin exposure. May cause mild irritation and redness. The primary skin irritation index (Rabbit) is 0.

Eye Contact:
No adverse effects expected. May cause mild irritation, possible reddening.

Chronic Exposure:
Prolonged inhalation of excessive dust may produce pulmonary disorders. The effects of long-term, low-level exposures to this product have not been determined. Safe handling of this material on a long-term basis should emphasize the avoidance of all effects from repetitive acute exposures.

Aggravation of Pre-existing Conditions:
No information found.

6. First Aid Measures

Inhalation:
Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion:
Give several glasses of water to drink to dilute. If large amounts were swallowed, seek medical attention.

Skin Contact:
Not expected to require first aid measures. Wash exposed area with soap and water. Seek medical attention if irritation develops.

Eye Contact:
Wash thoroughly with running water for at least 15 minutes. Seek medical attention if irritation develops.

7. Accidental Release Measures

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Reduce airborne dust and prevent scattering by moistening with water. Pick up spill for recovery or disposal and place in a closed container. Warning! Spent product may have absorbed hazardous materials.

8. Handling and Storage

Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

CAUTION!! Wet activated carbon removes oxygen from air causing a severe hazard to workers inside carbon vessels and enclosed or confined spaces. Before entering such an area, sampling and work procedures for low oxygen levels should be taken to ensure ample oxygen availability, observing all local, state, and federal or national regulations.

9. Exposure Controls/Personal Protection

Exposure Guidelines:
OSHA PEL*:
5mg/M3 (Respirable)
ACGIH TLV*:
10 mg/M3 (Total)
*PELs and TLVs are 8-hour TWAs unless otherwise noted.

Ventilation System:
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):
For conditions of use where exposure to the dust or mist is apparent, a half-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:
Wear protective gloves and clean body-covering clothing.

Eye Protection:
Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

10. Toxicological Information

Investigated as a reproductive effector.

--------\Cancer Lists\----------

Ingredient	---NTP Carcinogen--- Known	Anticipated	IARC Category
Activated Carbon (7440-44-0)	No	No	None

11. Ecological Information

Environmental Fate:
No information found.

Environmental Toxicity:
No information found.

12. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

13. Transport Information

Proper Shipping Name:
NOT REGULATED
Hazard Class:
N/A
Identification Number:
N/A
Packing Group:
N/A
This product has been tested according to the United Nations *Transport of Dangerous Goods* test protocol for spontaneously combustible materials. It has been specifically determined that this product does not meet the definition of a self heating substance or any hazard class, and therefore is not a hazardous material and not regulated.

14. Regulatory Information

SARA TITLE III:
N/A
TSCA:
The ingredients of this product are on the TSCA Inventory List.
OSHA:
Nonhazardous according to definitions of health hazard and physical hazard provided in the Hazard Communication Standard (29 CFR 1910.1200)
CANADA

WHMIS CLASSIFICATION:
Not Classified
DSL#:
6798
EEC
Council Directives relating to the classification, packaging, and labeling of dangerous substances and preparations.
Risk (R) and Safety (S) phrases:
May be irritating to eyes (R36).

15. Other Information

NFPA Ratings: Health: 0 **Flammability:** 1 **Reactivity:** 0

Label Hazard Warning:
WARNING! FLAMMABLE SOLID. ACTIVATED CARBON AFFECTS THE RESPIRATORY AND CARDIOVASCULAR SYSTEMS.

Label Precautions:
Keep away from heat, sparks and flame. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.

Label First Aid:
If inhaled, remove to fresh air. Get medical attention for any breathing difficulty.

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.

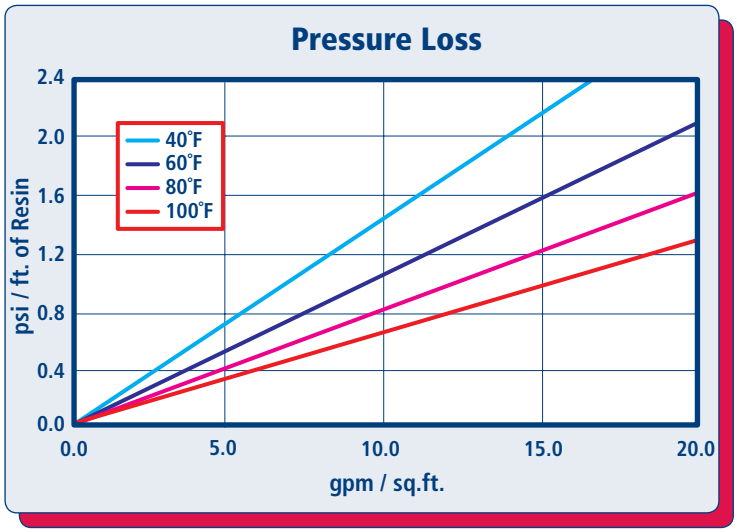
NSF/ANSI 44-61 CERTIFIED FOR MATERIAL SAFETY

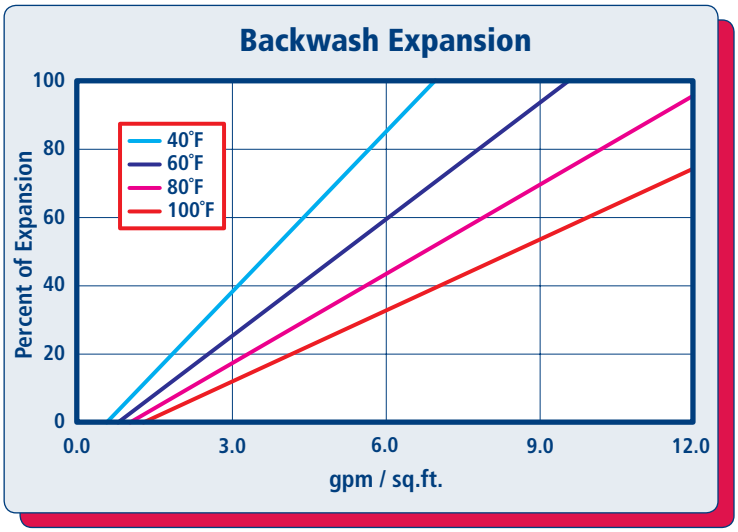
FEATURES & BENEFITS

- **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

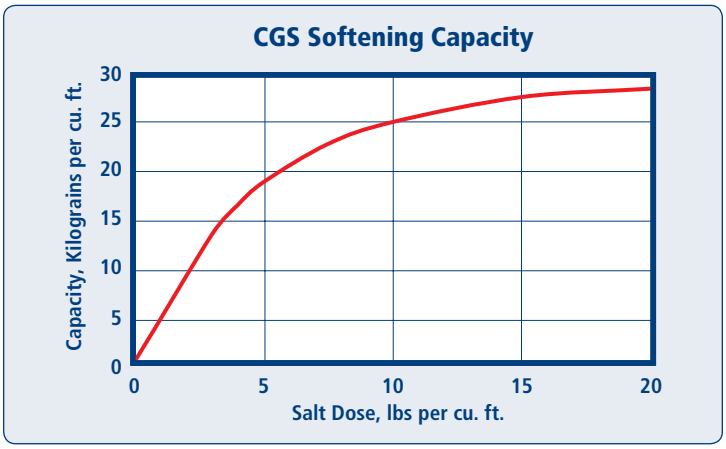
Maximum continuous temperature	
Sodium form	250˚F
Minimum bed depth	24 inches
Backwash expansion	25 to 50 percent
Maximum pressure loss	25 psi
Operating pH range	0 to 14 SU
Regenerant Concentration	
Salt cycle	10 to 15 percent NaCl
Regenerant level	4 to 15 lbs./cu.ft.
Regenerant flow rate.	0.5 to 1.5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

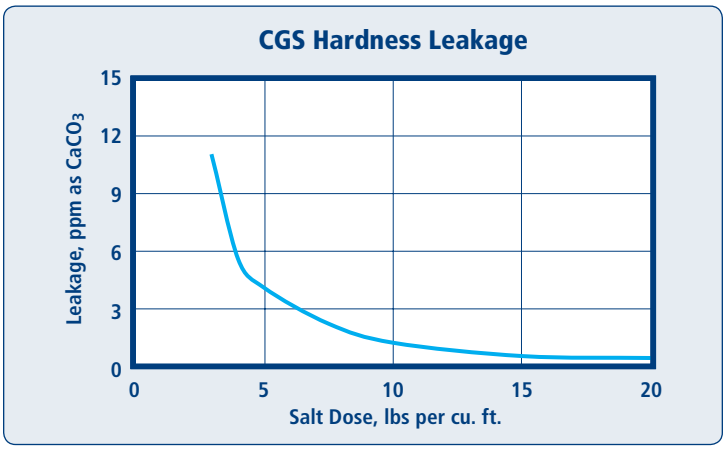
APPLICATIONS

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

Safety Data Sheet

Product Names: CGS, CGS-BL, CG8, CG8-BL, CG8-C, CG8-F, CG8-UPS, CG8-HP, CG8-NS, CG10, CG10-BL, CG10-UPS, CG10-HP, SACMP, SACMP-UPS

(Cation Exchange Resin in the Sodium Form)

Effective date 31 March 2015

Section 1: Identification

1a	Product Names	ResinTech CGS, CGS-BL, CG8, CG8-BL, CG8-C, CG8-F, CG8-UPS, CG8-HP, CG8-NS, CG10, CG10-BL, CG10-UPS, CG10-HP, SACMP, SACMP-UPS
1b	Common Name	Cation exchange resin in the sodium form.
1c	Intended use	All general purpose cation exchange for general use including water softening and demineralization.
1d	Manufacturer Address	ResinTech, Inc. 160 Cooper Road, West Berlin, NJ 08091 USA
	Phone Email	856-768-9600 ixresin@resintech.com

Section 2: Hazard Identification

2a	OSHA Hazard classification	Not hazardous or dangerous

Product Hazard Rating	Scale
Health = 0	0 = Negligible
Fire = 1	1 = Slight
Reactivity = 0	2 = Moderate
Special – N/A	3 = High
	4 = Extreme

2b	Product description	Amber, tan or black colored solid beads with little or no odor.
2c	Precautions for use	Safety glasses and gloves recommended. Slipping hazard if spilled.
2c	Potential health effects	Will cause eye irritation. Ingestion is not likely to pose a health risk.
2d	Environmental effects	Little or none.

Section 2A: Hazard classification UN OSHA globally harmonized system

Warning (contains ion exchange resin)

H320: Causes eye irritation (Category 2B)

Precautionary Statements

P264: Wash hands thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

P333+313: If skin irritation or a rash occurs: Get medical advice/attention.

P337+313: If eye irritation persists get medical advice/attention.

P403+233: Store in a well-ventilated place. Keep container tightly closed.

P411: Store at temperatures not exceeding 50 °C/ 122 °F.

Please refer to the safety data sheet for additional information regarding this product

ResinTech, Inc.
160 Cooper Road
West Berlin, NJ 08091-9234
856 768-9600
Ixresin@resintech.com

Section 3: Composition/ Information on Ingredients

3a	Chemical name	Polystyrene sulfonate in the sodium form
3b	Ingredients Polystyrene sulfonate in the sodium form	CAS# 69011-22-9 (40 - 60%)
	Water	CAS# 7732-18-5 (40 – 60%)

Section 4: First Aid Measures

4a	Inhalation	No adverse effects expected- normal use of product does not produce odors or vapors.
4b	Skin	Wash with soap and water- seek medical attention if a rash develops.
4c	Eye contact	Wash immediately with water-seek attention if discomfort continues.
4d	Ingestion	No adverse effects expected for small amounts, larger amounts can cause stomach irritation. Seek medical attention if discomfort occurs.

Section 5: Fire Fighting Measures

5a	Flammability	NFPA Fire rating = 1
5b	Extinguishing media	Water, CO2, foam, dry powder
5c	Fire fighting Procedures	Follow general fire fighting procedures indicated in the work place.
5d	Protective Equipment	MSHA/NIOSH approved self-contained breathing gear, full protective clothing.
5e	Combustion Products	Carbon oxides and other toxic gasses and vapors.
5f	Unusual Hazards	Product is not combustible until moisture is removed. Resin begins to burn at approximately 230º C. Auto ignition can occur above 500º C.

Section 6: Accidental Release Measures

6a	Personal Precautions	Keep people away, spilled resin can be a slipping hazard, wear gloves and safety glasses to minimize skin or eye contact.
6b	Incompatible Chemicals	Strong oxidants can create risk of combustion products similar to burning.
6c	Environmental Precautions	Keep out of public sewers and waterways.
6d	Containment Materials	Use plastic, paper, or metal containers.
6e	Methods of Clean-up	Sweep up material and transfer to containers.

Section 7: Handling and Storage

7a	Handling	Avoid prolonged skin contact. Avoid contact with salts or with salty water to prevent premature exhaustion of the resin. Keep resin moist and avoid allowing resin to completely dry.
7b	Storage	Store in a cool dry place (0º to 45º C) in the original shipping container. This product is thermally sensitive and will have reduced shelf life if subjected to extended periods of time at temperatures exceeding 50º C. Although freezing does not usually damage ion exchange resins, avoid repeated freeze thaw cycles.
7c	TSCA considerations	Ion exchange resins should be listed on the TSCA Inventory in compliance with State and Federal Regulations.

Section 8: Exposure Controls/Personal Protection

8a	OSHA exposure limits	None noted.
8b	Engineering Controls	Provide adequate ventilation.
8c	Personal Protection Measures	
	Eye Protection	Safety glasses or goggles.
	Respiratory Protection	Not required for normal use.
	Protective Gloves	Recommended for extended contact.

Section 9: Physical and Chemical Properties

Appearance	Amber, tan, or black beads.
Flammability or explosive limits	Flammable above 500º C
Odor	None
Physical State	Solid
Vapor pressure	Not available
Odor threshold	Not available
Vapor density	Not available
pH	Near neutral (6 to 8 typical)
Relative density	Approx 800 grams/Liter
Melting point/freezing point	Does not melt, freezes at approx. 0 C
Solubility	Insoluble in water and most solvents
Boiling point	Does not boil
Flash point	Approx 500º C
Evaporation rate	Does not evaporate
Partition Coefficient (n-octonol/water)	Not applicable
Auto-ignition temperature	Approx 500º C
Decomposition temperature	Above 230º C
Viscosity	Not applicable

Section 10: Stability and Reactivity

10a Stability	Stable under normal conditions.
10b Conditions to Avoid	Heat, exposure to strong oxidants.
10c Hazardous by-products	Organic sulfonates, charred polystyrene, aromatic acids and hydrocarbons, organic amines, nitrogen oxides, carbon oxides, chlorinated hydrocarbons.
10d Incompatible materials	Strong oxidizing agents (such as HNO_3)
10e Hazardous Polymerization	Does not occur

Section 11: Toxicological Information

11a	Likely Routes of Exposure	Oral, skin or eye contact.
11b	Effects of exposure	
	Delayed	None known.
	Immediate (acute)	None known.
	Chronic	None known.
11c	Toxicity Measures	
	Skin Adsorption	Unlikely.
	Ingestion	Oral toxicity believed to be low but no LD50 has been established.
	Inhalation	Unknown, vapors are very unlikely due to physical properties (insoluble solid).
11d	Toxicity Symptoms	
	Skin Adsorption	Mild rash.
	Ingestion	Indigestion or general malaise.
	Inhalation	Unknown.
11e	Carcinogenicity	None known

Section 12: Ecological information

12a	Eco toxicity	Not harmful to plant or animal life.
12b	Mobility	Insoluble.
12c	Biodegradability	Not biodegradable.
12d	Bioaccumulation	Insignificant.
12e	Other adverse effects	Not Harmful to the environment.

Section 13: Disposal Considerations

13a General considerations	Material is non-hazardous.
13b Disposal Containers	Most plastic and paper containers are suitable.
13c Disposal methods	No specific method necessary
13d Sewage Disposal	Not recommended
13e Precautions for incineration	May release toxic vapors when burned
13f Precautions for landfills	Resins used to remove hazardous materials may then become hazardous mixtures.

Section 14: Transportation Information

14a Transportation Class	Not classified as a dangerous good for transport by land, sea, or air.
14b TDG	Not regulated.
14c IATA	Not regulated.
14d DOT (49 CFR 172.101)	Not Regulated.

Section 15: Regulatory Information

15a CERCLA	Not regulated
15b SARA Title III	Not regulated
15c Clean Air act	Not regulated
15d Clean Water Act	Not regulated
15e TSCA	Not regulated
15f Canadian Regulations	
WHMIS	Not a controlled product
TDG	Not regulated
15g Mexican Regulations	Not Dangerous

Section 16: Other Information

The information provided in this safety data sheet is presented in good faith and believed to be accurate as of the effective data shown above. However, no warranty or guarantee of accuracy, express or implied is given. Regulatory requirements are subject to change and may differ from one location to another. It is the buyer's responsibility to ensure that their activities comply with federal, state, and local laws.

16a Date of Revision 31 March 2015

GROOVED & SMOOTH-END FLOWMETER MODEL MG/MS100

SPECIFICATIONS

PERFORMANCE

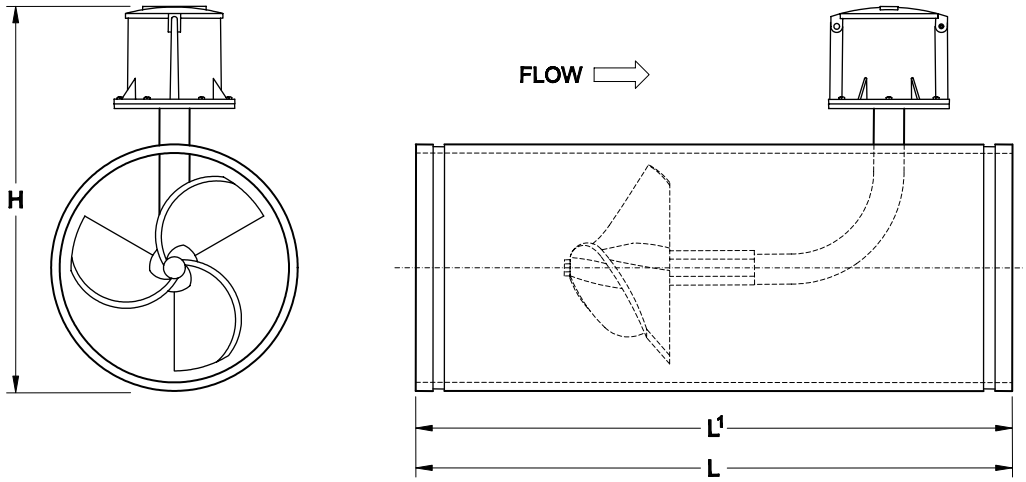
ACCURACY/REPEATABILITY: ±2% of reading guaranteed throughout full range. ±1% over reduced range. Repeatability 0.25% or better.
RANGE: (see dimensions chart below)
HEAD LOSS: (see dimensions chart below)
MAXIMUM TEMPERATURE: (Standard Construction) 160°F constant
PRESSURE RATING: 150 psi

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

Supplemental Information

MassDEP - Bureau of Waste Site Cleanup

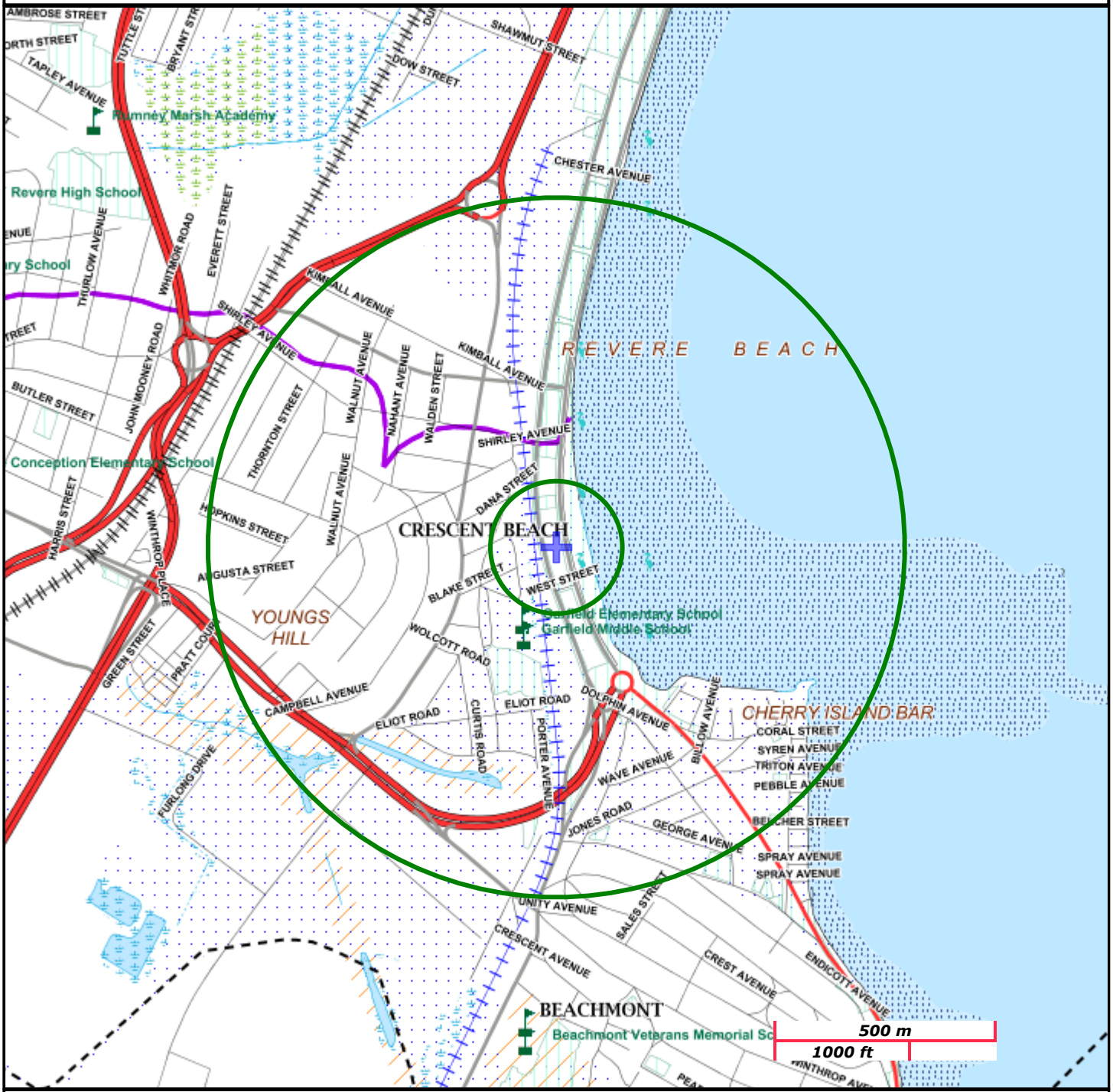
Phase 1 Site Assessment Map: 500 feet & 0.5 Mile Radii

Site Information:
REVERE BEACH HOTEL
49-54 REVERE BEACH BOULEVARD REVERE, MA

NAD83 UTM Meters:
4696676mN , 336118mE (Zone: 19)
October 12, 2018

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: http://www.mass.gov/mgis/.

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 IV of the NPDES RGP, the project located at 49-54 Revere Beach Boulevard, Revere, MA is eligible for coverage under this general permit under FWS Criterion C. This project is located in Suffolk 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 Red Knot was listed as "Threatened" wherever it is found.

Temporary dewatering activities at the site are not expected to impact the Red Knot.

Red Knots are predominately migratory coastal seabirds. The red knot breeds in the tundra of the central Canadian Arctic. Red Knots are long ranging migratory birds reaching from the extreme south of Tierra del Fuego, Argentina to the far north of the central Canadian Arctic. Red Knots typically begin migrating in early fall. Threats to the red knot include sea level rise; coastal development; shoreline stabilization; dredging; reduced food availability at stopover areas; disturbance by vehicles, people, dogs, aircraft, and boats; and climate change. The proposed project activities will not involve any of these activities; therefore, temporary dewatering activities are "not likely to adversely effect" the Red Knot. There are no critical habitats within the project area for the Red Knot.

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:
Consultation Code: 05E1NE00-2019-SLI-0088
Event Code: 05E1NE00-2019-E-00199
Project Name: Revere Beach Hotel

October 12, 2018

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

To Whom It May Concern:

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

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

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

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

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

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

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

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

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

Attachment(s):

- Official Species List

Official Species List

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

This species list is provided by:

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

Project Summary

Consultation Code: 05E1NE00-2019-SLI-0088

Event Code: 05E1NE00-2019-E-00199

Project Name: Revere Beach Hotel

Project Type: ** OTHER **

Project Description: Construction Dewatering

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/place/42.40517692605128N70.99154456338863W

Counties: Suffolk, MA

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.

Birds

NAME	STATUS
Red Knot *Calidris canutus rufa* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened

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:

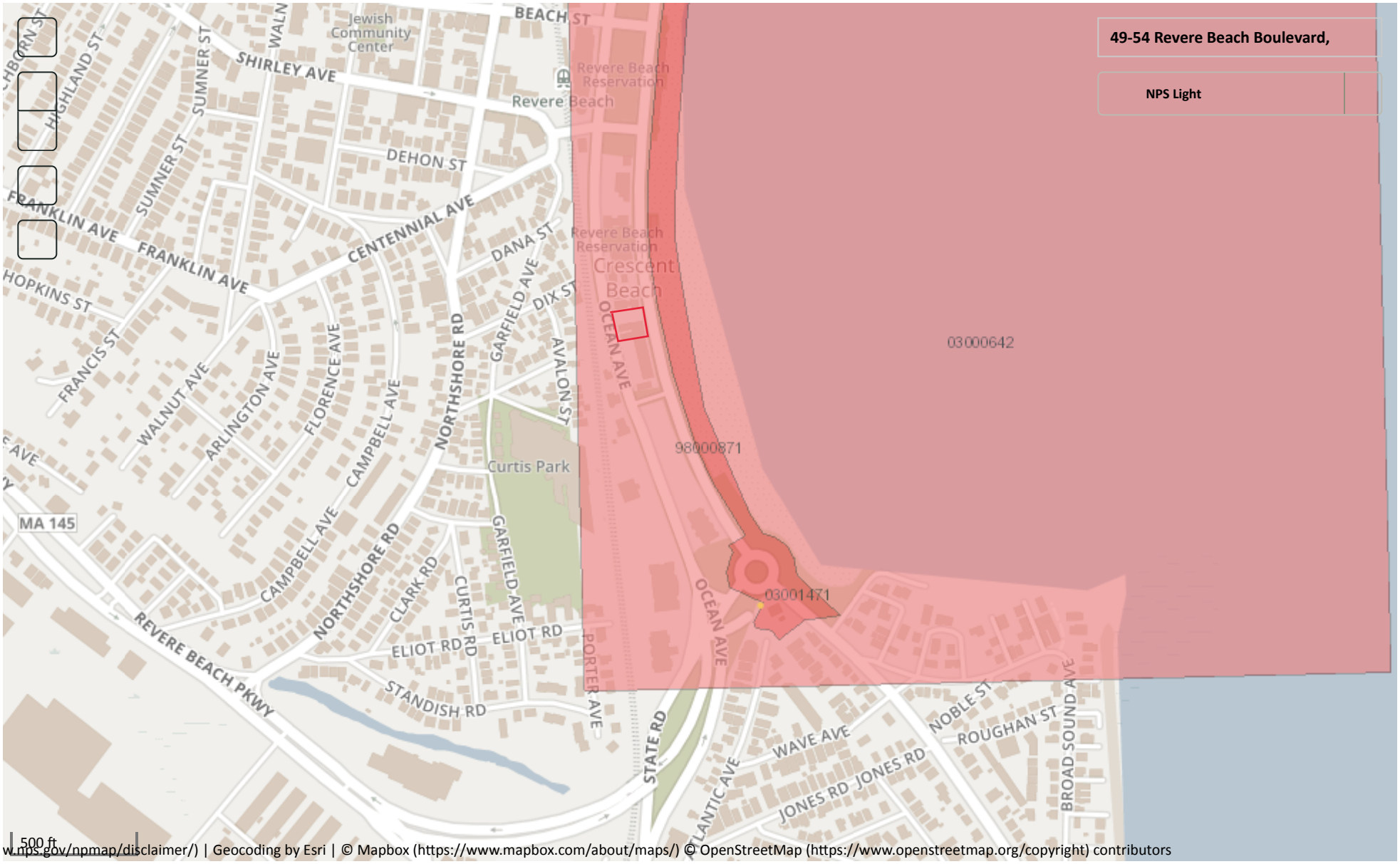
As part of this permit, a determination was made as to whether there were any historic properties or places listed on the national register in the path of the discharge or in the vicinity of the construction of treatment systems or BMPs related to the discharge. A search on the Massachusetts Cultural Resource Information System Database did not list any potential properties on or near the project site in the database. Therefore, the proposed discharge will not have the potential to cause effects on historical properties.

National Register of Historic Places

Public, non-restricted data depicting National Register spatial data processed by the Cultural Resources GIS facility. ...

National Park Service
U.S. Department of the Interior

= Site Boundary



Massachusetts Cultural Resource Information System

MACRIS

MACRIS Search Results

Search Criteria: Town(s): Revere; Street No: 49-54; Street Name: Revere Beach Blvd; Resource Type(s): Area, Building, Burial Ground, Structure, Object;

Inv. No.	Property Name	Street	Town	Year